

Primary & Secondary Research

Main research question:

What problems are traditional zoos dealing with today, and how do these problems affect the well-being of animals, conservation work, and how the public views zoos?

Sub-Questions:

1. How do traditional zoo environments affect the health and happiness of animals?

Reason: To understand if the spaces and conditions in traditional zoos are good for the animals' health and happiness.

2. What signs show that animals in zoos might be stressed or unhappy?

Reason: To identify clear signs that an animal is not doing well.

3. Do zoo animals have enough space and things to do to keep them active and engaged?

Reason: To check if animals have enough space and activities to stay physically and mentally healthy. This ensures they are not bored or cramped, which can affect their quality of life.

4. How effective are traditional zoos in teaching visitors about the animals and their natural behaviors?

Reason: To measure if zoos are successfully educating visitors about animals. This is important for raising awareness and helping people understand the need for conservation.

5. How do visitors feel about the conditions and care of animals in traditional zoos?

Reason: To find out what the public thinks about how animals are treated in zoos.

6. How does the expertise of zoo staff affect the care and well-being of the animals?

Reason: To see how the skills and knowledge of zoo staff impact animal care. Better-trained staff can provide better care, leading to healthier and happier animals.

7. How do management problems affect how well zoos can care for their animals?

Reason: To understand how issues with zoo management can affect animal care.

Target group

Families, school groups, and individuals of varying ages, including children and adults. Visitors interested in wildlife, education, and interactive experiences. (in the Netherlands)

To gain insights and better understand my project's target audience, I visited Velhoven Zoo to observe the environment and conduct interviews.

Interview Questions:

How do you feel about the conditions where the animals live in the zoo?

Do you think the animals look happy and healthy? Why or why not?

How does the appearance and cleanliness of the animal enclosures affect your view of the zoo?

How clear and helpful were the signs and information about the animals?

I have gathered perspectives from some visitors, and here are the interviews I conducted.

Participant 1 – A Student study at TU/e - original from Bulgaria)

How Often Going to the Zoo: About once a year.

Purpose: for leisure.

Summary: He found the conditions of the animal enclosures to be poor, with some areas looking neglected and cramped. The animals, in his view, seemed stressed and not well cared for. Cleanliness was a major concern, with several enclosures appearing dirty and poorly maintained. The informational signs were deemed helpful but could benefit from more interactive and detailed content.

Participant 2 – Family living in Woensel

How Often Going to the Zoo: Twice a year.

Purpose: For their children have chances to see, interact and learn about animals.

Summary: They observed that some enclosures were too which they believe negatively impacts animal well-being. The animals appeared subdued and less active than expected (also the reason that make their children feel bored). They noted several areas of the zoo that were not very clean. They found the informational signs to be inadequate, as they were often too brief and lacked depth, leaving them frustrated with the limited educational value provided.

Participant 3 – A child go to the zoo with her grand parent (Questions and answers was translated by her grand father)

How Often Going to the Zoo: One or two times a year with family, sometime with school for study purpose.

Purpose: To see animals (the animals she loves most is all kind of birds because they can fly).

Summary: She really likes Zoo Veldhoven because most of the animals there are birds. She wishes she could hold or touch the birds, but due to the rules, she can only see them through the cages. In some areas, she was not interested because they were not cleaned well and smelled bad. She would like to have games or activities to play with the animals she enjoys.

Participant 4 – Two young girls live in Veldhoven

How Often Going to the Zoo: quite often as they have the zoo subscription.

Purpose: mostly for leisure and love to see wild animals.

Summary: Compared to the other zoo they haved visited, Veldhoven Zoo is a bit small and not so many species. They noticed that the enclosures for several animals seemed outdated. They saw that the animals appeared unhappy and not very active (especially the big birds like eagle for falcon). The overall cleanliness of the zoo also did not meet their expectations. The signs and information provided to be unhelpful, as they were too brief and did not offer enough detail about the animals' natural behaviors.

Primary Research

Possible Methods

1. Surveys
2. Focus groups
3. Interviews
4. Observation
5. Experiments

Sub-Questions:

(My answers based on the experiences i have after visiting Zoo Veldhoven and observing the animals and their surroundings)

1. How do traditional zoo environments affect the health and happiness of animals?
(Observation)

Many of the enclosures are not very large, and some animals, like the zebras and camels, have limited space to move around. Smaller spaces make animals feel cramped and stressed. They don't have enough room to roam or display their natural behaviors, which affect their happiness and health.



The enclosures varies. Some areas were well-maintained, but others had visible litter and looked a bit neglected. Poor cleanliness impacts the health of animals by causing infections or other health issues. (looked tired)

I saw some animals were seen interacting with each other, which is a good sign of social health. However, other animals (especially vulture) seemed isolated or inactive, which indicate a lack of social interaction or proper care.

2. What signs show that animals in zoos might be stressed or unhappy? (Observation)

Some animals that do not move around much, just sit in one place or lie down all the time, might be feeling stressed or bored. Some animals were hiding in corners or not coming out to interact. This might be because they are feeling overwhelmed or scared by the people around them. I saw a few animals, like the monkeys, doing the same thing over and over, like pacing back and forth or rocking. This repetitive behavior can mean they are feeling stressed or anxious.



3. Do zoo animals have enough space and things to do to keep them active and engaged? (Observation)

I saw that the animal enclosures had some features like climbing frames or pools, but the overall space seemed insufficient for most animals. Many enclosures had only a few items, which might not be enough to keep the animals engaged and active throughout the day.

4. How effective are traditional zoos in teaching visitors about the animals and their natural behaviors? (Interviews with visitors – Zoo Veldhoven)

Most of participants found that the zoo was not very effective in teaching visitors about the animals and their natural behaviors. The informational signs were often too brief and lacked depth. Participant 1 thought the signs were helpful but felt they needed more interactive and detailed content. Participant 2 found the signs inadequate and frustrating because they did not provide enough information. Participant 3 also found the signs unhelpful, as they were too brief and did not give enough detail about the animals' natural behaviors.

5. How do visitors feel about the conditions and care of animals in traditional zoos?
(Interviews with visitors – Zoo Veldhoven)

Visitors had mixed but generally negative feelings about the conditions and care of the animals. Participant 1 found the conditions poor, with neglected and cramped enclosures, and noted that the animals seemed stressed. Participant 2 observed that some enclosures were too small, which negatively impacted the animals' well-being, and saw that the animals appeared subdued and less active. Participant 3 also felt the conditions were lacking, noting outdated enclosures and animals that seemed unhappy and inactive. Cleanliness was a concern for all, with several areas of the zoo appearing dirty and poorly maintained.

Secondary Research

Possible Methods

1. Literature analysis
2. Data analysis
3. Root cause analysis

Sub-Questions:

1. How do traditional zoo environments affect the health and happiness of animals?
(Literature analysis)

Traditional zoo environments can significantly impact the health and happiness of animals. According to research of NGO ADDA - a founding member of ENDCAP, animals in zoos often suffer due to the confinement and unnatural conditions they live in. Zoos typically restrict animals to small, artificial enclosures, which leads to several negative effects. For example, animals might develop **stereotypical behaviors**, such as pacing, circling, or self-mutilation, because they cannot express their natural instincts and behaviors.

Key Findings:

- **Stereotypical Behaviors:** Animals may show repetitive actions like walking in circles, biting bars, or rocking. These behaviors indicate frustration and stress, affecting their mental health.
- **Health Issues:** Captive animals often experience problems like apathy, eating disorders, and abnormal aggression. Diseases such as digestive or respiratory issues are also common.
- **Loss of Natural Instincts:** Due to the lack of freedom and natural stimuli, animals in zoos cannot develop or use their natural instincts. This leads to boredom and frustration, further harming their well-being.
- **Impact on Conservation:** Out of approximately 6 million animals in captivity, less than 10% are endangered species. Zoos have not significantly contributed to successful reintroduction programs, and many animals bred in captivity are less likely to survive if reintroduced into the wild.
- **Educational and Ethical Concerns:** Zoos often fail to provide meaningful educational experiences about wildlife and perpetuate the view of animals as objects of entertainment. The current setup reinforces a negative image of animals being used for human pleasure rather than focusing on their well-being and conservation.

2. What signs show that animals in zoos might be stressed or unhappy? (Literature analysis)

According to research, animals in zoos may show signs of stress or unhappiness in several ways. One major indicator is **stereotypy**, which involves repetitive behaviors like pacing or self-mutilation. This behavior is often a result of limited space and unnatural environments. For instance, polar bears, which roam up to 1,000 square kilometers in the wild, might only have a few hundred square feet in a zoo.

Another sign is **zoochosis**, a form of mental distress caused by confinement and lack of stimulation. This condition is widespread due to the crowded and monotonous conditions in many zoos.

Additionally, stress can be exacerbated by **high visitor numbers**. Studies show that increased human presence correlates with higher stress hormone levels in animals. Furthermore, **animal mistreatment** is also a concern, including harmful training methods and poor hygiene in enclosures.

3. Do zoo animals have enough space and things to do to keep them active and engaged? (Data Analysis)

Zoo animals often do not have enough space or activities to keep them active and engaged. Many zoo enclosures are too small for animals that would naturally roam large distances. For example, polar bears, which in the wild cover about 1,000 square kilometers, are confined to a few hundred square feet in many zoos.

4. How effective are traditional zoos in teaching visitors about the animals and their natural behaviors? (Data Analysis)

Traditional zoos offer a unique opportunity for people to see animals they might never encounter otherwise. Each year, over 181 million people visit U.S. zoos, making them popular educational destinations. However, their effectiveness in teaching visitors about animals and their natural behaviors is mixed.

Advantages:

- **Educational Value:** Zoos do provide educational experiences, particularly for children. They offer close-up views of animals and run programs like guided tours and talks with zookeepers. According to a study, 34% of children learned more about animals during a zoo visit. Zoos also inspire some visitors to adopt eco-friendly behaviors, with about 35% of environmentally conscious individuals reporting they learned sustainable practices from their zoo visits.
- **Research Opportunities:** Zoos allow scientists to study animal behavior and health in controlled settings, which has led to important discoveries.

Disadvantages:

- **Limited Space and Unnatural Conditions:** Many zoo enclosures are too small, especially for animals that need large areas to roam. For instance, polar bears, which naturally roam over about 1,000 square kilometers, are confined to much smaller spaces in zoos. This can lead to "zoochosis," a condition where animals display repetitive, stress-related behaviors.

- **Animal Welfare Issues:** Some zoos face criticism for poor conditions and mistreatment. Reports show that a significant number of zoos allow harmful human-animal interactions and neglect proper care. Additionally, the stress from large crowds and the unnatural environment can negatively affect animal well-being.
- **Effectiveness of Conservation:** While zoos claim to contribute to conservation, their impact is limited. Only about 14% of animals reintroduced into the wild come from zoos, and their conservation efforts often focus on more popular species rather than less-known but equally important ones.

5. How do visitors feel about the conditions and care of animals in traditional zoos? (Data Analysis)

Visitors generally have mixed feelings about the conditions and care of animals in traditional zoos. According to the research, many people appreciate zoos for providing an opportunity to see exotic animals up close and view them as educational and conservation hubs. However, significant concerns exist regarding animal welfare.

Critics highlight several issues:

- **Limited Space:** Many zoo enclosures are too small for animals that need large areas to roam. For example, polar bears, which naturally cover about 1,000 square kilometers, might only have a few hundred square feet in a zoo.
- **Crowded Conditions:** Zoos often overcrowd enclosures to ensure visitors see animals, which can stress the animals and limit their space.
- **Unnatural Environments:** Zoo habitats are typically artificial, lacking the complexity of natural environments.
- **Behavioral Problems:** Confinement and inadequate stimulation can lead to stereotypic behaviors, known as "zoochosis," where animals engage in repetitive, purposeless actions.
- **Animal Mistreatment:** Issues such as inadequate care, harmful training practices, and poor living conditions have been reported, including incidents where animals are not properly cleaned or are subjected to harmful interactions with visitors.
- **Animal Welfare Issues:** There's also concern about animal mistreatment. Reports indicate that around 75% of zoos have human-animal interactions that can be stressful or harmful for the animals. Additionally, some zoos have been found to neglect proper cleaning and care, leading to unhygienic conditions and sometimes abusive treatment.

6. How does the expertise of zoo staff affect the care and well-being of the animals? (Root Cause Analysis)

Advantages of Skilled Zoo Staff:

- **Improved Animal Health:** Experienced staff can better manage the health of zoo animals, including detecting and treating illnesses. They are also trained to provide proper nutrition and enrichment, which is vital for the animals' physical and psychological well-being.
- **Behavior Management:** Skilled zookeepers can implement enrichment activities that stimulate animals' natural behaviors and reduce stress. This helps in preventing conditions like stereotypy, where animals display repetitive, purposeless behaviors.

Disadvantages of Poorly Trained Staff:

- **Inadequate Enrichment:** Less experienced staff may not provide sufficient mental stimulation or appropriate habitats, leading to boredom and stress for the animals. This can contribute to a condition known as "zoochosis."
- **Poor Handling:** In some cases, untrained staff may use harmful training techniques or fail to address injuries and illnesses properly, which can negatively impact animal welfare.

Conversely, when zoo staff lack expertise, it can lead to poor animal care. Inadequate training or lack of knowledge can result in insufficient enrichment, poor enclosure conditions, and improper handling of animals, which can all contribute to stress and health problems. Research shows that about 25% of zoos have been reported to mistreat animals due to poor staff practices.

7. How do management problems affect how well zoos can care for their animals? (Root Cause Analysis)

When animals are deemed "surplus" after they have reproduced or when their presence is no longer needed, their well-being is often compromised. Zoos may decide to sell surplus animals to private owners who might keep them in poor conditions or use them for taxidermy. Alternatively, they might sell them to other zoos or, in some cases, euthanize them. This approach arises from financial and logistical challenges rather than the animals' needs, demonstrating how management issues can directly affect the care and treatment of zoo animals.

Secondary Target Group Research

Moving forward, I will focus on secondary Target Group research, specifically examining the number of people going to zoos in the Netherlands. This research will be based on data from the Council on Animal Affairs' report, *The State of Animals in the Netherlands*.



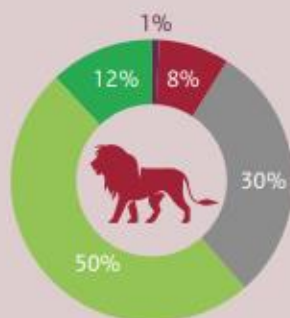
Figure 1. Survey results of the views of the Dutch public on the state of zoo animals

People support zoos as long as the animals can express their natural behaviour

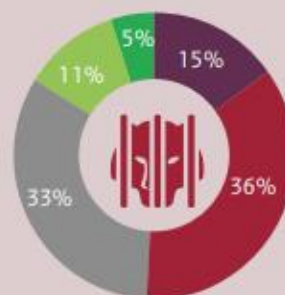
According to six in every ten respondents (62%), if we are unable to allow zoo animals to express natural behaviour, the species concerned is not suitable to be kept in zoos.

That does not mean they believe zoos are a thing of the past. Half of all respondents (51%) disagreed that 'Zoos should be banned in the Netherlands; wild animals should not be kept behind bars'. Sixteen percent agreed with this statement, and 33% neither agreed nor disagreed.

If we are unable to allow zoo animals to express natural behaviour, the species concerned is not suitable to be kept in zoos.



Zoos should be banned in the Netherlands; wild animals should not be kept behind bars.



Please consider the statements below, and indicate the extent to which you agree or disagree with them.
Base: half of all respondents (n=1,000)

Figure 2. Survey results show the percentage of people support zoos only if the animals are able to exhibit their natural behaviors.

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