Zootiere an Zootiere verfüttern ist ein ethisches Problem

- wenn man es nicht tut

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20. Seminar Tierschutz in Zirkus und Zoo, Juni 2023 Nürnberg

every life is important

every life is important

vs.

only some selected lives are important

death is a natural part of life

death is a natural part of life

vs.

we do not want to see/show/talk about death

it is important to take responsibility

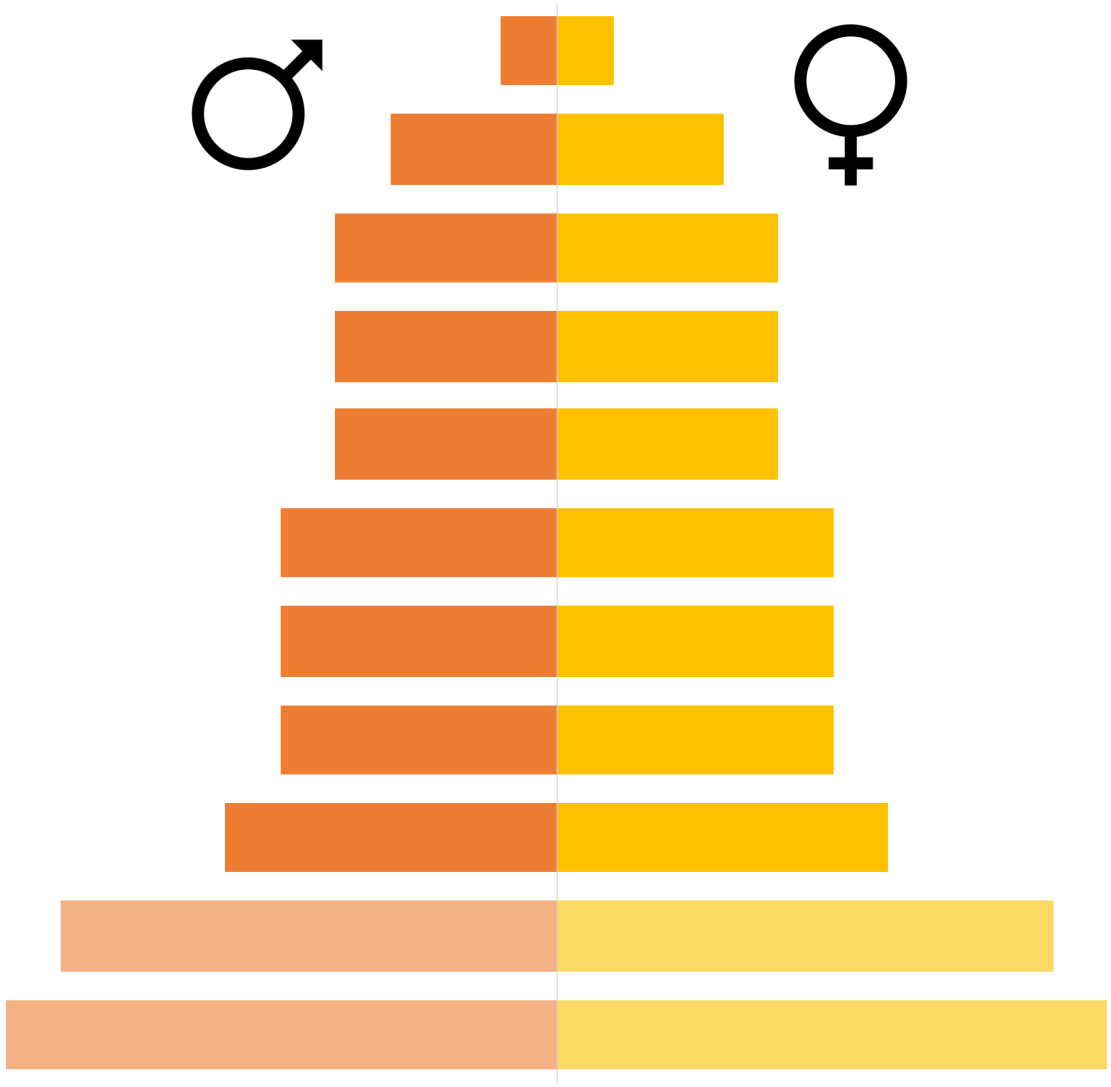
it is important to take responsibility

vs.

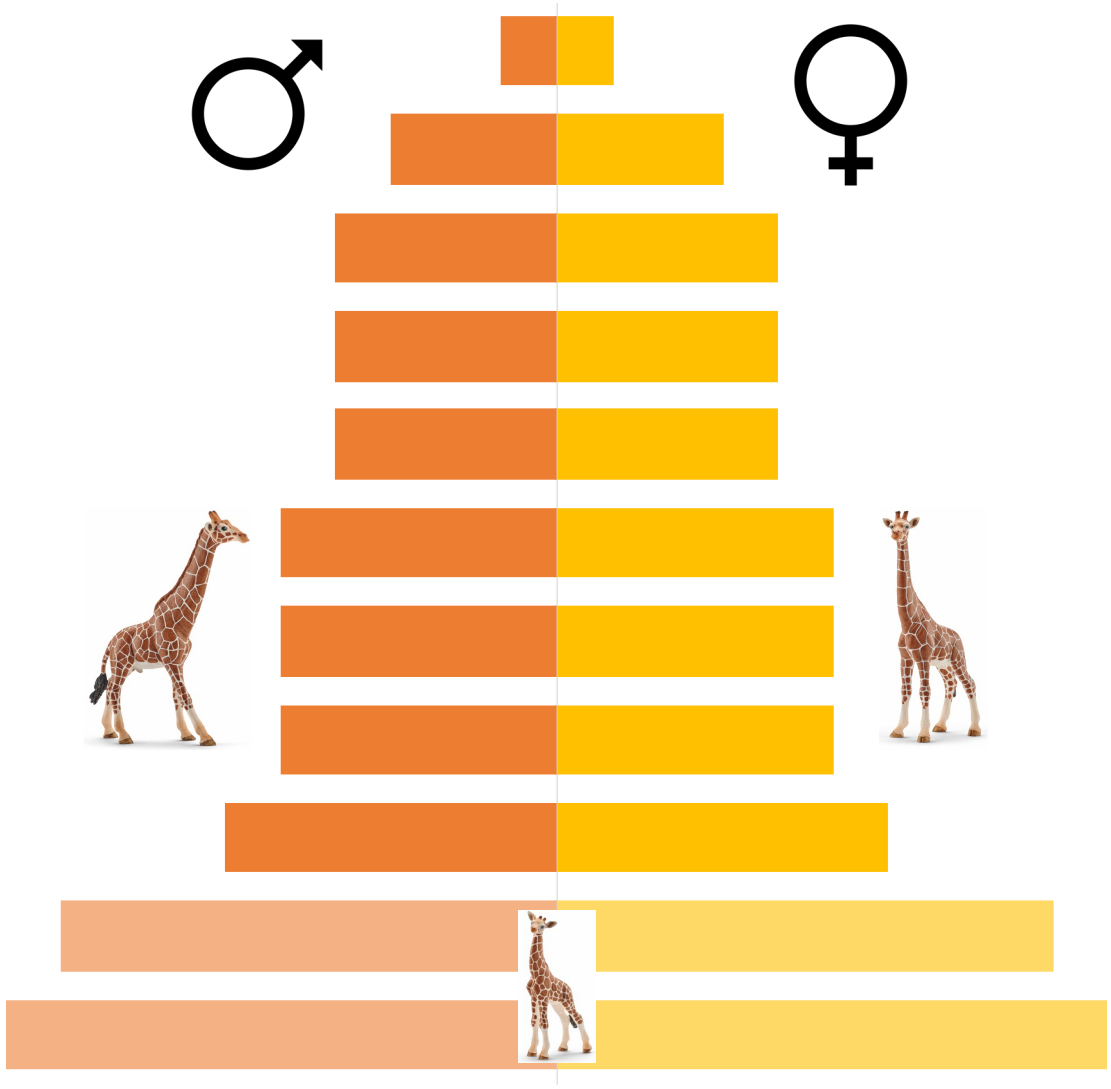
it is convenient to outsource responsibility

Natural habitat – Zoo

Natural habitat – Zoo



Natural habitat – Zoo



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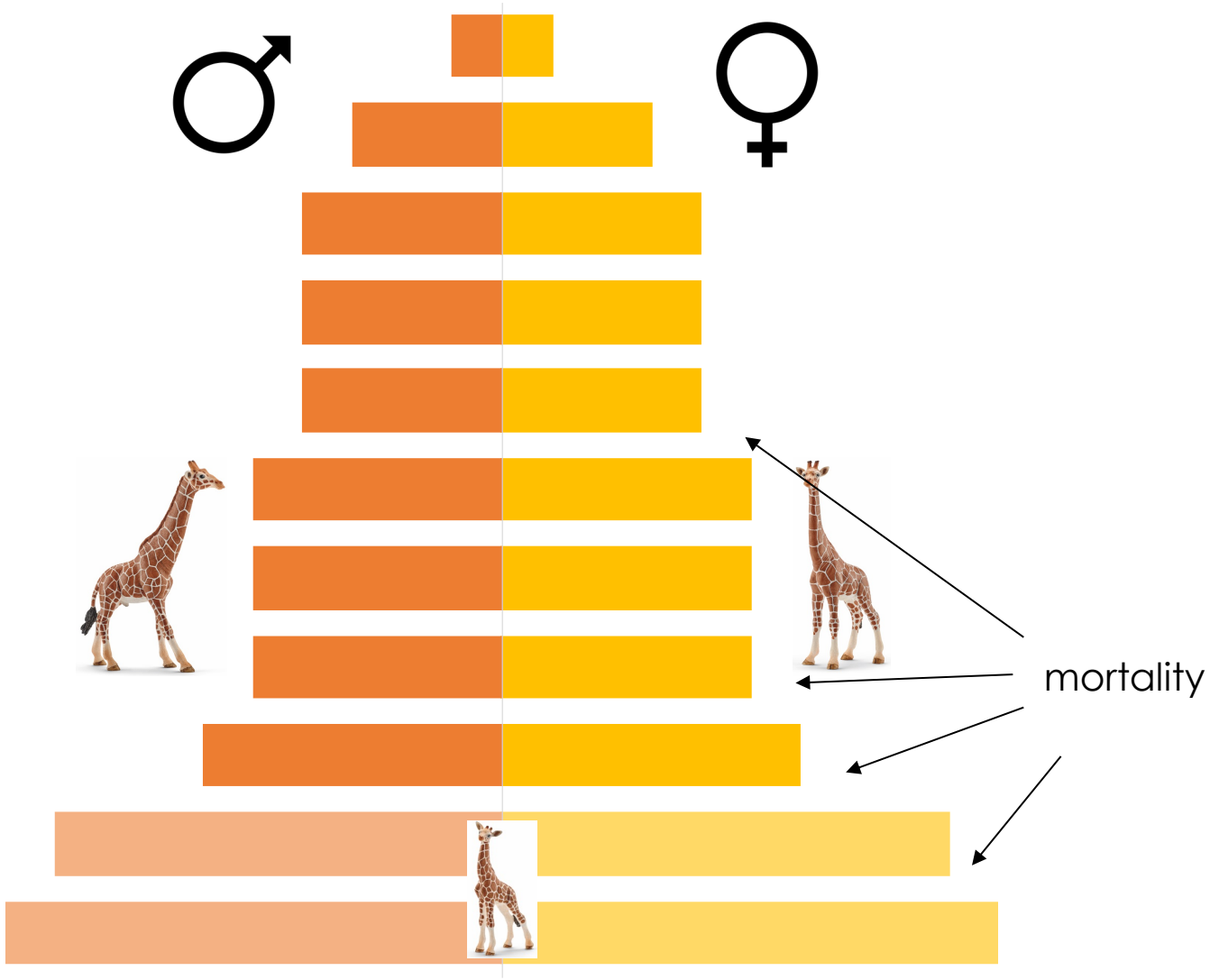

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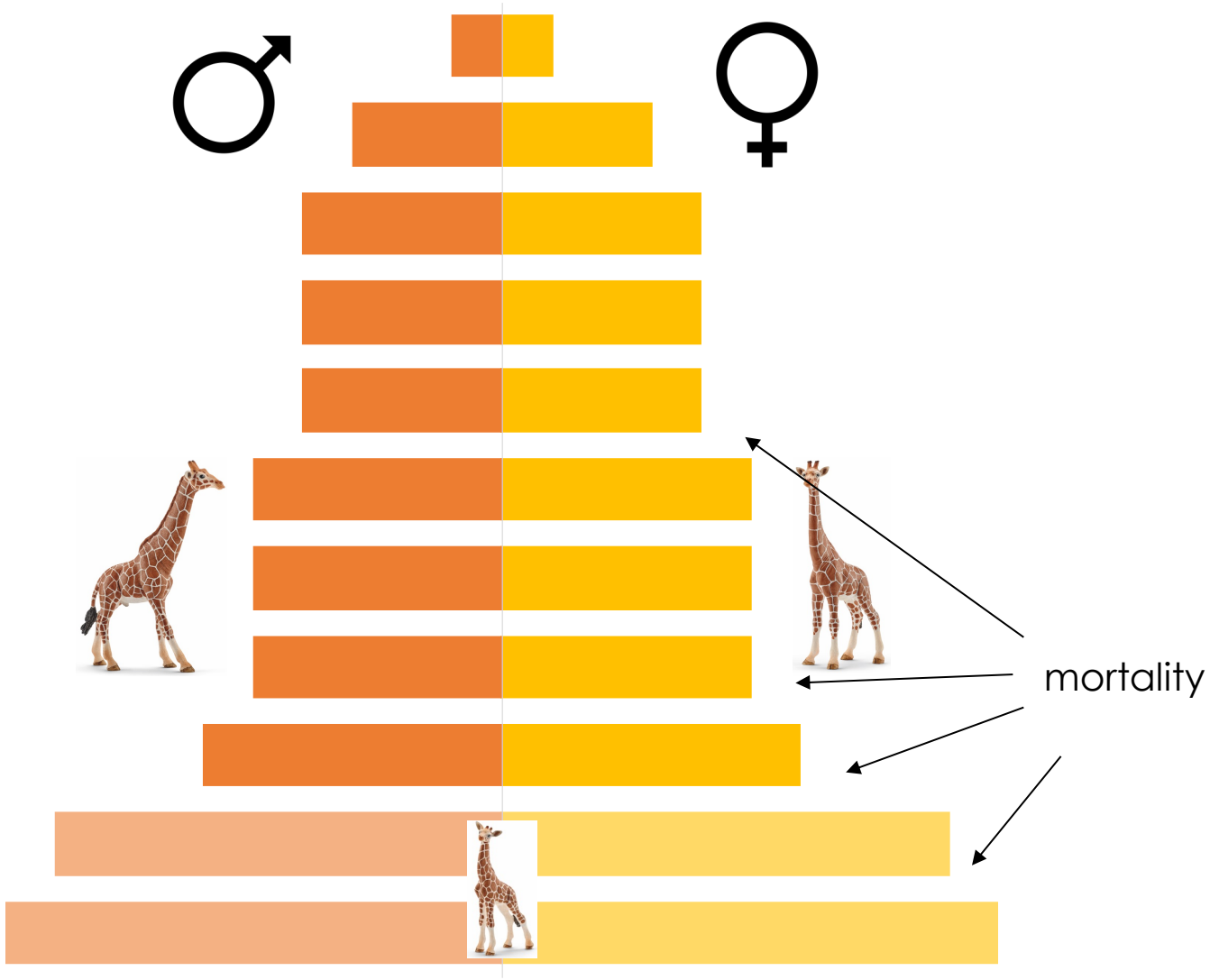

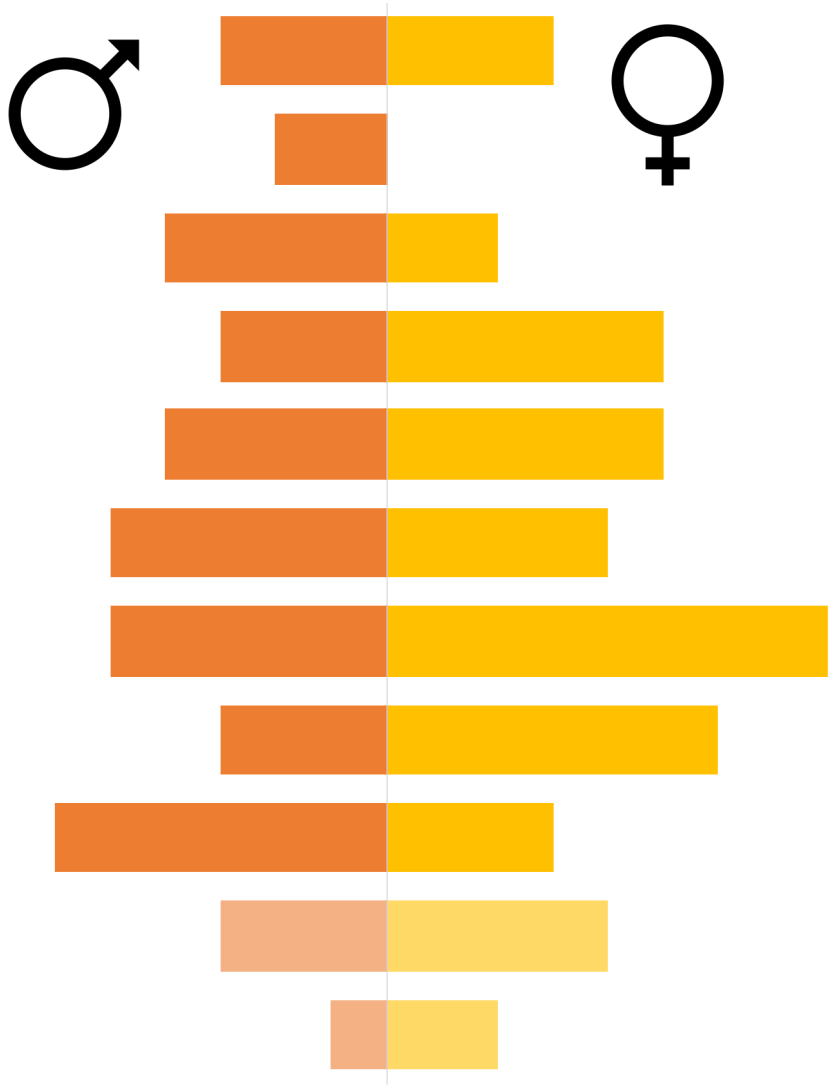

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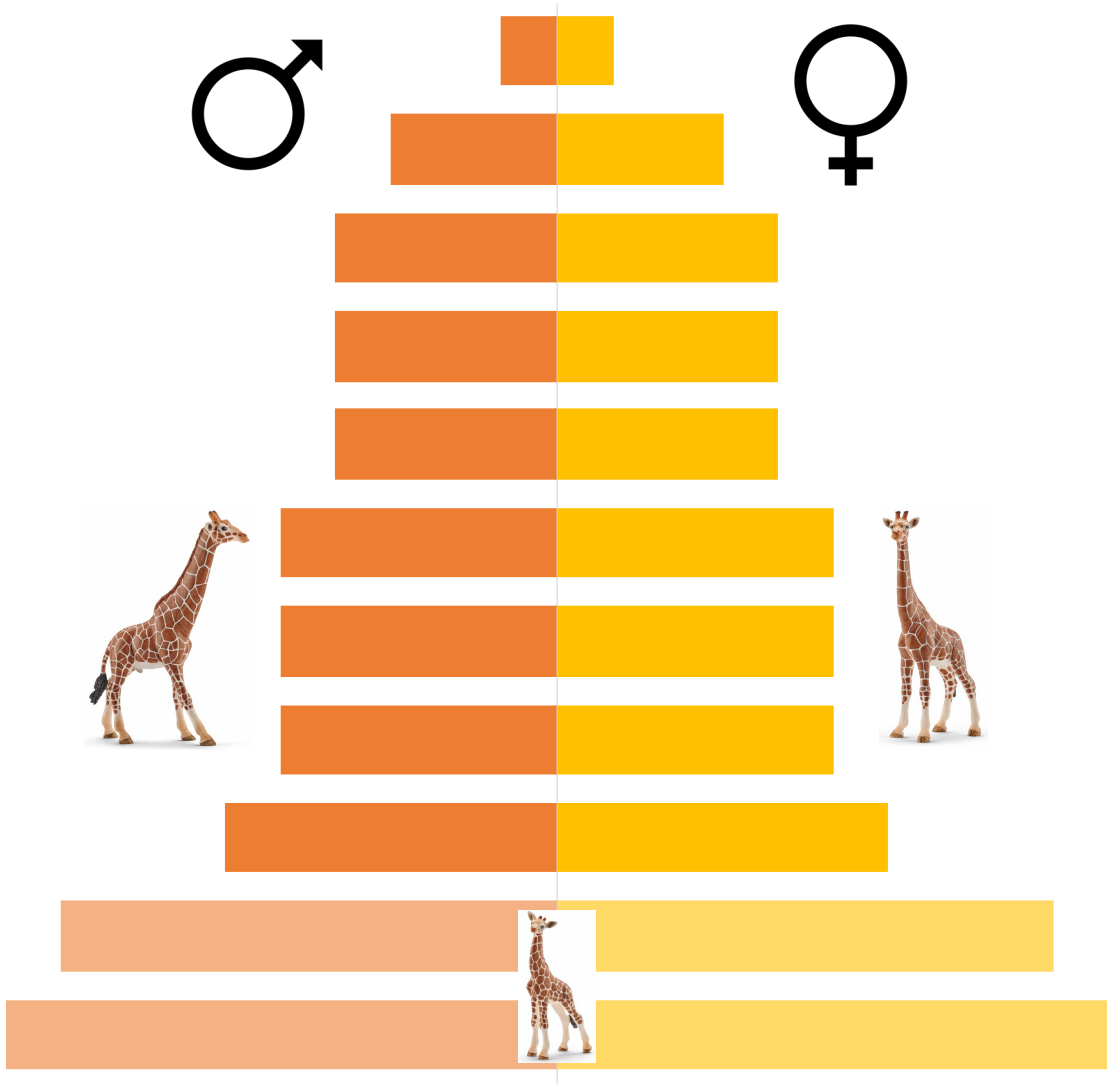
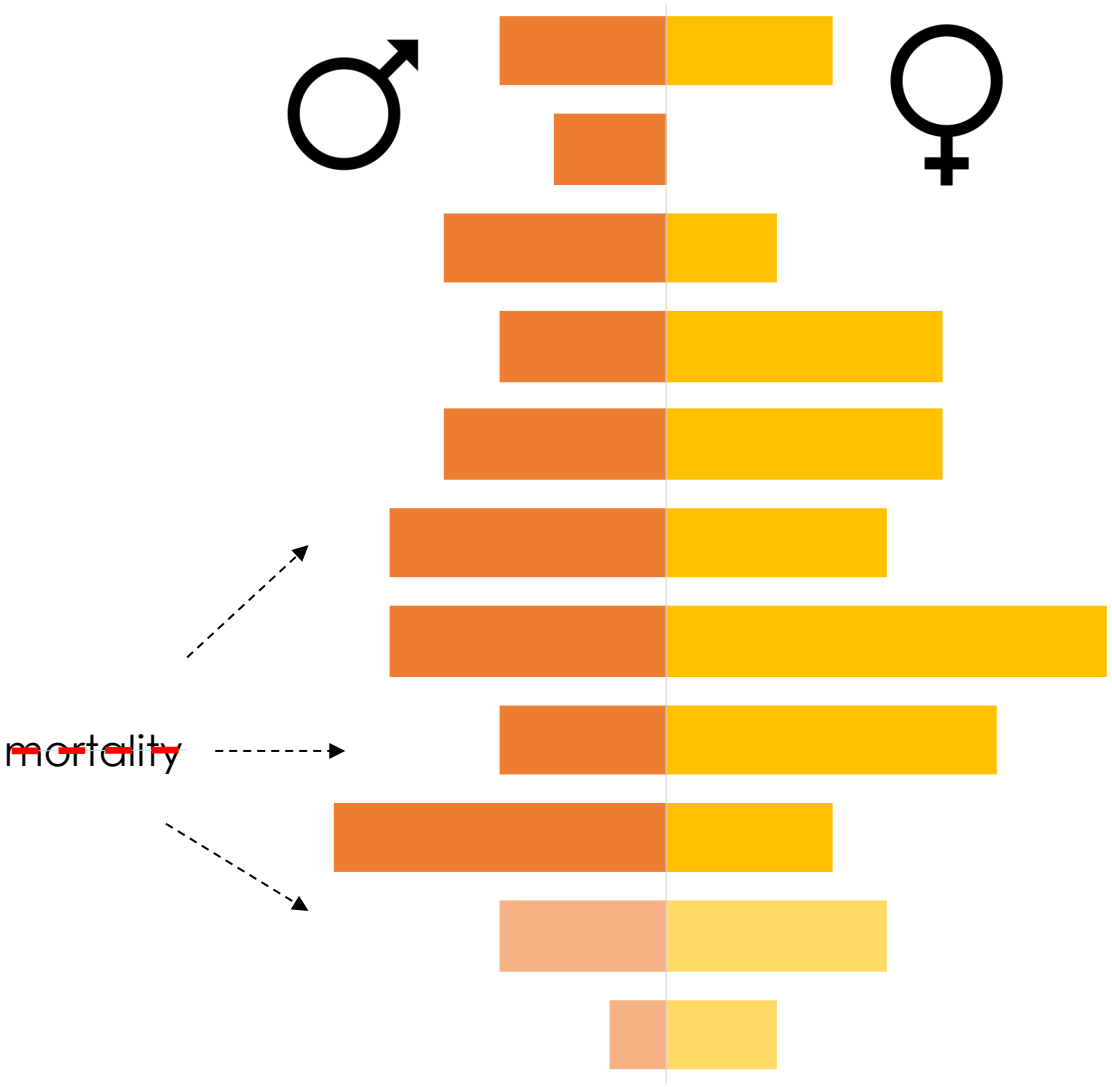
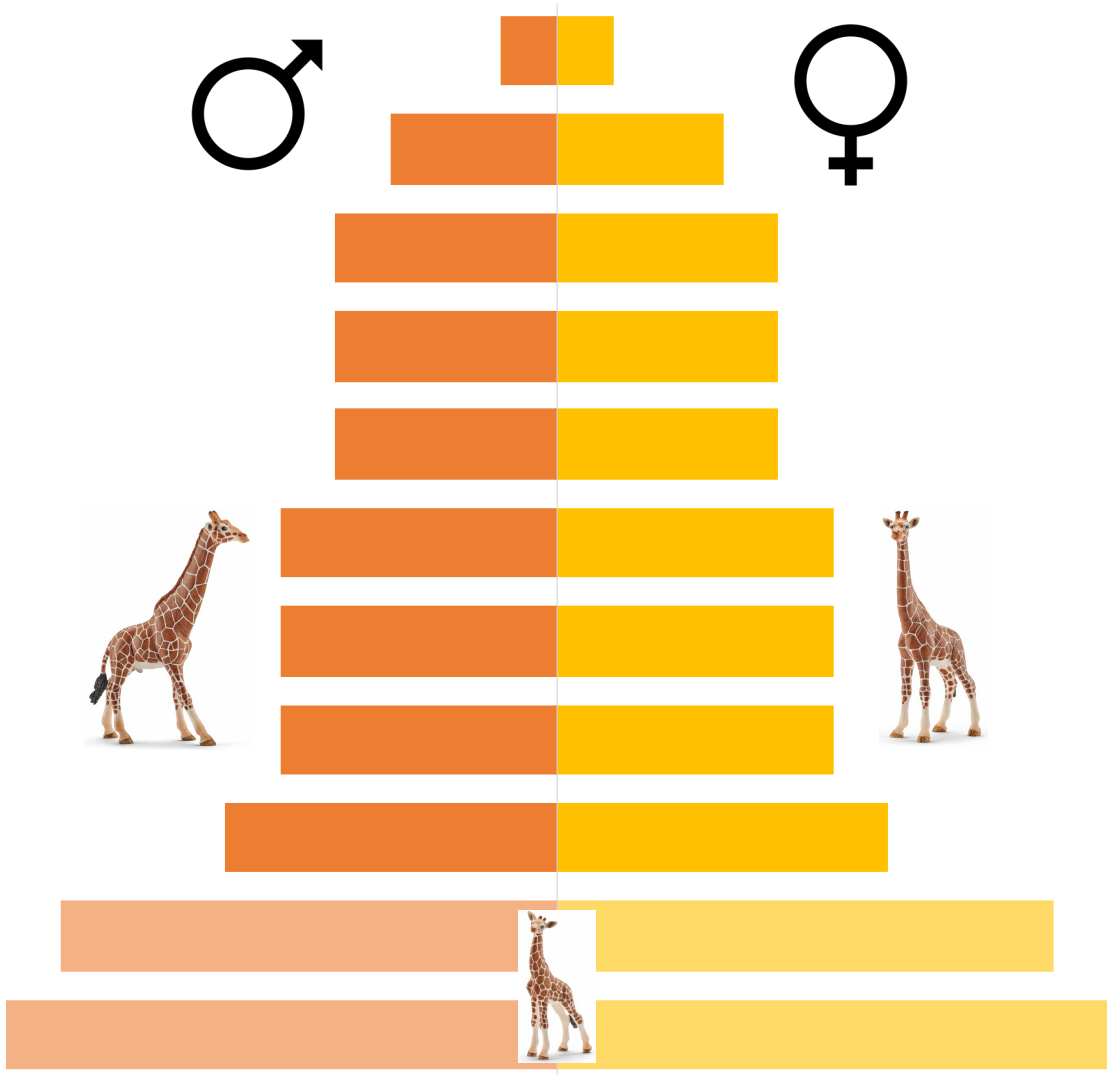
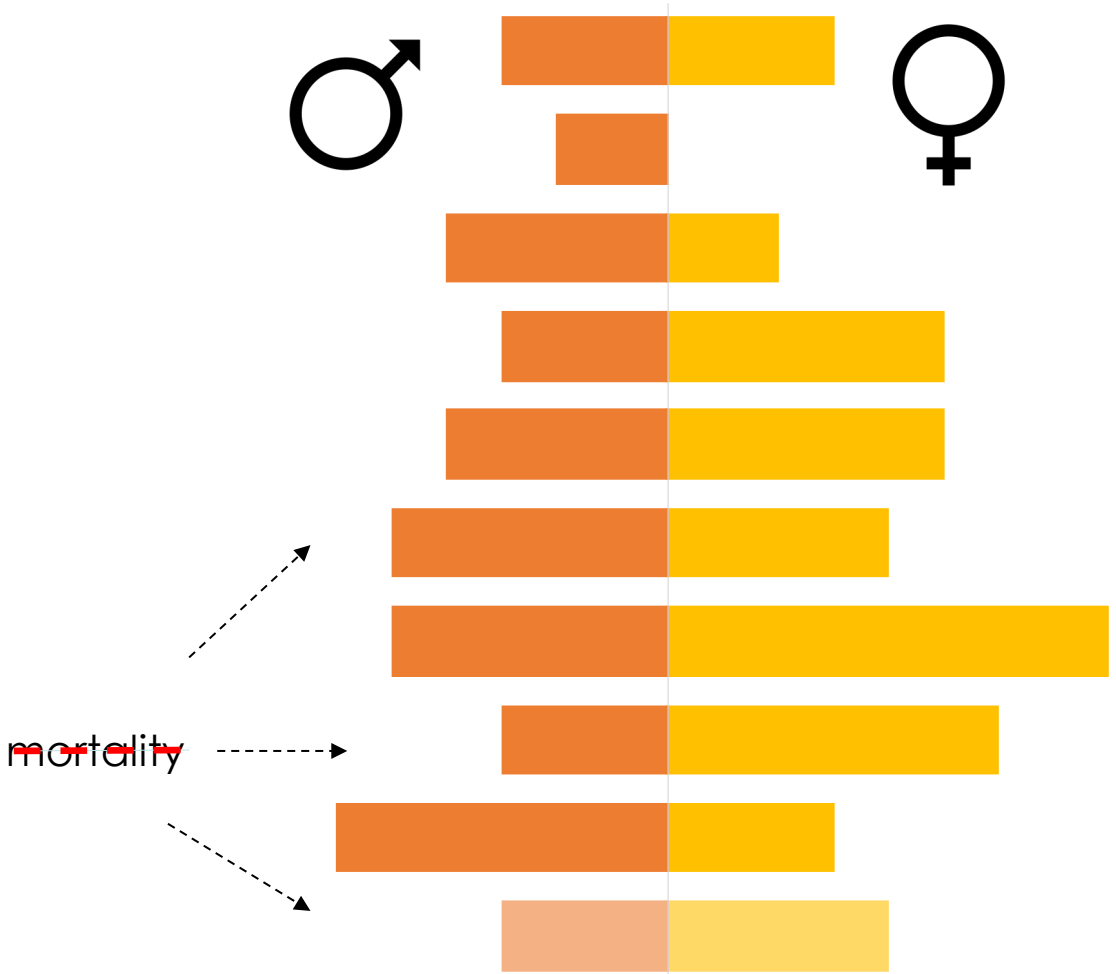




Natural habitat – Zoo





little offspring production because

we don't want responsibility for 'early' deaths

We don’t want responsibility for ‘early’ deaths …

23

Issues Surrounding Surplus Animals in Zoos

MADS FROST BERTELSEN

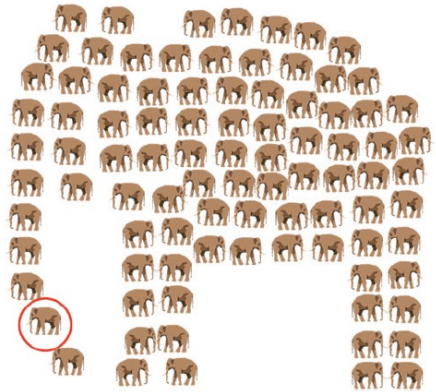
"Surplus animal" has a negative connotation, and it seems appropriate to start a discussion around this topic with a definition. Surplus animals are surplus to the needs of the population and in excess of the needs of the individual institution. In other words, a surplus is more likely to occur the better a species is doing in zoos. The more offspring that are born and the better the individuals are doing in terms of coping with disease, stress, and other problems, the more likely it is that the supply will exceed the demand. Fundamentally surplus animals are a sign of success. The day when zoos breed a surplus of all endangered animals would be a day to celebrate. However, surplus animals eat, take up space (which is ultimately always limited), and evoke the emotions of staff and visitors, so their management is a complicated issue.

Sustainable Populations

It is a declared goal of zoos to be self-sufficient with regard to animals, and indeed the ambition is to maintain genetically, demographically, and physically healthy populations over the long term to promote visitor education and to act as an assurance population for potential future reintroduction to the wild.[1,2] This can happen only through careful genetic management of the animals in the zoo's care and through continued breeding to provide a constant turnover of the population.[2–5] For many veterinarians trained to cater to the survival of the individual animal and used to contributing to species conservation one case at a time, it sometimes takes an effort to step back and see the bigger picture, where it is the long-term health and survival of the *population* that counts (Fig. 23.1). The population has become the patient, and that patient is not doing very well. Despite efforts to maintain sustainable captive populations, recent scrutiny has demonstrated that zoos are far from that goal—far enough to warrant the use of the term "sustainability crisis" (see Chapter 22).[6] To increase sustainability, a change in the culture surrounding zoo animal breeding is needed. Successful breeding of a species must become more important to an institution than maintaining specific individuals. Relocation of individuals must happen more often to allow mate choice, increase genetic diversity, and address infertility (see Chapter 21). That is, a reproductive management plan must be implemented for each individual to optimize the possibility of retaining genetic diversity through breeding while maintaining manageable yet sustainable populations.

Meeting the Demand

Contraception or even just separation of the sexes are powerful tools to reduce the number of offspring. However, the safety and reversibility in terms of future breeding are often (depending on the species) less than optimal.[6,7] More importantly though, sustainability is not just about numbers but about breeding the right animals. Although sometimes skewed,[8] the average sex ratio at birth is close to 1:1, producing an unavoidable surplus of males in species where one male breeds with several females (e.g., a "harem"



• **Figure 23.1** For veterinarians trained to cater to the survival of the individual animal and used to contributing to species conservation one case at a time, it sometimes takes an effort to take a step back and see the bigger picture, where it is the long-term health and survival of the *population* that counts.

system of breeding). This applies to most hoofstock and megavertebrates as well as a number of carnivores. Contraception cannot solve this problem, and surplus males are an unavoidable byproduct of breeding enough females.

Even if the exact production of offspring could be controlled, which of course it cannot, the demand is impossible to predict. Disease, senescence, and infertility may change the influx required to sustain a population. Therefore a certain surplus is necessary, as it provides an essential buffer for unexpected events. However, such surplus animals cannot be sustained forever. Although some bachelor herds are necessary for backup and for providing a "genetic pool" from which to draw new breeding males, permanently housing animals surplus to the breeding programs ultimately will obstruct the system by taking up space and resources that could otherwise be used for more genetically valuable breeding individuals. There are only so many seats on the bus, so to speak.

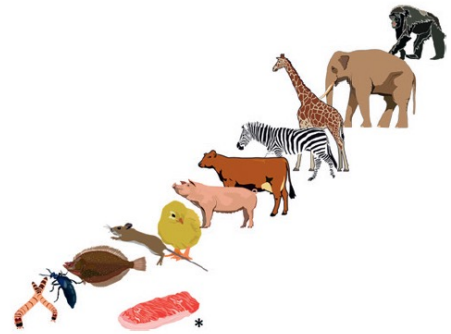
Breeding Is "Natural"

In general, zoos strive to provide "natural" conditions for their animals, although in practice numerous compromises are made; "natural" space is not available to most animals, "natural" diets are often substituted, and "natural" habitats and climates are mostly lacking. On the upside, "natural" parasites, "natural" predator stress, and "natural" competition for food are usually absent. Most would agree that "natural" behavior should be strived for, and with food provided and no predators to avoid, breeding becomes a paramount tool in providing "natural" behavior and "enrichment" in the shape of courtship, pair bonding, mating, pregnancy, nursing, feeding, mother–infant bonding, playing, sparring, and so on.[9–11] All these effects are essential parts of animal welfare, but in excess of population needs, surplus animals are the unavoidable secondary outcome.

How to Deal With Surplus Animals

So for the reasons previously mentioned, a certain surplus of animals is not only a sign of healthy populations but also an unavoidable "by-product" of sustainable breeding. As previously mentioned, simply housing surplus animals indefinitely is counterproductive to achieving sustainable populations, as these animals take up space that could be used for individuals more genetically valuable to the population. Sending such animals to private holders or institutions outside of the breeding programs raises a multitude of ethical issues and ultimately is not a long-term solution. Reintroduction into the wild unfortunately is rarely a realistic solution. Thus the only option available is to kill (or cull) those animals definitely in surplus.

It can be (and has been) argued that killing any animal is ethically wrong; however, the vast majority of human beings and every zoo known to the author have made the fundamental choice that it is acceptable to kill animals. For example, approximately 95% of the US population consume



• **Figure 23.2** What animal species may be culled to feed others? Most people have an irrational cutoff on the "cuteness index" shown here. Where is yours? Note that generic meat (*) falls very low on the scale.

meat,[12] and every zoo utilizes invertebrates, rodents, chickens, and ungulates as feed for its carnivorous inhabitants. In addition, most zoos kill invertebrates, rodents, and various other animals categorized as pest species. An old anecdote accounts for a conversation between a gentleman and a distinguished lady at a fundraising dinner. The gentleman offers the lady $100,000 if she will agree to sleep with him, an offer to which she assents. He then asks if she would do it for $10. The lady gets upset and says: "What kind of woman do you think that I am?" to which he replies: "We have already established that. Now we are just haggling over the price." The situation is very analogous to our relationship to killing animals; consciously or not, we all apply a more or less arbitrary cutoff on a scale from cockroach to great ape (Fig. 23.2), and our position on the scale is highly dependent on our nationality and cultural background.[10,13]

When the rational decision to cull has been made, the next question is when to do so. Some institutions have instituted a practice of culling infants deemed surplus shortly after birth; however, this precludes them from harvesting several of the benefits of producing surplus animals: the enormous behavioral enrichment to the parents of raising the offspring and the idea of having a buffer. A compromise, based on the three peaks of mortality observed in the wild, appears rational and "natural": In "nature" the mortality is highest in infants, animals around dispersal age, and in animals past their prime; geriatrics are not common in the wild. Zoos can mimic this by reducing litter sizes perinatally, primarily culling around dispersal age, and by minimizing the amount of postreproductive animals to a minimum deemed necessary for balanced group composition. Maintaining postreproductive individuals of solitary or monogamous species is counterproductive for population sustainability.

How the animals are used following culling has a great impact on the acceptance of the practice by zoo employees and the public alike. Also here, there are vast cultural differences around the globe, yet it appears that a utilitarian

The ‘surplus problem’

Surplus = ‘too much’ --- animals that can’t be placed

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Killing surplus
(breed & cull, management euthanasia, breed & feed)
= “*not using all management options*”

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‘breed & feed’ sounds like an excuse

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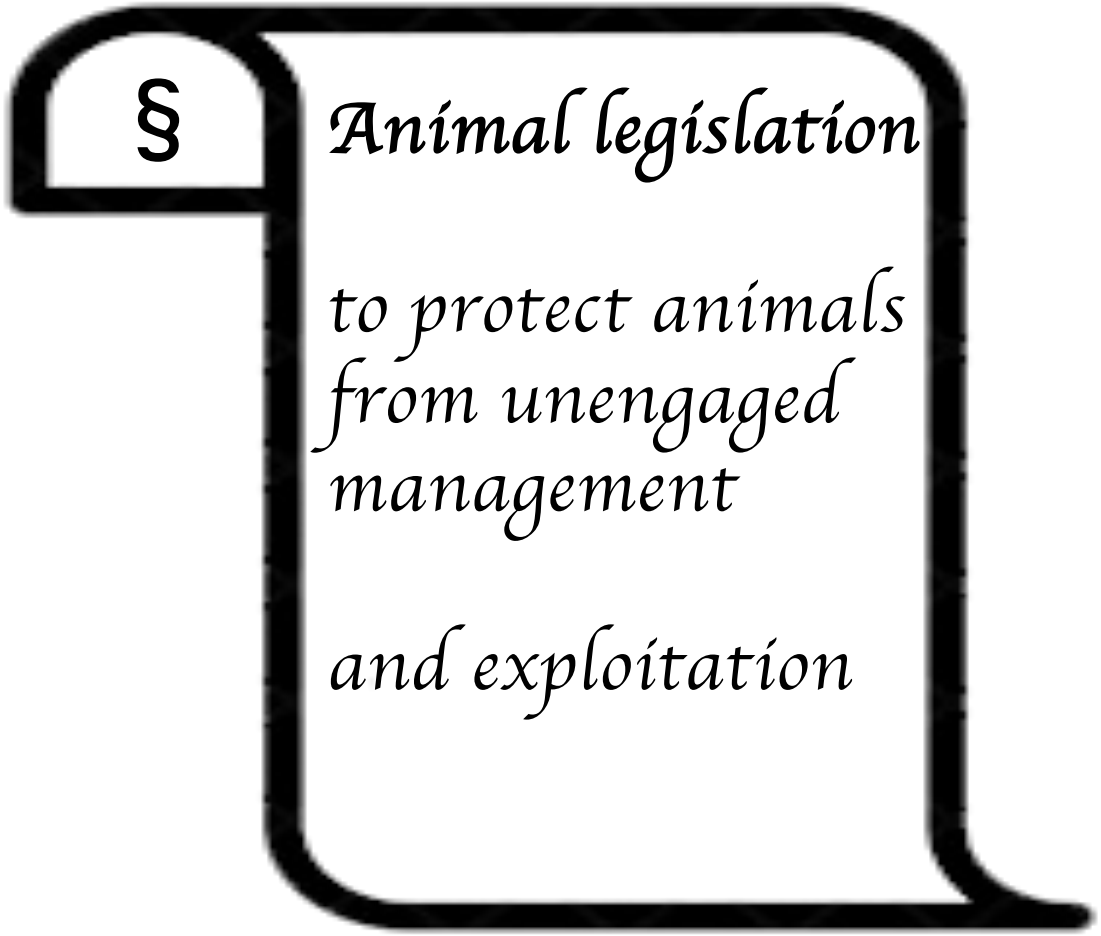


But all this is 'breed & feed' …



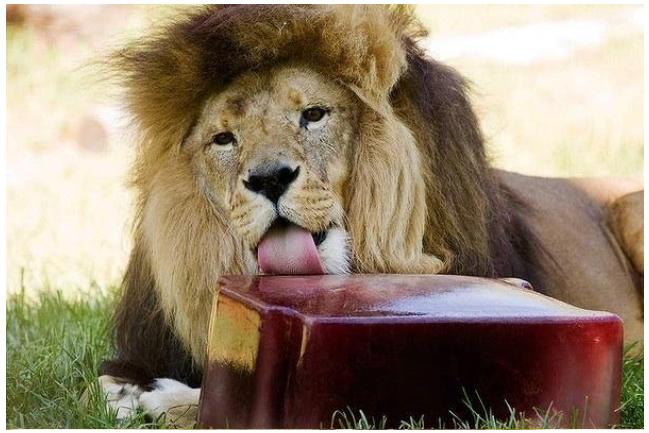



Feeding animals to zoo animals

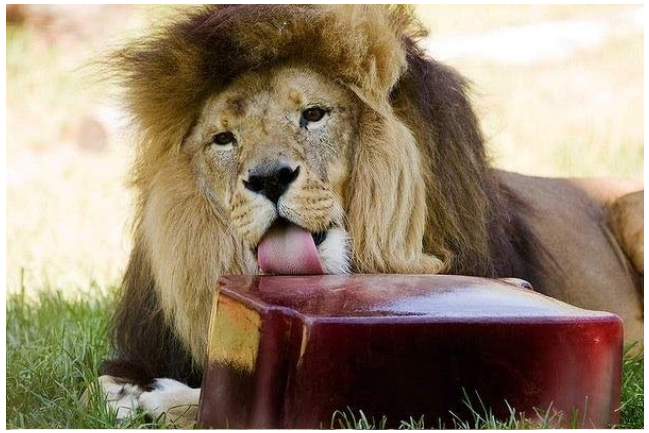
Feeding animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores

Feeding carnivores …



Feeding carnivores …



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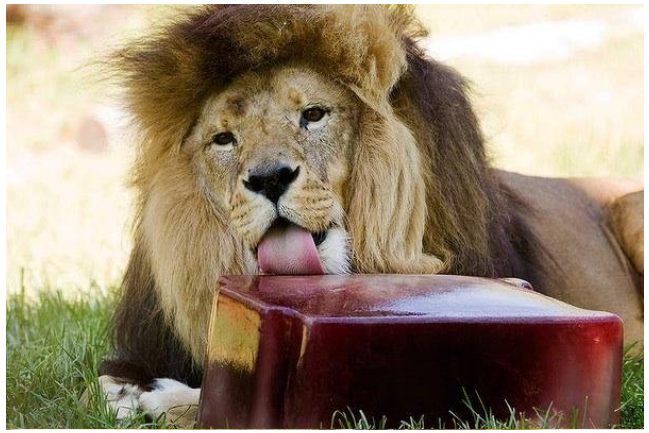

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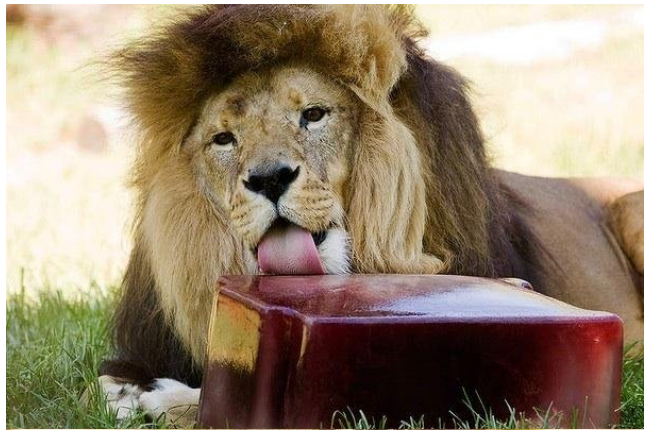

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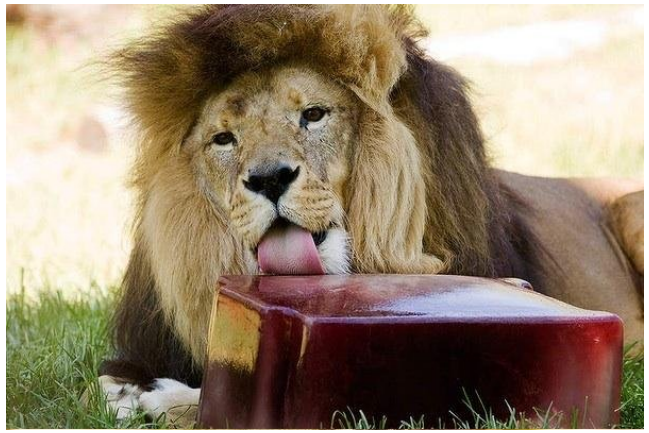

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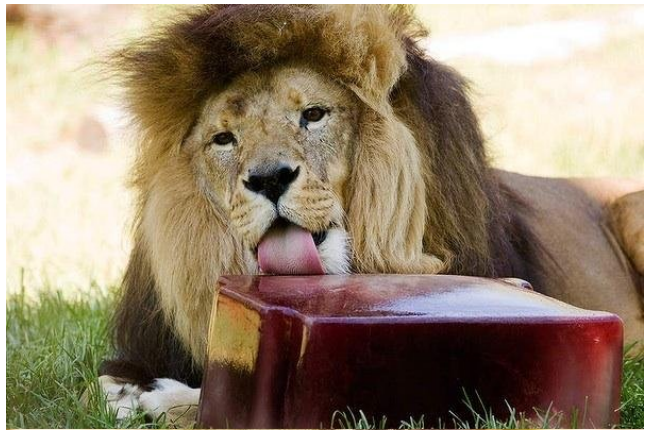
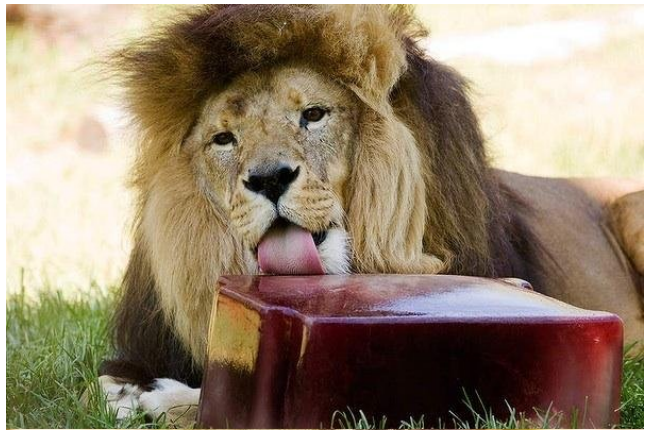
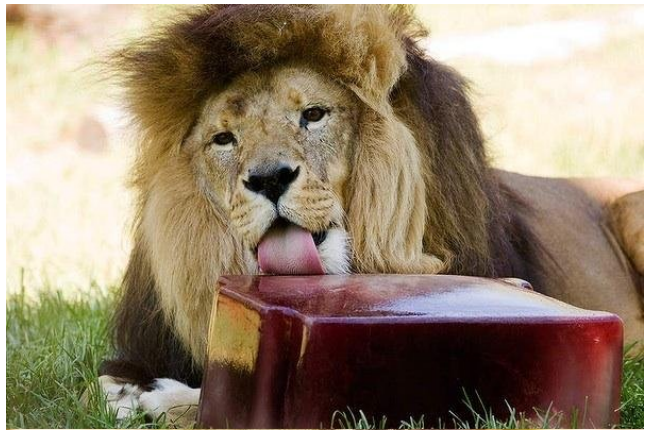


Feeding carnivores …



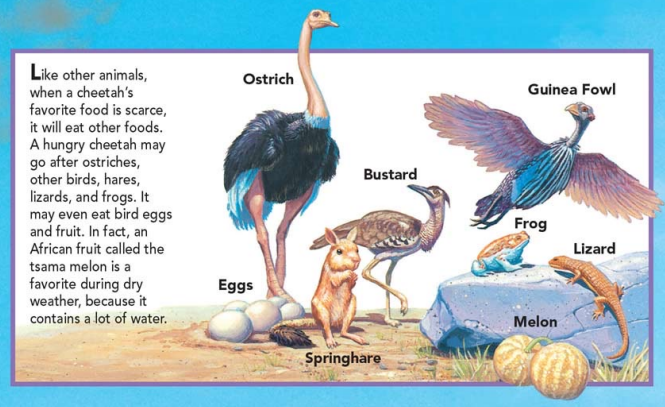
Feeding carnivores
… *with animal (product)*



Cheetahs are spectacular hunters. Many cats creep close to their prey and pounce on it. When tall grass is available, cheetahs will do that, too. But on the open plains, in a blur of speed, cheetahs can begin their high-speed chase from as far as ***300 feet away***.

Cheetahs do most of their hunting in the cool early morning or late afternoon hours. Usually they hunt alone. But a cheetah mother teaching her cubs, or a small group of two to four male cheetahs, may also hunt together. Cheetahs prefer to hunt gazelles, impalas, and other small antelopes.

Like other animals, when a cheetah's favorite food is scarce, it will eat other foods. A hungry cheetah may go after ostriches, other birds, hares, lizards, and frogs. It may even eat bird eggs and fruit. In fact, an African fruit called the tsama melon is a favorite during dry weather, because it contains a lot of water.



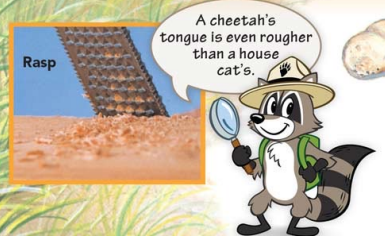
Even though cheetahs are very good hunters, they don't always catch the meal they go after. Cheetahs tire quickly, and if they can't catch their prey within a few hundred feet, they give up the chase. Only about half of all cheetah hunts are successful.

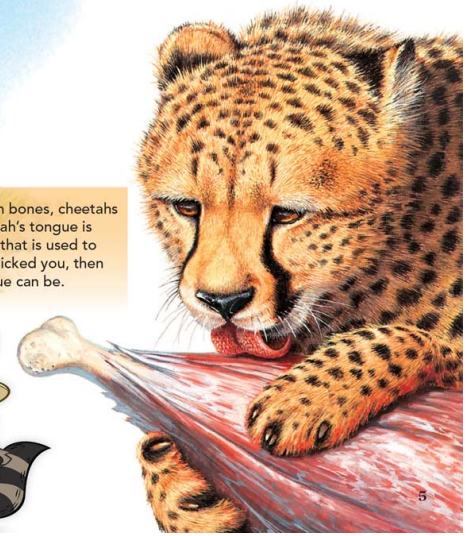
After making a kill, cheetahs usually drag their prey into the shade of a bush or tree. But they don't eat it right away. They must catch their breath first! After a hard chase, even the hungriest cheetah may need to rest for up to 30 minutes before eating.

After chasing its prey at lightning speed, the cheetah strikes the animal on the rump to knock it over. It will then hold the prey by the throat to cut off its air supply. As incredible as it seems, the whole chase lasts only 20 seconds, yet may cover as many as 1,500 feet.

Cheetahs hunt almost completely by sight. To look for prey, they usually climb on top of termite mounds or other raised places for a good view of the plains. Once they've spotted a herd, they single out a victim and the hunt is on. This mother and her almost-grown cub are looking for prey together.

To scrape the last bit of meat from bones, cheetahs have very rough tongues. A cheetah's tongue is almost as rough as a rasp—a tool that is used to file wood. If a house cat has ever licked you, then you know how rough a cat's tongue can be.





What do we want to see … when ?

What do we want to see … when ?

What do we want to see … when ?

What do we want to see … when ?

What do we want to see … when ?

Feeding animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores

Feeding animals to zoo animals

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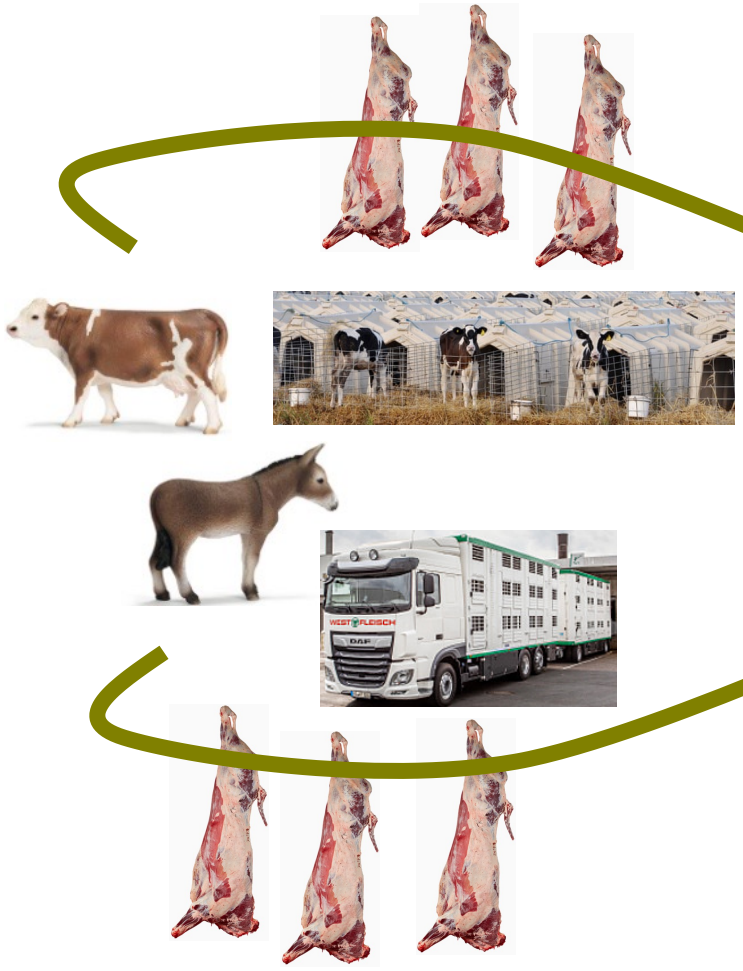
Where do these animals come from ?

Feeding your carnivores

Feeding your carnivores



Feeding your carnivores

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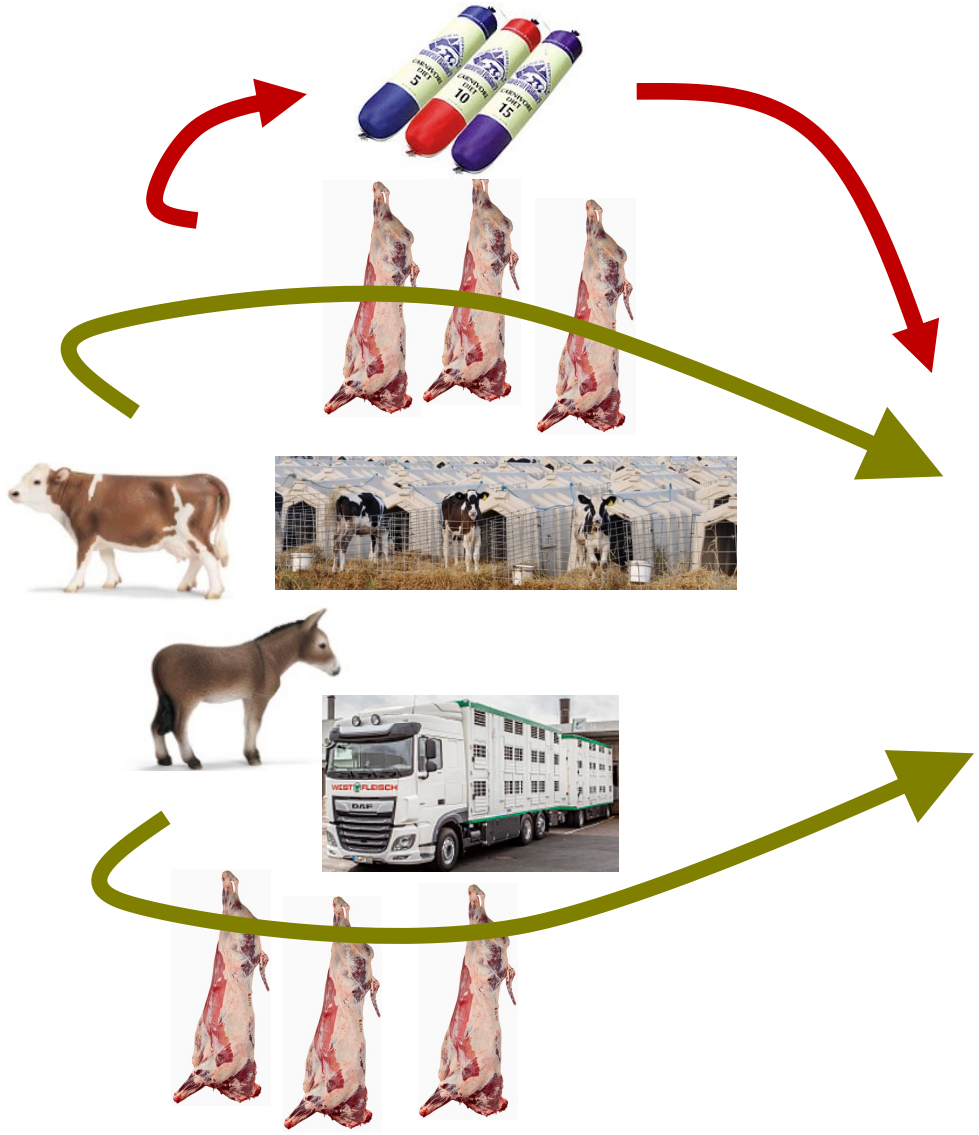
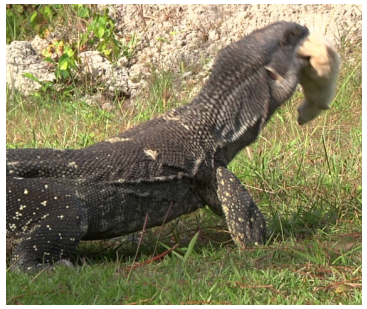
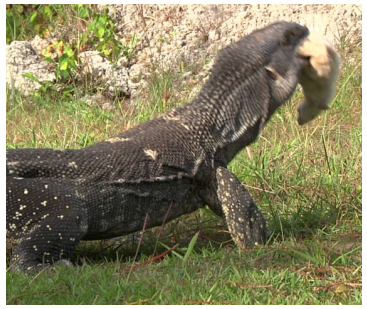


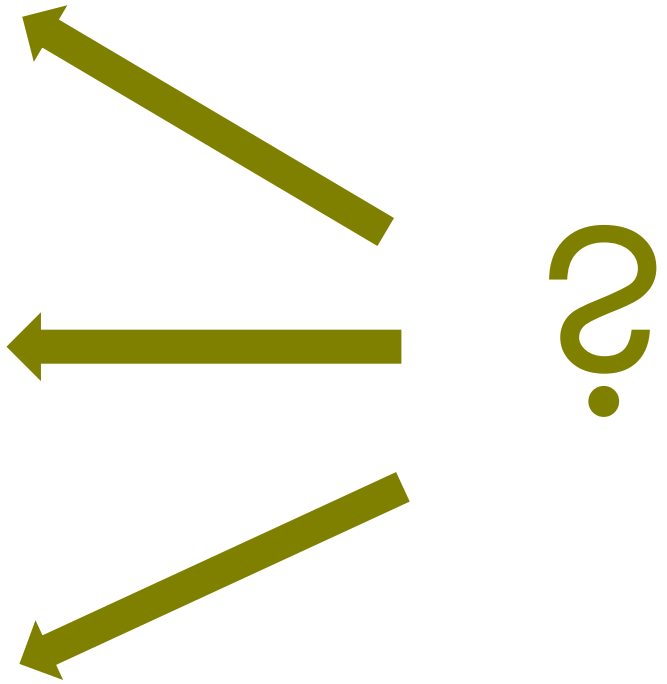
Husbandry
Welfare
Social structures ?
Offspring raising
Time of harvest

Complex carnivore enclosures

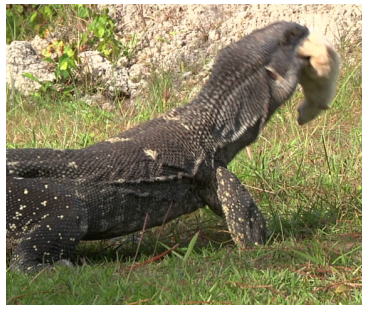


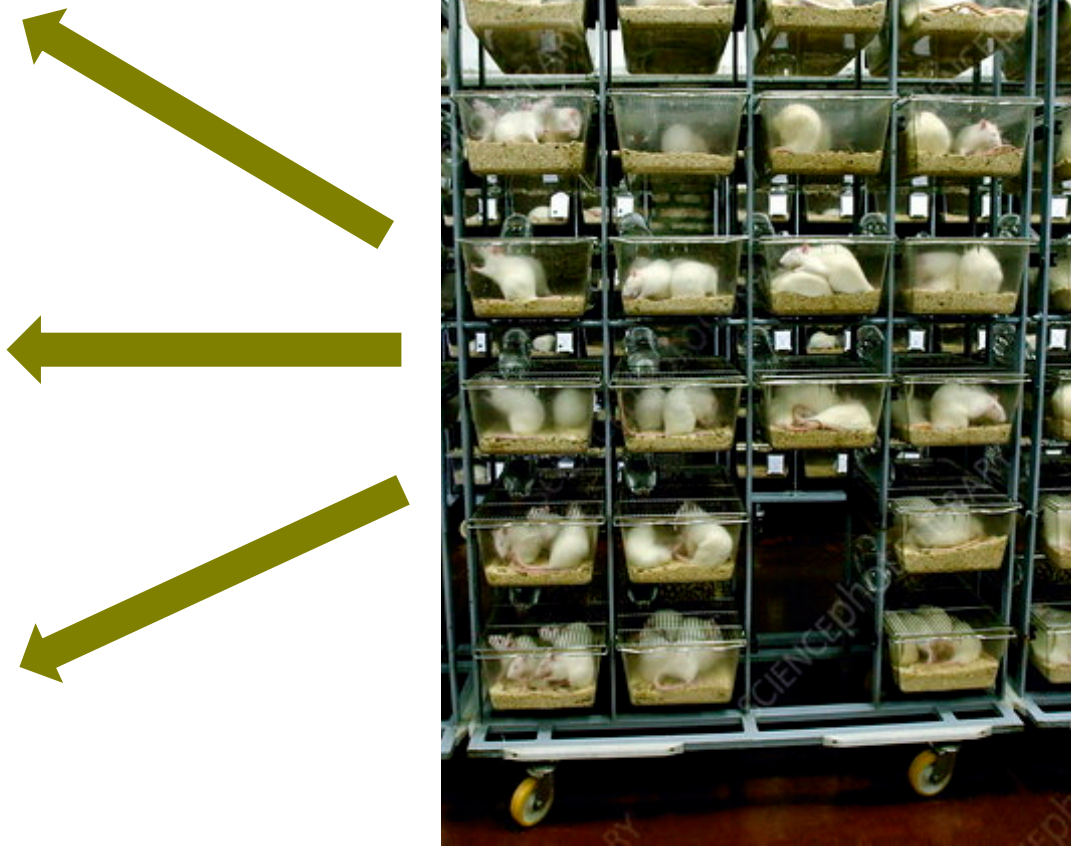
Where does the food come from ?



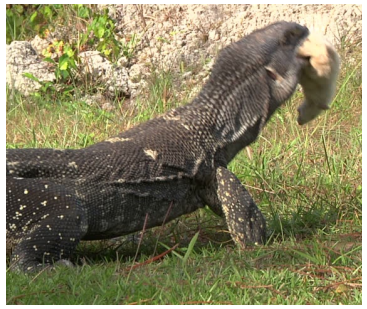


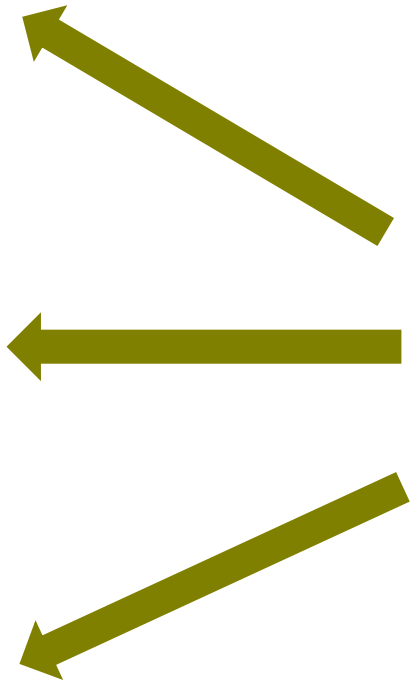
Not so complex food animal enclosures





Animals are primarily animals … and secondarily food





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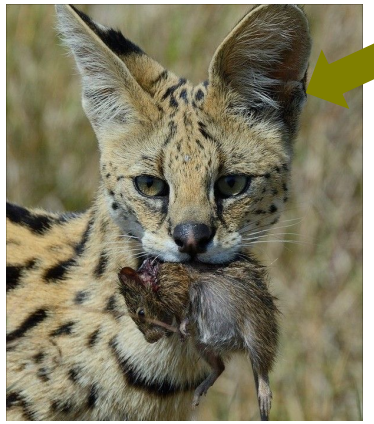

If this is not good food animal husbandry …

If this is not good food animal husbandry …

… then this isn't, either:

If this is not good food animal husbandry …

… then this isn't, either:

If this is not good food animal husbandry …

… then this isn't, either:

If this is a better way to raise food animals …

If this is a better way to raise food animals …

… then this is as well:

Feeding animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores

Feeding animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores
… must be about welfare-oriented food animal production

Feeding animals to zoo animals

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… must be about welfare-oriented food animal production
… grants animals the welfare benefits of reproduction,

Feeding animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores
… must be about welfare-oriented food animal production
… grants animals the welfare benefits of reproduction,
including offspring raising
appropriate social structures

Feeding your carnivores

We don’t want responsibility for ‘early’ deaths …

We don’t want responsibility for ‘early’ deaths …

➜ and therefore support food animal production

We don’t want responsibility for ‘early’ deaths …

➜ **and therefore support food animal production**

… with doubtful husbandry and uncontrolled welfare

We don’t want responsibility for ‘early’ deaths …

➜ **and therefore support food animal production**

… with doubtful husbandry and uncontrolled welfare

… with no natural reproduction, no offspring raising (until a biologically meaningful age), no adequate social structures

We don’t want responsibility for ‘early’ deaths …

➜ **and therefore support food animal production**

… with doubtful husbandry and uncontrolled welfare

… with no natural reproduction, no offspring raising (until a biologically meaningful age), no adequate social structures

➜ **and therefore deny zoo animals**

… reproduction, offspring raising, (adequate social structures)

Feeding animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores
… must be about welfare-oriented food animal production
… grants animals the welfare benefits of reproduction,
including offspring raising
appropriate social structures

Feeding zoo animals to zoo animals

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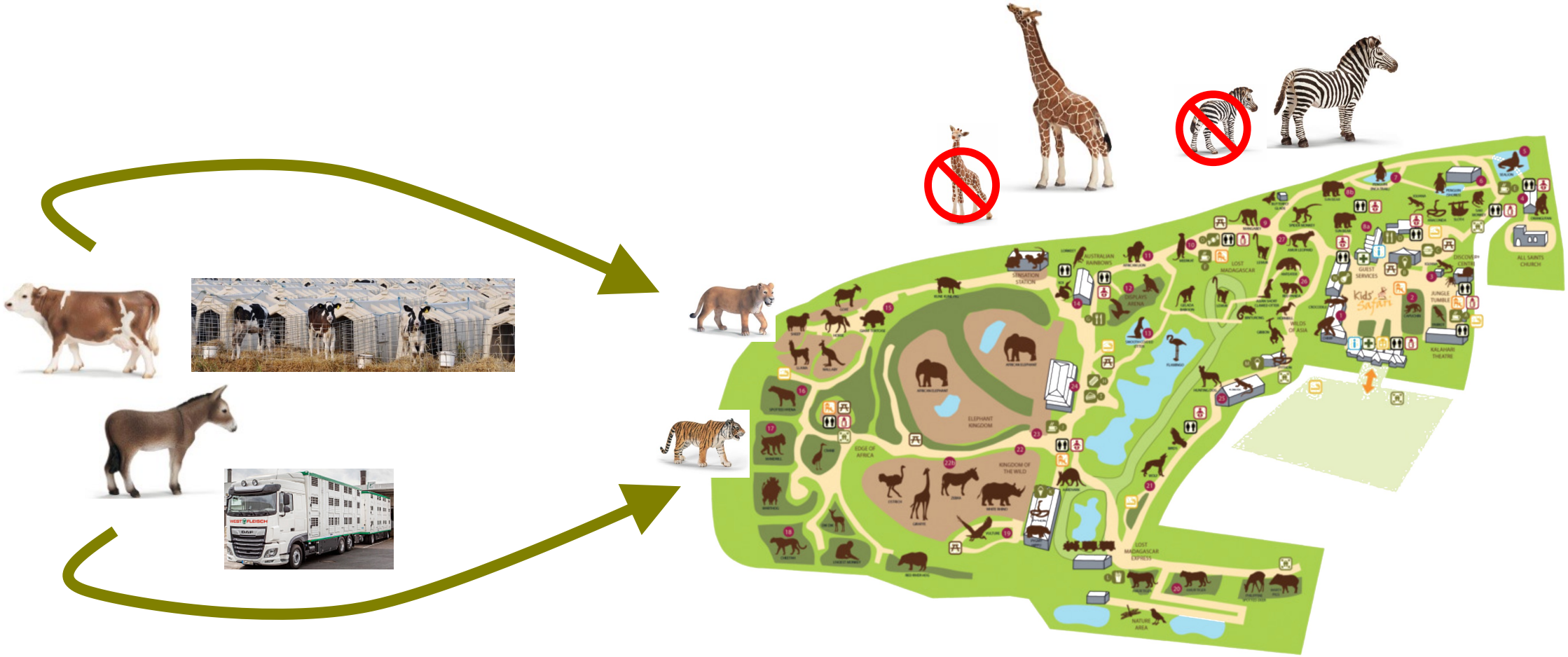
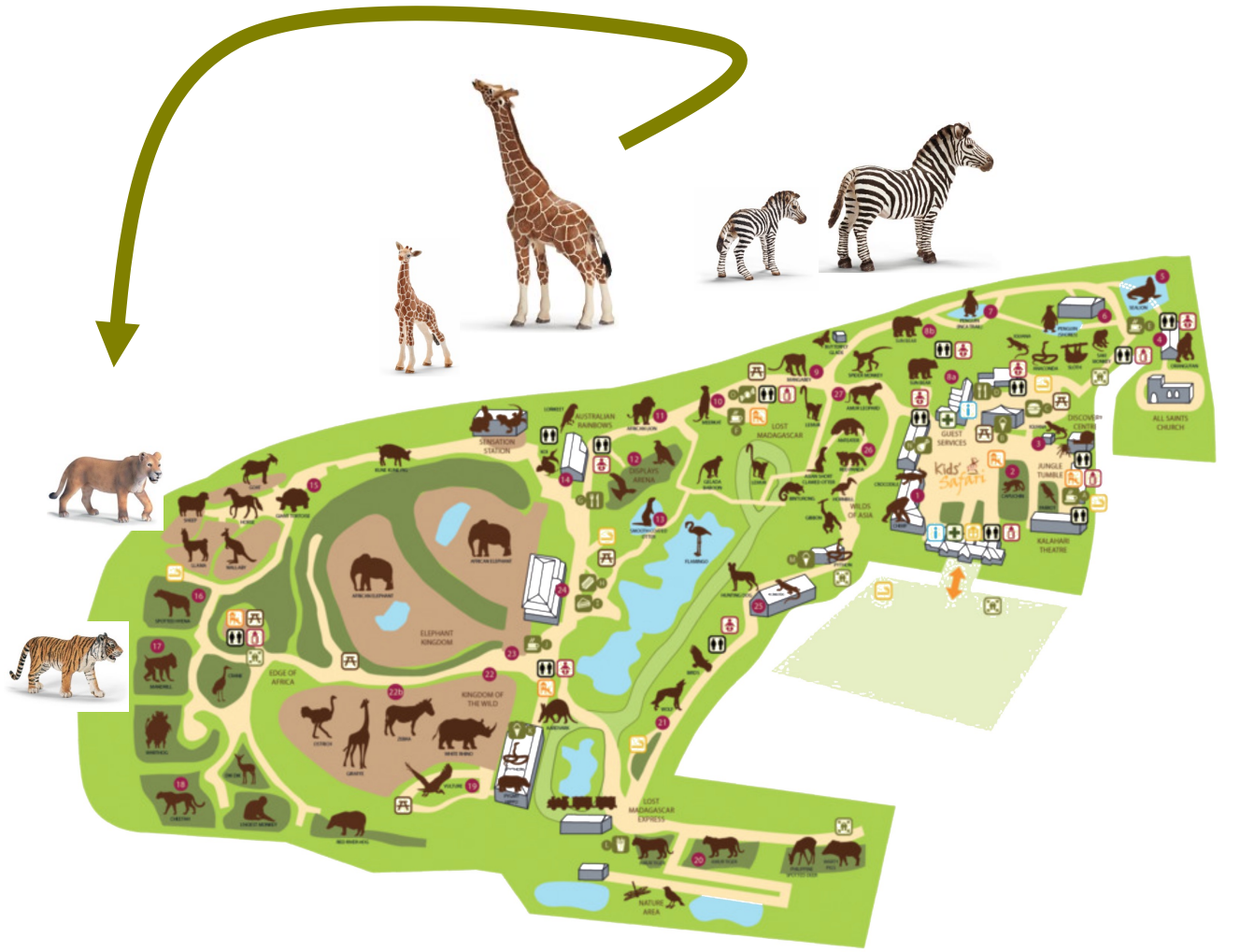
Feeding zoo animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores
… must be about welfare-oriented food animal production
… grants zoo animals the welfare benefits of reproduction,
including offspring raising
appropriate social structures
… is particularly sustainable

Footprint



Footprint



We don’t want responsibility for ‘early’ deaths …

➜ **and therefore support food animal production**

… with doubtful husbandry and uncontrolled welfare

… with no natural reproduction, no offspring raising (until a biologically meaningful age), no adequate social structures

➜ **and therefore deny zoo animals**

… reproduction, offspring raising, (adequate social structures)

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… that mostly requires transport prior to death

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Feeding zoo animals to zoo animals

… is a necessity for every zoo that keeps carnivores/omnivores
… must be about welfare-oriented food animal production
… grants zoo animals the welfare benefits of reproduction,
including offspring raising
appropriate social structures
… is particularly sustainable

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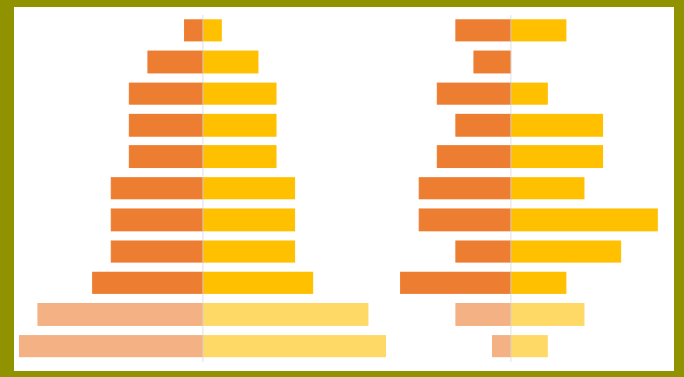

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➜ **and therefore make population management more risky**

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including understanding biology-based conservation

How can we support in situ conservation …

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… with the narrative that management killing is inacceptable ?

Didactic mission: not to close your eyes

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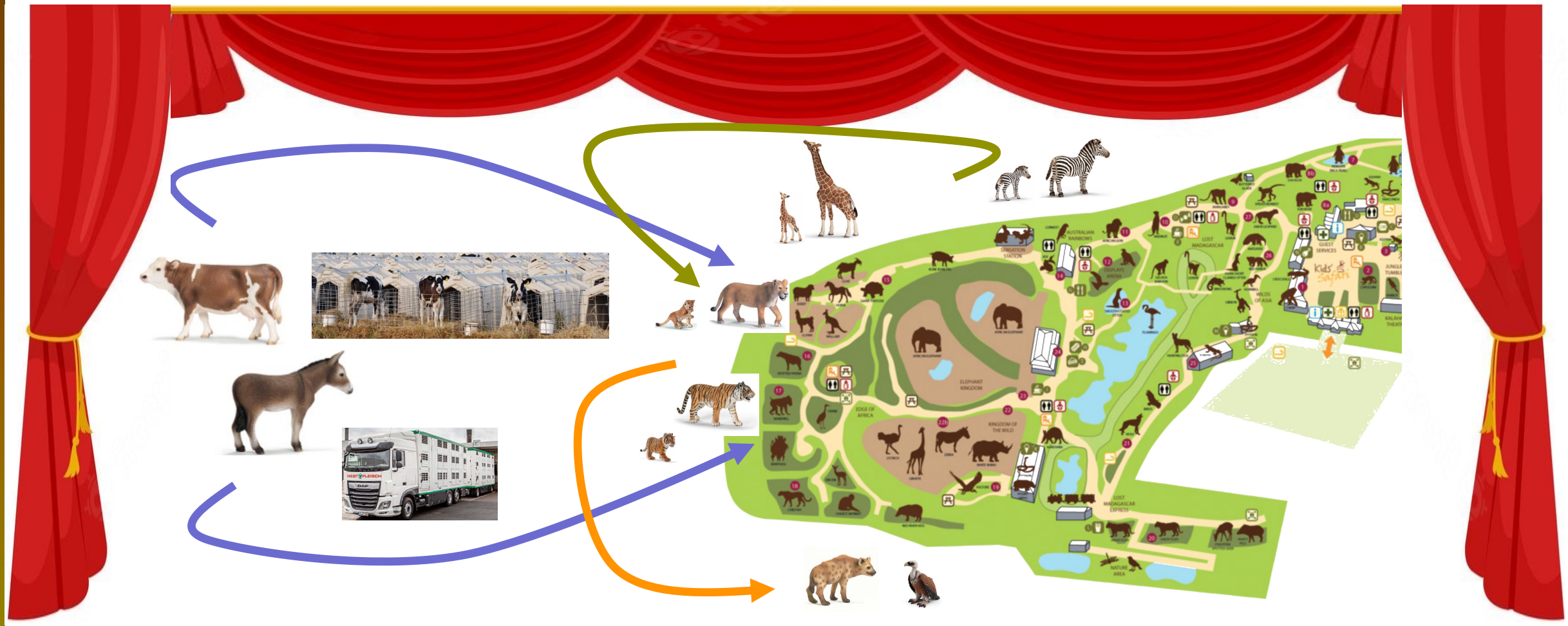

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Necessary steps

- don't start with the most difficult species

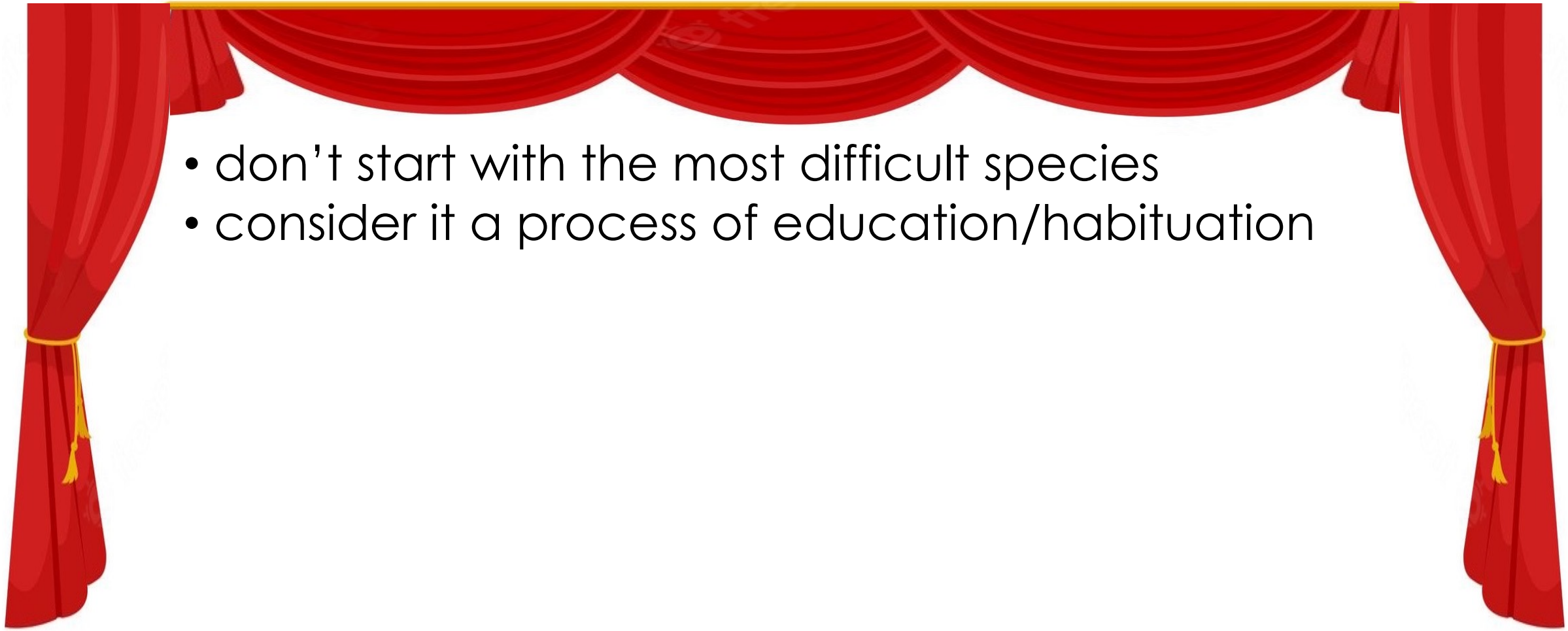
23

Issues Surrounding Surplus Animals in Zoos

MADS FROST BERTELSEN

• **Figure 23.2** What animal species may be culled to feed others? Most people have an irrational cutoff on the "cuteness index" shown here. Where is yours? Note that generic meat (*) falls very low on the scale.

Necessary steps



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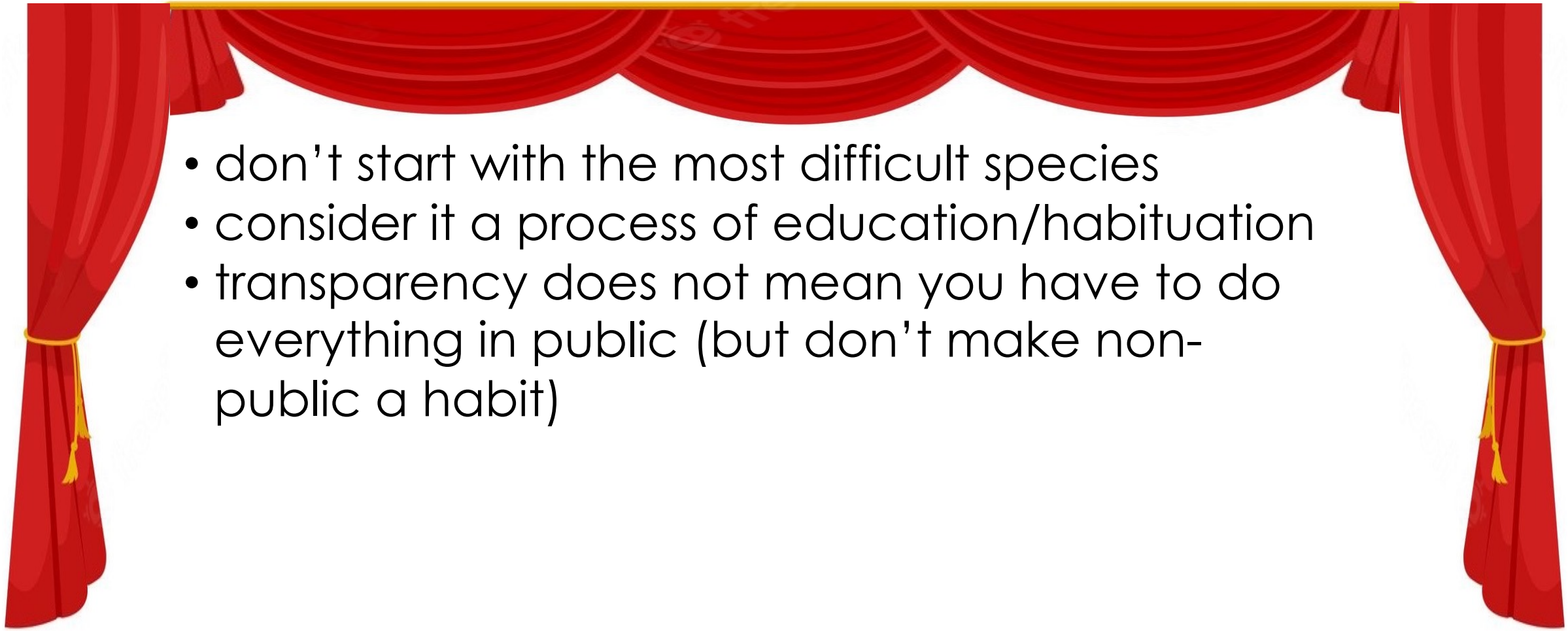
- consider it a process of education/habituation

Necessary steps



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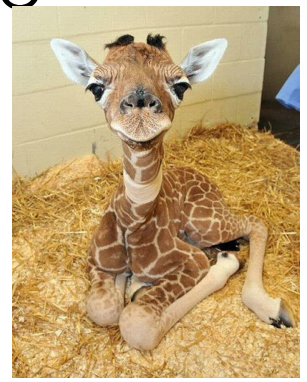
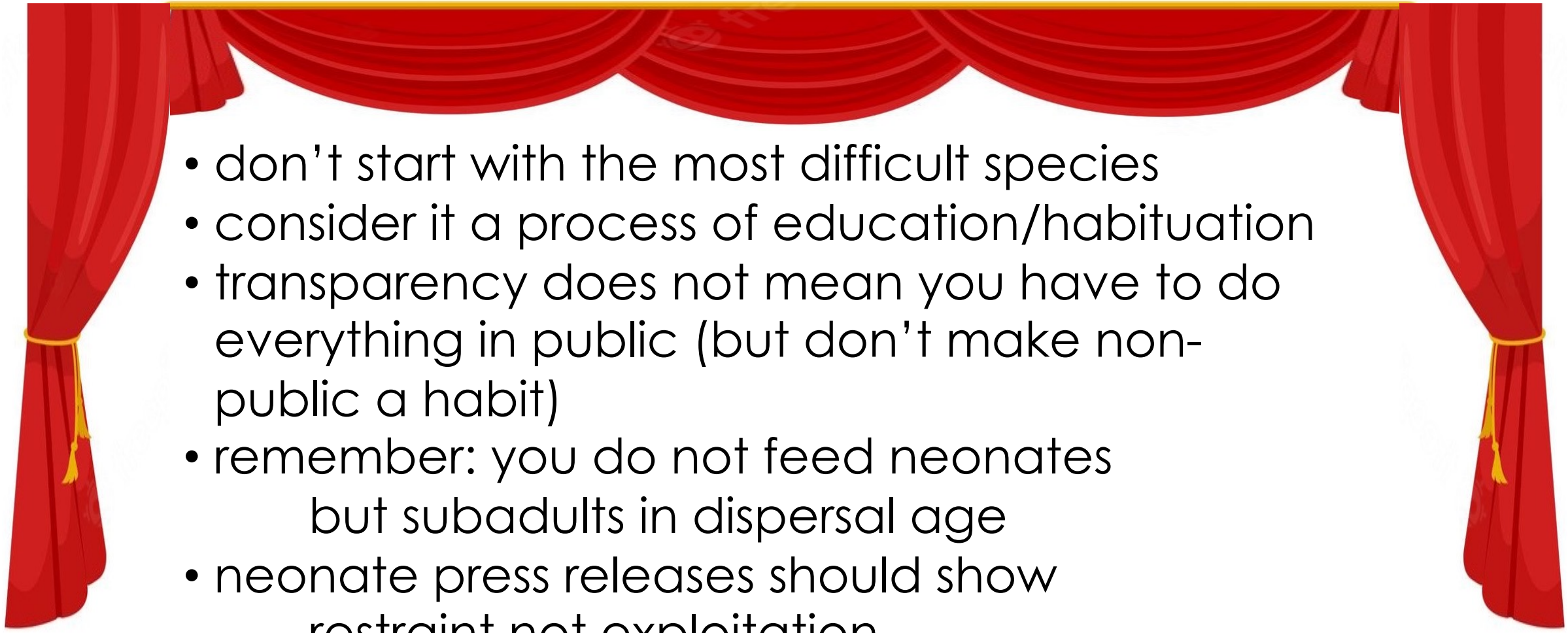
- don't start with the most difficult species
- consider it a process of education/habituation
- transparency does not mean you have to do everything in public (but don't make non-public a habit)
- remember: you do not feed neonates
  but subadults in dispersal age



Necessary steps



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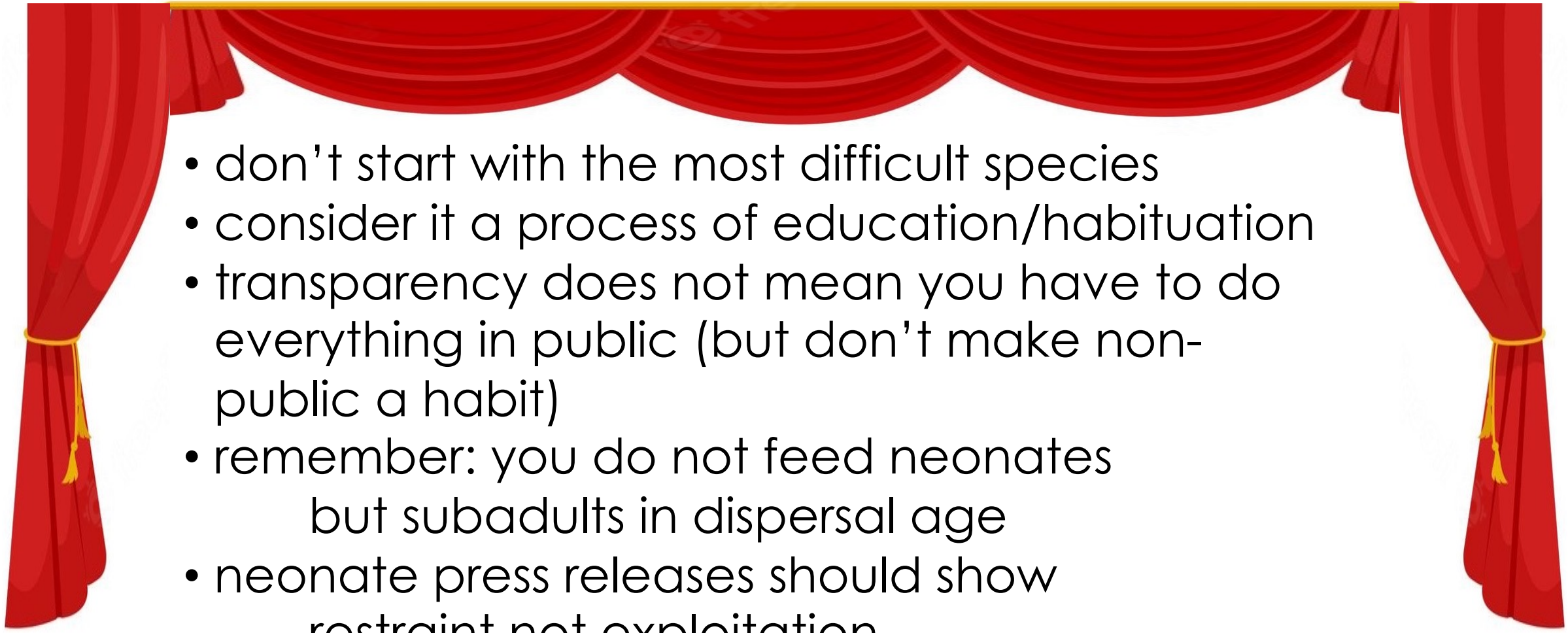
- neonate press releases should show
  restraint not exploitation

Necessary steps



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- consider it a process of education/habituation
- transparency does not mean you have to do everything in public (but don't make non-public a habit)
- remember: you do not feed neonates
  but subadults in dispersal age
- neonate press releases should show
  restraint not exploitation
- logistics and expertise for killing

It's not about 'surplus animals' –

it's about producing animal food
in a respectful way
that reflects the zoo world's
high husbandry and welfare
standards.

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it's about producing animal food
in a respectful way
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- and no animal has better welfare than an animal in your zoo

It's not about 'surplus animals' –

it's about maintaining viable populations

Message

Reproducing animal groups with intact social structures
Feeding of (respectfully killed) zoo-raised animals
Self-sustaining populations

every life is important

death is a natural part of life

it is important to take responsibility

Thank you for your attention