

TITLE PAGE

JIJAMATA UDYAN: PARADISE OR PRISON?

TABLE OF CONTENTS

Abstract	2
Introduction	3
Research Question	3
Personal Reasons	3
References	3
Hypothesis	3
Methods	4
Findings	5
Major Findings	5
Testing the Hypothesis	5
Detailed Findings	5
Discussion	12
Reflection	13
CITATIONS	14
APPENDIX	15
Appendix 1	15
Appendix 2	15
Appendix 3	15

ABSTRACT

The Research Question for our study was “Is Jijamata Udyan capable to keep wild animals?” The ‘Recognition of Zoo Rules, 2009 with (Amendment) Rules, 2013’ by the ‘Central Zoo Authority’ (CZA) provides requirements for zoo and animal maintenance. We hypothesised that the zoo would not be following these rules, and therefore is not capable to keep the animals. We created a framework to check whether the zoo is following the rule. Our hypothesis was proved right. Jijamata Udyan is not providing proper care to most of its animals, such as portable water, safety from human disturbance, natural environment in cages or clean cages. Some of the animals might be physically ill or mentally disturbed. The zoo not being an education facility for conservation and environment to the Mumbai public, either through information boards near cages, information at the gate, or activities for the public to learn. We believe this research is significant for Mumbai because firstly, as this is the only zoo in Mumbai, and it receives around 15,000 daily visits, it should be a conservation and environmental centre and education facility, which it is not. Secondly Mumbai is biggest city in India, it is not good for the city or the country for the zoo not to be capable or follow rules. Further research and awareness campaigns could help improve conditions in the Zoo. While Jijamata Udyan is planning to renovate the zoo it should be asked to give guarantee that they will take care of its current animals.

(250 Words)

INTRODUCTION

Research Question

“Is Jijamata Udyan capable to keep wild animals?”

Personal Reasons

- i. When we heard the news that Byculla Zoo will showcase eight penguins, we started being worried about them as in the past many animals have died in the zoo. We then found out that one of the penguins had died due to liver dysfunction and kidney infection.

- ii. Whenever we visit Byculla zoo, we feel the conditions of the animals is not good as they are unhealthy. Most animals were sleeping or looked weak to us. So we felt that the zoo is not taking proper care of them, and this is leading to them dying.

References

- i. In 2009 and 2010, young hippopotamus have died due to lung failure (Yerunkar, 2016).
- ii. One of the penguins died within three months of being brought into the Mumbai zoo. City animals are enraged over this, and want action taken against authorities (Tahseen, 2016).
- iii. Shiv Sena corporator, Jadhav, who had opposed the Sena's plans in bringing in the penguins, has demanded BMC chiefs to improve facilities in the zoo, asking for improving conditions, better animal management, weekly checks on animals, cleaner cages, etc. He submitted a survey showing 86% people interviewed do not feel zoo is clean or well maintained (HT Correspondent, 2016)
- iv. Nair (2016) said that the zoo is planning to bring in new animals as part of its new plan, but Mumbai's environment activists are saying that the zoo needs to drastically improve conditions before it brings in new exhibits.

(Citations of these references are given at the end of the paper)

Therefore, we felt that the zoo is not capable to bring new animals, or take care of its own animals. We feel that since this is the only zoo, and it is such a big city, many people come to visit it, and therefore this issue is an important for Mumbai.

Hypothesis

Jijamata Udyan is not capable to keep wild animals. Our hypothesis was proved right.

METHODS

First our research question was about the penguins, regarding their condition after coming to the zoo, and how the behaviour of these penguins changed after coming to the zoo. We tried to talk to zoo officials but they did not want to comment, or they were unavailable. We carried out 2-3 visits to the zoo but were unsuccessful. Therefore, we changed our focus of research.

After doing secondary research, reading newspaper articles, we felt that the zoo itself is not capable to handle wild animals. We read about the 'World Association of Zoos and Aquariums' (WAZA), an organization which tells countries how to take care of animals. India is also a member of this, and all zoos in India are under the 'Central Zoo Authority' (CZA). CZA has rules for zoo management.

The 'Recognition of Zoo Rules, 2009 with (Amendment) Rules, 2013' (Annex 1) provides requirements and rules for how the zoo should be maintained and the animals should be kept. As our hypothesis is that the zoo is not capable to handle its wild animals, we thought that they would not be following the rules.

We decided that since we were not able to speak to the zoo authority, we would observe and make our own analysis. Since our observations may be right or wrong, or biased, we would check if the zoo was following the national rules or not.

To start with, we read the regulations, and made a list of points which we could check ourselves, to our best understanding, and we visited the zoo to check them. We visited the zoo on a weekend, because most people visit that time, and we could observe if people are disturbing the animals.

We divided points into 2 parts:

- i. Applicable to the zoo in general, which we checked ourselves. (Annex 2)
- ii. List of points which applied to each cage. We made an observation table out of these points, to check them. (Annex 3)

We visited each cage and observed the animals and the cage according to our table. We made a note of our observation, and also took a photograph where we could.

We visited 25 cages in total. We have counted each animal's cage as a separate one. For example, in the small bird enclosure, we have counted separate cages for the dove, parrot etc, as despite being in the same big enclosure, they had different cages. Because there was no map or directions available we were not able to be sure if we have covered all cages or not.

FINDINGS

Major Findings

- i. Jijamata Udyan is not following the rules and regulations as required by the CZA.
- ii. It is not providing proper care to most of its animals, such as portable water, safety from human disturbance, natural environment in cages or clean cages.
- iii. Some of the animals might be physically ill or mentally disturbed.
- iv. The zoo not being an education facility for conservation and environment to the Mumbai public, either through information boards near cages, or information at the gate, or activities for the public to learn.

Testing the Hypothesis

Through our major findings our hypothesis was tested correct, that Jijamata Udyan is not capable to keep wild animals.

Detailed Findings

- i. Our findings about general rules for the zoo:
 - a. Our observations about the Zoo in general show that Jijamata Udyan is not following the rules and regulations as required by the CZA.
 - b. While zoo has nature inside, protective wall around it, there are domestic animals there in the zoo, which are against the law.
 - c. While zoo keeps one day of holiday, it does not regulate the visitors. Nair (2016) says that 15,000 people visit the zoo daily, but the zoo can only take 2,000 visitors in one day. These visitors are not informed about the animals or their importance.
 - d. Zoo has a waste management system, but it can be more progressive and stricter.

Table 1: Observations on General Zoo Requirements

CZA Requirement	Following Yes/No	-	Explanation
-----------------	---------------------	---	-------------

Zoo should have naturalistic environment	Yes	This Zoo is also a botanical garden
Zoo surrounded by human landscape should have a wall of two meter height around it	Yes	This zoo has a wall around entire zoo
Zoo should have a waste management system	Yes (but can be better)	Zoo has dustbins at gate, it, waste separation is not there. The zoo does not allow visitors to take food inside. This is done through announcements and checking of bags. However, one 1 of the 5 times we visited, our bags were checked. Also, we saw garbage in some enclosures, and outside.
Zoo should not have any domestic animals or pets	No	We saw a group of cats and kittens in two cages.
Zoo should regulate movement of visitors	No	Zoo always let's all people visit the zoo at all times
Zoo should be closed at least once a week	Yes	Zoo is closed on Wednesdays
Zoo should educate public about conservation and the environment through various activities	No	There was no information or activities about this during our visits

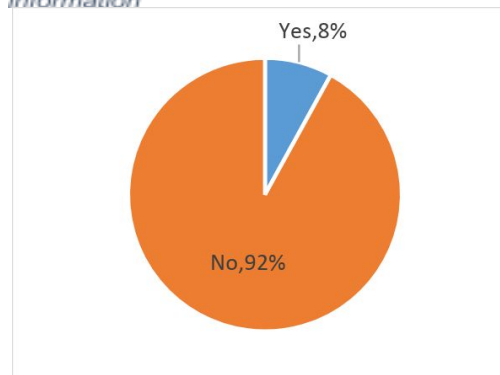
Figure SEQ Figure 1* ARABIC 1: Domestic Cats in one of the Cages



ii. Our findings about the condition of the cages in the zoo:

- a. The Rule by CZA asks that *“Every zoo shall relevant information on the biology, the species in the wild at every display signage was present or not in our table, and have such a sign (92%).*

Figure SEQ Figure 1* ARABIC 2:
Presence of board with scientific
information

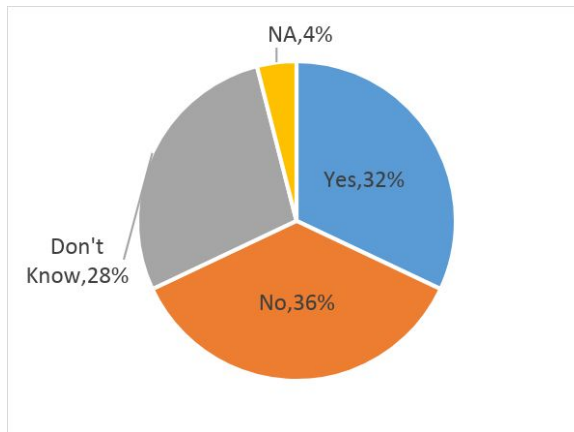


provide appropriate signage with behaviour and the population status of enclosure”. We noted whether such a we found that only 2 out of 25 cages

- b. The Rule by CZA asks that “zoo operator shall ensure round the clock supply of potable water to all the animals in the zoo” We found 36% of cages did not have water present where we could see. 28% of cages, we are not sure, as we could not see the whole cage. NA is for the blackbuck cage, where the animal was not present.

Figure SEQ Figure 1* ARABIC 3: Presence of Portable Water

In the
In the



Whichever cage we saw water present (32%), it appeared not clean. For example:

crocodile (and sambhar) enclosure the water was a bright green colour, and also there was presence of garbage (plastic bottles).

other cages (Water birds, parrot, hornbill etc) where we saw water in the cage, it did not appear clear, and had feathers and other material floating on it.

Therefore 100% of the cages observed with water, it did not appear portable.

Figure SEQ Figure 1* ARABIC 4: Garbage in water



Figure SEQ Figure * ARABIC 6: Plastic bottles in crocodile pond



there). They were also very dark and
Sambhar, Neel Gai)

Figure SEQ Figure * ARABIC 9: Neel Gai cage is run down and lacks natural immersion



Figure SEQ Figure * ARABIC 5: Eutrophication appears to have happened in pond

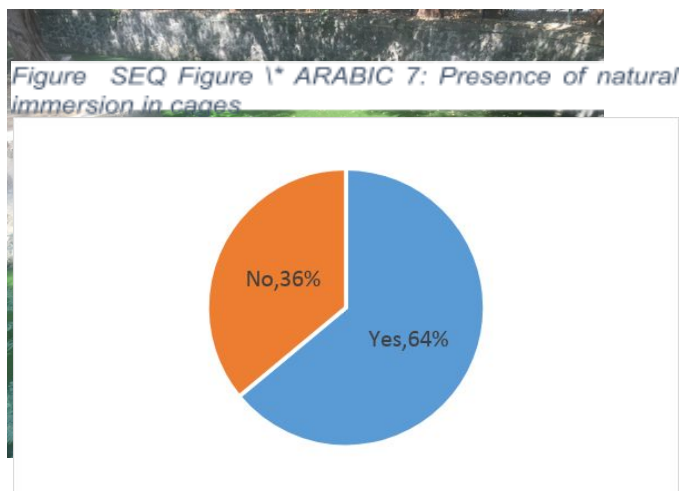


Figure SEQ Figure * ARABIC 8: Sambhar/Deer in dark cage



c. The CZA says that "Every zoo shall endeavour to display the animals in nature immersing enclosures". Most cages (64%) had some greenery, grass, small pond, branches etc. But 36% cages were made of concrete, they were empty (except for the animal run down. (Example: Emu, Hyena,

Figure SEQ Figure * ARABIC 10: Hyena cage is concrete, run down, and lacks natural emersion

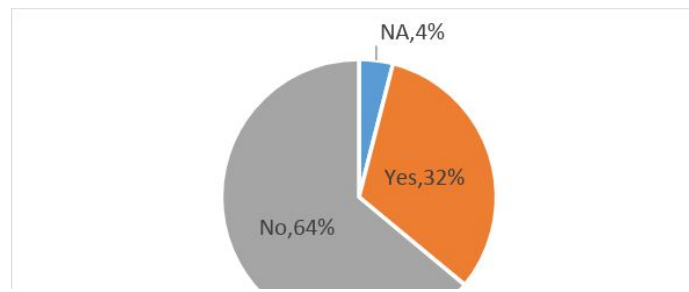


Figure SEQ Figure * ARABIC 11: Hyena in Cage



- d. The rule requires that the zoo give warning to the visitors to Most cages (64%) did not have

Figure SEQ Figure * ARABIC 12: Warnings for Visitors



'display adequate sign boards so as to keep a safe distance from the animals', such signage outside the cage. Also,

every time we visited the zoo, we saw many people disturbing the animals. For example, teasing the animals, going close the cage, throwing things at the animals, making lot of noise, playing music near the cage. 80% cages we visited had this problem.

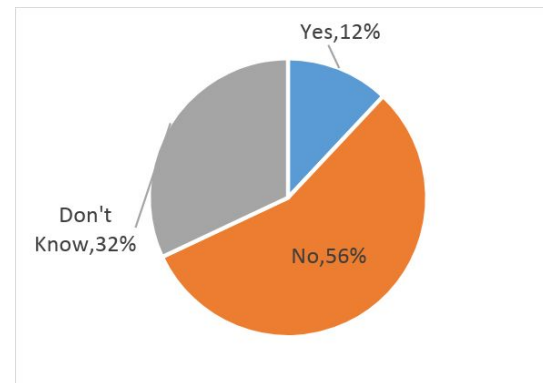
Figure SEQ Figure 1* ARABIC 13: People crossed barriers to go closer to animals and disturb them



Figure SEQ Figure 1* ARABIC 15: Feathers and dirt in bird cages



e. According to us cages should be kept very neat and clean. While there was not details in the rules, we also observed cleanliness of cage. We felt that most of the cages (56%) were unclean (had presence of scat and feathers, had strong smell and even garbage, or were very run down). Cages which we could not see fully, were far, or were very dark inside, we have classified as 'don't know' (32%).



- f. Rule has lot of requirements about health of animals and how they should be taken care of. But, we are not experts and we didn't get to talk with the vet, so we could not check these points. However, we saw some animals which looked unhealthy and sick. For example, the Sambhars in the water pond with the crocodiles were looking weak and their coat of fur was dirty and dull looking. The Emu had its beak open and was making movements indicating it was very thirsty. Some of the Painted Storks were looking weak and dull. While the Elephants enclosure was big, the three elephants were kept chained in a one sided open stable like enclosure in the middle of the mound. They were constantly moving their head and body from side to side. This behaviour shows that they were mentally disturbed.

Figure SEQ Figure 1* ARABIC 16: Sambhar in pond
appear weak and sick



Figure : Emu looked dehydrated



DISCUSSION

Our research question was 'Is Jijamata Udyan capable to keep wild animals and our hypothesis was that it is not capable. Our hypothesis was correct, because we found that Jijamata Udyan is not following the 'Recognition of Zoo Rules, 2009 with (Amendment) Rules, 2013' as required by the CZA in India for zoo management. By not following this regulation, Jijamata Udyan is not providing proper care and living conditions to most of its animals, and we found some of them to be physically ill or mentally disturbed. Also, the zoo is providing conservation and environmental education to Mumbai's public. Since it is not following the guidelines of proper zoo management, it is not being a capable zoo.

We recognise that our research could have been influenced by personal bias, for example, in deciding whether water is clean, or the cages are clean. So, we tried to limit this bias by using the framework we made based on the details in the rules. One limitation was that we could only check those points which we could understand and check ourselves, as we were not able to meet the zoo authorities and interview them.

We believe this research is significant because it is important to prevent cruelty towards animals. But this is also significant for Mumbai for the following reasons: firstly, as this is the only zoo in Mumbai, and it receives around 15,000 daily visits, it should be a conservation and

environmental centre and education facility, which it is not. Secondly, since CZA is a member of the WAZA, and Mumbai is biggest city in India, it is not good for the city or the country for the zoo not to be capable or follow rules.

One action step we can take is to carry out an awareness campaign on our research through social media, writing to newspapers and telling our friends. We can also write to the zoo authorities, asking them for more information and requesting them to improve the conditions. Also, we can request CZA to ask the zoo to improve and follow all the rules.

One new research which can be done further is to check how the zoo is managing against the more detailed 'Guidelines for Establishment & Scientific Management of Zoos in India' by CZA. Further, new research can find out how other big cities keep their zoos, for ideas on how to improve Jijamata Udyan. While Jijamata Udyan is planning to renovate the zoo, and transform it, it should be asked to give guarantee that they will take care of its current animals.

REFLECTION

Akanksha:

1. My most enjoyable part of the project was the practical experience of going to the zoo to observe the animals.
2. I struggled with the non availability of expert in the zoo. In the zoo no authorities gave us any information.
3. If I had to do this research again, we could have compared this zoo with zoos from other cities and countries.
4. I learnt about animals and their behaviour. I also learnt teamwork.

Shreya:

1. My most enjoyable part was the visit to the zoo. Surveying different animals was the most enjoyable part. I also enjoyed reading the names of the trees in the zoo.
2. Taking an appointment with zoo authorities was very difficult. I feel we also struggled because there were no proper directions given in the zoo.
3. I feel we could have taken the help of the expert from the beginning. We changed the research question as no one allow us to see the penguin.
4. I learnt team work, got information about the animals. I got to know the rules for zoo.

Tanvi

1. My most enjoyable part was going to the zoo.
2. We went to the zoo so many times to see the penguins but we didn't get to see them.
3. If I could change something I would change the process.
4. I learn that to achieve something we need to face problems in order to reach the goal.

CITATIONS

- i. Chetna Yerunkar (2016, August 21) Byculla Zoo Welcomes Hippo Calf . Retrieved from Hindustan Times.
<http://www.hindustantimes.com/mumbai-news/female-hippo-gives-birth-at-byculla-zoo/story-P0MMsHVQuuiZvWP8XkwQxH.html>
- ii. Major R Nair (2016, November 28) Mumbai's Zoo is Sad Place. Retrieved from Hindustan Times.
<http://www.hindustantimes.com/mumbai-news/mumbai-s-zoo-is-a-sad-place/story-G3dnnPPnslfTxpIH5pp1AJ.html>
- iii. Ismat Tahseeni (2016, October 2016) 'Mumbai Zoo Authorities Must Send back the Surviving Penguins Back Immediately'
<http://timesofindia.indiatimes.com/city/mumbai/Mumbai-Zoo-authorities-must-send-the-surviving-penguins-back-immediately/articleshow/55049827.cms>
- iv. HT Correspondent (2016) Give Animals Cleaner Enclosures at Byculla Zoo: Sena Corporator. *Hindustan Times*



APPENDIX

Appendix 1

'Recognition of Zoo Rules, 2009 with (Amendment) Rules, 2013' <http://cza.nic.in/rzenglish.pdf>

Appendix 2

Table 2: Framework used to check following of General Rules under CZA regulation

Requirement	Following - Yes/No	Explanation
Zoo should have naturalistic environment		
Zoo surrounded by human landscape should have a wall of two meter height around it		
Zoo should have a waste management system		

Zoo should not have any domestic animals or pets		
Zoo should regulate movement of visitors		
Zoo should be closed at least once a week		
Zoo should educate public about conservation and the environment through various activities		

Appendix 3

Qualitative and Quantitative data collected cage-wise at Jijamata Udyan, using requirements of Zoo Rules as a framework. (Attached Excel)



Annex 3 - Qualitative and Quantitative

