



## PEMBUKAAN KEMBALI KEBUN BINATANG SURABAYA DALAM PANDEMI CORONAVIRUS DISEASE 2019 (COVID-19)

### Reopening of Surabaya Zoo in Coronavirus Disease 2019 (Covid-19) Pandemic

**Puteri Hapsari Fitriyanti**

Magister of Science in Law and Development Airlangga University Postgraduate

Email: [puterihapsari.f@gmail.com](mailto:puterihapsari.f@gmail.com)

#### **ABSTRACT**

*High spread of Covid-19 in Surabaya implemented on a Large-Scale Social Restrictions policy. This has impacted on closure of tourist destinations, including Surabaya Zoo. During the closing period, Surabaya Zoo suffered significant losses due to the absence of revenue that impacted on the conservation operations in saving endangered animals. Based on Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020, Surabaya Zoo is reopened. This fact is an interesting issue to study how well the management in handling this situation. The writing method used in this paper is a literature review and primary data collection as a form of best practice that might be adopted in Surabaya Zoo. The results showed that management is succeeded in reopening Surabaya Zoo. The conclusion from this study is Surabaya Zoo is recommended to be reopened during the first stage of New Normal.*

**Keywords:** covid-19, new normal, management, surabaya zoo, tourism

#### **ABSTRAK**

Tingkat penyebaran Covid-19 yang tinggi di Surabaya mengakibatkan Pemerintah Kota Surabaya untuk menetapkan kebijakan Pembatasan Sosial Berskala Besar. Kebijakan tersebut berakibat pada penutupan objek-objek wisata di Surabaya, salah satunya Kebun Binatang Surabaya. Selama masa penutupan, Kebun Binatang Surabaya mengalami kerugian yang signifikan yang diakibatkan oleh tidak adanya pendapatan. Hal tersebut berakibat pada operasional Kebun Binatang Surabaya sebagai lembaga konservasi satwa yang dilindungi. Dengan berdasarkan pada Peraturan Walikota Surabaya Nomor 28 Tahun 2020 sebagaimana telah diubah dengan Peraturan Walikota Surabaya Nomor 33 Tahun 2020, Kebun Binatang Surabaya telah dibuka kembali. Hal tersebut merupakan isu yang menarik untuk mempelajari bagaimana kinerja manajemen dalam mengatasi situasi ini. Metode penelitian yang digunakan adalah tinjauan pustaka dan pengumpulan data primer sebagai bentuk praktik terbaik yang dapat diimplementasikan pada Kebun Binatang Surabaya. Hasil penelitian menunjukkan bahwa manajemen telah berhasil dalam melakukan pembukaan kembali Kebun Binatang Surabaya. Kesimpulan dari penelitian ini adalah Kebun Binatang Surabaya dapat direkomendasikan untuk dibuka kembali dalam tahap pertama kondisi Normal Baru.

**Kata Kunci:** covid-19, normal baru, manajemen, kebun binatang surabaya, pariwisata

## INTRODUCTION

Conservation Institutions is an institution that conserve wild plants and animals outside their habitat (ex-situ), which functions are to breed and save plants and animals while maintaining species purity in order to ensure the preservation of their existence and utilization. In addition, Conservation Institutions are also functioning as a place for education, demonstration, research, development of science, means of protection and preservation of species and healthy recreational facilities. One of Conservation Institutions is

zoo. Based on the Regulation of the Minister of Forestry of Conservation Institutions Number P.22/MENLHK/SETJEN /KUM.1/5/2019, a zoo is a place or container that has the main function as a conservation agency that undertakes efforts to care for and breed various types of animals based on the ethics and principles of animal welfare in the context of forming and developing new habitats, as a means of protection and species preservation through activities of rescue, rehabilitation and reintroduction of nature and utilized as a means of education, research, development of science and technology as well as a means of healthy recreation.

Surabaya Zoo is owned and managed by Surabaya City Government as the only capital owner. Surabaya Zoo, which developed at 1916, is one of Conservation Institutions of wild plants and animal, education, research and recreation facilities as well as one of the icons of Surabaya. Surabaya Zoo has permission as a Conservation Institution based on Decree of the Director General of Natural Resources Conservation and Ecosystem Number: SK.340/Menlhk/Setjen/KSA.2/5/2019 concerning Conservation Institution Licenses in Form of Zoo to Regional Company Animal Park Surabaya Zoo in Surabaya City, East Java Province. Surabaya Zoo has an area of 15,3 hectares with a collection of 2.295 animals, consists of 211 species (mammals, aves, reptiles, pisces). In addition, the function of the zoo can also be transformed into an exhibition place for animal breeding, a center for animal protection and breeding as well as a learning center aimed at preventing the extinction of rare and endangered species. Where all these functions are able to become assets that generate very high local revenue (PAD) from communities who visit this zoo.

Coronavirus Disease 2019 (Covid-19) is a public health emergency of international concern. Coronaviruses are a large family (Coronaviridae) of single-stranded RNA (ribonucleic acid) viruses that have a lipid envelope studded with club-shaped projections, which may cause illnesses in wildlife and domestic animals (especially birds and mammals) or humans<sup>123</sup>. Some strains of coronaviruses are zoonotic; meaning they can be transmitted between animals and humans, but many strains are not zoonotic. In humans, several coronaviruses are known to cause severe respiratory diseases such as the Middle East respiratory syndrome (MERS) and the severe acute respiratory syndrome (SARS)<sup>45</sup>. The World Health Organisation (WHO) coordinates the global efforts to manage the impacts and it declared Covid-19 as a global pandemic. The scale of the impacts is unprecedented, and studies have suggested that it might take more than a decade for the world to recover, societally and economically. Surabaya is one of cities in Indonesia with high level of spread of Covid-19. From a safety management point of view the world is confronted with an unwanted event and huge adverse consequences: by June 10, 2020 the growing total death toll in over 190

countries passed 408,000 while societal disruption and global economic damage continue to develop.

High level of Covid-19 spreadness impacted on Surabaya City Government policy to implement a Large-Scale Social Restrictions. This has impacted significantly not only on human, but thousands of animals living in Indonesian zoos are facing the threat of famine as management struggles to afford animal feed as would-be visitors stay home to contain the spread of Covid-19. One of the impact is the closure of tourist destinations, including Surabaya Zoo in mid March 2020. The closure was also carried out to prevent the spread of the Corona COVID-19 virus.

During the closing period in mid March-mid July 2020, Surabaya Zoo suffered significant losses due to the absence of revenue from ticketing sales. That impacted on the conservation operations in saving endangered animals. Thus impacted not only on animals, but also on the salaries of employees who work are also disrupted. Despite the facts that Surabaya Zoo is owned by Surabaya City Government, Surabaya Zoo still needs to stock and provide foods to feed and breed the animals. A survey conducted by the Indonesian Zoo Association (PKBS) in April, showed that 92 percent of the association's members in Sumatra, Java, Bali, Lombok and Borneo – 55 zoos – had stocks to feed their animals only until mid-May. The survey also showed that only three zoos would be able to provide food for one to three months, while only two had enough for more than three months. The survival of wild animals in a zoo depends on the continuity of feeding from the manager. If the feed needs of wild animals are not fulfilled, bad things will happen, such as: death due to hunger.<sup>6</sup>

Based on Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020, and also Investigation Event (BAP) Verification of the Management of Conservation Institutions in Implementation of New Normal Period Surabaya Zoo, Surabaya Zoo is reopened in mid-July 2020. This fact is an interesting issue to study how well the management in handling this situation. This study aims to not only learn how well the management in handling Surabaya Zoo in pandemic situation, but also find the best practice model for the improvement of Surabaya Zoo's performance.

## **METHOD**

### **Place and Time of Research**

This research was conducted at the Surabaya Zoo and Surabaya City Government. The research period was carried out for 2 weeks, which was carried out from July, 25th until August, 16th 2020.

## **Method**

This paper used qualitative method with the purpose of obtaining more complete, comprehensive, and representative data and information on various facts of zoo management in Surabaya and also another zoo. The writing method used in this paper is a literature review and primary data collection as a form of best practice that might be adopted in Surabaya Zoo. Data were collected in two ways, namely (a) primary data obtained from semistructured in-depth interview with informants to gain comprehensive information in a more flexible but-focused way in order to explore the aspects of management; and (b) collection of secondary data in a form of supporting documents.

## **RESULTS AND DISCUSSION**

### **1. Coordination and Simulation**

Regional Company Animal Park Surabaya Zoo is a company belongs to the Surabaya City Government which is engaged in the field of flora and fauna conservation at the location of the Surabaya Zoo<sup>7</sup>. As a regional company owned by Surabaya City Government, Surabaya Zoo needs permission from Mayor of Surabaya to reopen the zoo. Before it decided to reopen, Surabaya Zoo have been coordinated with Surabaya City Government's COVID-19 Task Force, Center for Conservation and Natural Resources (BBKSDA) East Java Province, and also academics and expert. Based on BBKSDA's Investigation Event (BAP) Verification of the Management of Conservation Agencies for the Implementation of New Normals in PDTS Kebun Binatang Surabaya Number BA.1210/K.2/BKWII/SKW3/KSA/7/2020, BBKSDA has conducted verification checks on the management of the conservation agency for the New Normal at Surabaya Zoo. The result is Surabaya Zoo is recommended to be reopened during the first stage of New Normal by getting approval/legality from the Surabaya City Government. Thus, after coordinating with Surabaya City Government's COVID-19 Task Force, at July 25<sup>th</sup> 2020 Surabaya Zoo staged a reopening simulation which was attended by the Surabaya City COVID-2019 Acceleration Task Force, relevant Regional Apparatus, and health experts by implementing health

protocols in accordance with Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020.

2. Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020

Based on Article 14 of Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020, management of public facilities has to implement health protocols, such as:

- a. obliged to compile health protocols;
- b. obliging employees / officers to wear masks and if necessary also use a face shield, and gloves in providing services to visitors;
- c. oblige to detect every body temperature employees / officers and visitors who will enter at public place or facility, if body temperature is detected  $\geq 37.5$  degrees Celsius and not allowed to enter;
- d. put the sink with hand washing soap and hand sanitizer dispenser contains alcohol (hand sanitizers) at entrances and strategic places easy to reach as well as ensuring a soap / hand dispenser sanitizer is replenished regularly;
- e. perform cleaning, sterilization and / or periodic spraying of disinfectants;
- f. provide landfills, non-organic, organic and residues in public places or facilities;
- g. limit the number of visitors at a place or facility general 50% (fifty percent) of the original capacity;
- h. spacing in public places or facilities:
  - 1) the distance between seats is at least 1 (one) meter;
  - 2) the queue distance of each person is at least 1 (one) meter;
  - 3) the distance between people is at least 1 (one) meter;
  - 4) the lift capacity is not more than 50% (fifty percent).
- i. conduct outreach on prevention of spread Covid-19 to employees and visitors to public places or facilities, such as posters and on banners that contain Corona prevention procedures Covid-19;
- j. socializing the ethics of coughing/sneezing by:
  - 1) displaying posters regarding the importance of applying ethics of coughing / sneezing and procedures for sneezing / coughing on public places or facilities;

- 2) providing information and update corner information about Covid-19 regularly, and place it in a convenient area seen by visitors; and
  - 3) providing information and education media (KIE) regarding the prevention and control of Covid-19.
- k. in case there are employees who are sick with symptoms fever, cough, runny nose / sore throat / shortness of breath, they have to isolate themselves at home by not doing

much contact with other people, use masks and if needed also use a face shield as well advised immediately to the nearest health facility for get checked out; and

1. not imposing penalties for employees who do not enter because of illness, as well does not enforce incentive-based policies presence.

### 3. Implementation of Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020

In response to the COVID-19 pandemic, countries across the globe have implemented several public health and social measures (PHSM), including physical distancing, closure of schools and businesses, geographical area quarantine, and movement restrictions. As the local epidemiology of the disease changes, countries will adjust (loosen/reinstate) these measures accordingly. On 16 April 2020, WHO published an interim guidance document that provides advice on adjusting public health and social measures<sup>8</sup>, while managing the risk of resurgence of cases. A series of annexes has been developed to guide countries through adjusting public health and social measures in different contexts.

Mass gatherings are events characterized by the concentration of people at a specific location for a specific purpose over a set period of time, which have the potential to strain the planning and response resources of the host country or community<sup>9</sup>. In the context of COVID-19, mass gatherings are events with a high density of individuals present in a venue for a defined period of time, which can amplify transmission of COVID-19, and place additional strain on a country's healthcare system. WHO currently defines four transmission scenarios for COVID-19 (no reported cases, sporadic cases, clusters of cases and community transmission). As the pandemic evolves, countries or areas will move from one transmission scenario to another (in either direction) and may experience a resurgence in cases interspersed with periods of low-level transmission. In countries where the overall intensity of transmission is decreasing, and public health and social measures are being lifted, reopening mass gatherings can be considered. As these measures are adjusted, countries should recognize that it may be necessary to reintroduce such measures to manage an increased number of cases. This means that the epidemiological situation may vary based on the geographical area and time in which the event takes place. As such, countries and event organizers need to apply a dynamic approach to risk mitigation strategies to reduce the risk of COVID-19 transmission in events.

### 3.1. Implementation of Physical Distancing

Indonesia Government and WHO believes that the ability to make physical isolation not descend into social isolation has been key to reducing the psychosocial impact of COVID-19 on the Indonesian population. The emphasis on exercise, maintenance of non-COVID related health, people keeping in contact and maintaining essential services have provided the maintenance of social fabric. The UK seems to have managed to increase social isolation, especially of the elderly, without always achieving physical isolation and preventing community transmission. The young and the elderly suffer most in any tear in the social fabric. ~~In any case, the psychological~~ effects are likely to be mixed, may be short or long term, or within acute on previously chronic disadvantaged backgrounds. All of these factors represent short term trends and vary greatly from region to region, even in the same country.<sup>10</sup>

Surabaya Zoo implements physical distancing by following protocols such as:

#### a. Implementation of Operational Hour

Surabaya Zoo implement operational hour that been divided into 2 shifts, namely a) 08.30-11.30 WIB; and b) 12.30 – 15.30 WIB. It is believed to minimize the risk of Covid-19 transmission by suppressing crowds of visitors and being able to implement physical distancing effectively and efficiently. Results shows that this operational hour is relatively effective in suppressing crowds, and also make management works better in implementing physical distancing. During the breaks between shift, officers cleaned the entire area of the Surabaya Zoo by spraying disinfectant. Management saves time by installing a disinfectant sprayer at each entrance so that every visitor who will enter the Surabaya Zoo area has been firstly cleansed with disinfectant.

#### b. Limitation on Number of Visitors

Based on Balai Besar Konservasi dan Sumber Daya Alam (BBKSDA) Jawa Timur<sup>11</sup>, the average number of visitors at Surabaya Zoo in 2019 are 3.000 people on Monday-Thursday, 1.000 people on Friday, 5.000 people on Saturday and 15.000 people on Sunday. Thus, to implement Physical Distancing, certain public areas or facilities such as zoos, when operating again, are required to apply a maximum number of visitors to 50% of their capacity under normal conditions. Meeting that condition, Surabaya Zoo implement limitation on number of visitors by 50% from normal condition, so that the number of maximum visitors in New Normal condition are 1.500



people on Monday-Thursday, 500 people on Friday, 2.000 people on Saturday and 5.000 people on Sunday. That maximum number of visitors are divided by 2 adjusting to zoo's operational hours.

c. Purchasing Entry Tickets or Reservations via Online

Surabaya Zoo implements online ticketing and restricting access to purchasing tickets via cash. In terms of safety procedures, ticket purchasing are made in cash (by making a reservation via online) and non-cash with an online purchase mechanism through [www.surabayazoo.co.id](http://www.surabayazoo.co.id) or <https://tiket.surabayazoo.co.id/>. In buying those online tickets, visitors are obliged to fill Visiting Form which contains visitors requirements, such as a) visitors must be in healthy condition; b) visitors are required to follow the health protocol applied by Surabaya Zoo such as using a mask, applying clean behavior and healthy lifestyle (PHBS) and social distancing as well as using face shield and bringing sanitizer; and c) filling Visitor Form which contain an agreement to the terms and conditions that apply when entering Surabaya Zoo. Online ticket sales are limited according to the capacity of the Surabaya Zoo visit. After exceeding the quota of purchases per day, the ticketing will be systematically and automatically closed. This online ticketing are working well, but Surabaya Zoo still provide officer to help visitors that still don't know about the online ticketing procedure at the entrance gate.

d. Limitation of Rides and Business Activities

All activities that are deemed to have the potential to cause crowds for a while cannot be opened/operated. Rides and Business Activities that can't be opened/operated are: a) Feeding Time; b) Keeper Talk; c) Animal (Elephant) Riding; d) Breakfast with Elephant; e) Animal Edutainment; f) Boat Tour; g) Swimming Pool; h) Library; i) Outbond; j) Event/Entertainment; and k) Canteen/Tenant. Results shows that limitation in rides and business activities impacted on numbers of visitors. Result shows that the number of visitors of Surabaya Zoo is still not satisfying. The average number of visitors on Monday-Friday ranges from 100-200 visitors, meanwhile on Saturday-Sunday there was an increase of 250-900 visitors. But, it's still far from the maximum number of visitors that been targeted. Thus, Surabaya Zoo intend to open the rides step by step while asking for permission from Surabaya City Government as the capital owner.

e. Making a Route/Circulation Flow

Surabaya Zoo implements a one-way system with path/route settings. Entrance and Exit gateway are not in the same access. Surabaya Zoo set an alternative path for visitors with a final destination to the exit. Surabaya Zoo also provide some officers to guide visitors in visiting the route that been set, so that visitors do not wander too

far from the route and prevent violation of Physical Distancing. Surabaya Zoo also provide arrows along the road as a guide. Visitors are obliged to follow the arrow and also the guide from the officers. This shows quite effective for management to implement, but some children are too young to understand the rule and tend to violate the rules.

f. Distance Alerts and Advice/Prohibition of Crowds

Surabaya Zoo has implement Article Number 14 Paragraph (3) of Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020 about setting distance in public places or facilities. In terms of safety procedures, a queuing system/guard a distance of 1-2 m for visitors is carried out by marking the floor/paving/seating to facilitate compliance with physical distancing. This proves effective for management to implement, because the fun symbols interest visitors to obey the rules that has been set. Each exhibit is given a sign to keep the distance for visitors who intend to stop to see animals as an effort to implement physical distancing. There are 2 officers that been assigned to mobile around the zoo to ensure the implementation of physical distancing and health protocols by visitors.

g. Parking Center in Joyoboyo Intermoda Terminal (TIJ)

Apart from being one of the applications of physical distancing in an effort to minimize the occurrence of crowds, it is also to synergize the Park and Ride program between Surabaya Zoo and TIJ. Result shows that the distance between Surabaya Zoo and TIJ are quite far, so that some visitors, especially elderly and children, are not too satisfied with this decision. Thus, some visitors choose to come to Surabaya Zoo with online or public transportation to overcome this problem.

### 3.2. Implementation of Health Protocol

In an effort to prevent and control Covid-19 in the Surabaya Zoo environment, employees/guests/partners/visitors are obliged to comply with established health protocols that have been set by management. Those health protocols are including:

- a. Obligated to wear a mask while in the Surabaya Zoo area

Wearing a medical mask is one of the prevention measures that can limit the spread of certain respiratory viral diseases, including COVID-19.<sup>12</sup> To support the mandatory of

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<sup>12</sup> WHO (2020) Advice on the use of masks in the context of COVID-19. Interim guidance. 6 April 2020  
<https://apps.who.int/iris/rest/bitstreams/1274280/retrieve>

using mask, Surabaya Zoo has placed some banners and other appeals to use masks at strategic points and provide masks for visitors who don't wear masks.

b. Washing hands using soap with running water or hand sanitizer

Before entering the KBS area, visitors required to wash hands for 20 seconds with running water and laundry soap hands as recommended set by the government. Surabaya Zoo has provided 23 units of sinks to support the hand washing movement and 50 units of hand sanitizers scattered in Surabaya Zoo area.

c. Have a body temperature checked when entering the KBS area and are not allowed to enter the KBS area if the temperature is upper 37.5° Celcius and/or show symptoms of respiratory tract infections such as fever, cough, runny nose, diarrhea and sore throat Surabaya Zoo provides 2 officers at the entrance gate to check visitors temperatures 2 times.

d. Underwent a foot bath and/or spraying of disinfectant

Surabaya Zoo also provides 10 units of foot bath. After barcode scanning, visitors will pass through the Disinfectant Curtain as an application biosecurity to minimize spread of the virus to areas within KBS. Surabaya Zoo makes sure visitors has to pass these procedures before entering Surabaya Zoo area.

e. Implementing a Clean and Healthy Lifestyle (PHBS)

In the New Normal Order, Surabaya Zoo set visitors provisions for visitors who will enter the area of Surabaya Zoo. These Socialization Banner are installed in front of the Surabaya Zoo entrance, so that visitors can read, understand and obey the provisions.

f. Implementing physical distancing

Each exhibit is given a sign to keep the distance for visitors who intend to stop to see animals as an effort to implement physical distancing. Surabaya Zoo also implement the placement of officers at points that are considered crucial can lead to this the crowd. The duty of each officer is to provide advice regarding implementation health protocols, healthy and clean lifestyle and physical distancing during their stay the area within Surabaya Zoo, and ensure visitors comply with all conditions and appeal enforced. The indoor exhibition area regulates the number of visitors' entry and one- way path from the entrance to the exit so that visitors can keep their distance.

### 3.3. Environmental Cleanliness Improvement

In supporting the implementation of health protocol, supporting facilities have been prepared, including: a) sink in 23 points; b) hand sanitizer in 50 points; c) footbath in 10

points; d) desinfectant sprayer in 5 points; and e) 1 clinic. COVID-19 is transmitted primarily through respiratory droplets or contact with contaminated surfaces<sup>13</sup>. Work-related exposure can occur anytime at the workplace, during work-related travel to an area with local community transmission, as well as on the way to and from the workplace<sup>14</sup>. Based on it, not only in zoo areas, management also perform regular cleaning and disinfection in work areas and public areas every day, especially places that are frequently touched or used by many people (door handles, prayer rooms, toilets and other public facilities) to improving environmental cleanliness.

#### 3.4. Formation of Task Force

Surabaya Zoo has formed a COVID-19 Task Force team based on the Decree of the Regional Company of Animal Park Surabaya Zoo Directors Number: 12/KEP/PDTS/VI/2020 of the Independent Responsive Task Force COVID-19 in 18 June 2020 and has carried out a simulation of the opening of an internal visit on July, 25<sup>th</sup> 2020 in order to rationalize the New Normal period. Surabaya Zoo formed an Independent Task Force (Satgas) to respond to COVID-19 in terms of prevention, handling, restrictions and follow-up on the emergence of indications of the presence of COVID-19 in Surabaya Zoo areas. Preventive Field is responsible to prevent and control the spread of Covid-19 in Surabaya Zoo areas. Curative & Rehabilitative Field is responsible for monitoring and handling whether employees/guests/partners/visitors are found who are indicated by OTG, ODP and PDP, including in the psychological condition approach and recovery activities. Promotive Field is responsible for increasing awareness of the importance of health which can be achieved by carrying out verbal socialization and/or providing education through infographics. Transportation And Security Field is responsible for security during Covid-19 Prevention and Control activities as well as providing the necessary transportation.

## **CONCLUSION**

Based on the results of the study and analysis, several conclusions can be given as follows:

1. Surabaya Zoo is recommended to be reopened during the first stage of New Normal. Center for Conservation and Natural Resources (BBKSDA) East Java Province has given its recommendation as stated in Investigation Event (BAP) Verification of the Management of Conservation Agencies for the Implementation of New Normals in PDTS Kebun Binatang Surabaya Number BA.1210/K.2/BKWII/SKW3/KSA/7/2020 and will evaluate the results 1 month after the reopening.
2. As a regional company owned by Surabaya City Government, Surabaya Zoo still needs permission and approval in operating the Conservation Institution. Surabaya Zoo has good coordination with Surabaya City Government as the capital owner as well as other vertical institutions or agencies authorized to operate this Conservation Institution. This is proven by the relationship between the parties involved in the simulation that was held prior to the reopening and also the sustainability of the operation of Surabaya Zoo.
3. Surabaya Zoo has implemented guidelines in Surabaya Mayor Regulation of New Normal Order Guidelines Number 28 of 2020 as amended by Number 33 of 2020 very well as they implement physical distancing, health protocol, environmental cleanliness improvement and formation of task force. But despite the good management, the number of visitors still haven't reached the daily maximum quota. This indicates that some people still have awareness of COVID-19, and Surabaya Zoo has to work more in gaining trust.

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## BIBLIOGRAPHY

- Shereen, M.A., Khan, S., Kazmi, A., Bashir, N. and Siddique, R. (2020) COVID-19 Infection: Origin, Transmission, and Characteristics of Human Coronaviruses. *Journal of Advanced Research*, 24, 91-98. <https://doi.org/10.1016/j.jare.2020.03.005>
- Guan, Y., et al. (2003) Isolation and Characterization of Viruses Related to the SARS Coronavirus from Animals in Southern China. *Science*, 302, 276-278. <https://doi.org/10.1126/science.1087139>
- Wang, C., Horby, P.W., Hayden, F.G. and Gao, G.F. (2020) A Novel Coronavirus Outbreak of Global Health Concern. *The Lancet*, 395, 470-473. [https://doi.org/10.1016/S0140-6736\(20\)30185-9](https://doi.org/10.1016/S0140-6736(20)30185-9)
- Altaf, M. (2020) Wild Animals as Source of Zoonotic Diseases—A Review. *Journal of Wildlife and Ecology*, 4, 71-84.
- Cui, J., Li, F. and Shi, Z.-L. (2019) Origin and Evolution of Pathogenic Coronaviruses. *Nature Reviews Microbiology*, 17, 181-192. <https://doi.org/10.1038/s41579-018-0118-9>
- The Jakarta Post (2020), Thousands of Animals in Indonesian Zoos may Soon Go Hungry. *Physical @ net Main Reference*. <https://www.thejakartapost.com/news/2020/04/26/indonesian-zoos-struggle-to-feed-animals-during-pandemic.html>. Accessed August 19, 2020
- World Health Organization. Considerations in adjusting public health and social measures in the context of COVID-19 (Interim Guidance). Geneva, 2020 (<https://www.who.int/publications-detail/considerations-in-adjusting-public-health-and-social-measures-in-the-context-of-covid-19-interim-guidance>.)
- World Health Organization. Key planning recommendations for Mass Gatherings in the context of the current COVID-19 outbreak (Interim Guidance). Geneva 2020 (<https://www.who.int/publications-detail/key-planning-recommendations-for-mass-gatherings-in-the-context-of-the-current-covid-19-outbreak>)
- Fitzgerald, D A., Kenneth N and David I (2020) Consequences of physical distancing emanating from the COVID-19 pandemic: An Australian perspective, *Paediatric Respiratory Reviews*. <https://doi.org/10.1016/j.prrv.2020.06.005>
- WHO (2020) Advice on the use of masks in the context of COVID-19. Interim guidance. 6 April 2020 <https://apps.who.int/iris/rest/bitstreams/1274280/retrieve>
- Koh, David, Occupational risks for COVID-19 infection, *Occupational Medicine* 2020;70:82–83
- Michael Belingheri, Maria Emilia Paladino, Michele Augusto Riva, COVID-19: Health prevention and control in nonhealthcare settings, *Occupational Medicine* 2020;70:82–83