

# **THE ETHICS OF ZOO LICENSING AND FUNDING IN THE NETHERLANDS**

**MASTER'S THESIS IN APPLIED ETHICS  
UTRECHT UNIVERSITY**

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# MANAGEMENT SUMMARY



## Management Summary

In this study I present a case for the public funding of the mandatory activities defined under Article 12, sections 2a, 2b and 6, of the Dutch Zoo Licensing Act (Dierentuinenbesluit). In chapter one I present the case of Rotterdam Zoo. I examine the zoo's relationship of dependence on municipal council subsidies and consider the consequences of cuts in municipal spending.

In chapter two, I explore European Commission Directive 1999/22/EC and the implementation of the Dutch Zoo Licensing Act. I take a critical look at the obligations of (1) education, (1) scientific research, and (3) conservation examining the extent to which these obligations are measurable, necessary and / or desirable as legal requirements.

In chapter three I explore sources of zoo funding and examine the multi-functional nature of the zoo as a social institution. I explore differences between fully commercial zoos and zoos that have been established as charitable trusts. I present reasons to conclude that the zoo is a particularly vulnerable type of social institution when compared to similar recreational and agricultural enterprises. I question the essential differences between a municipal subsidy and a Public Private Partnership construction (PPP).

In chapter four, I examine the ethics of zoo licensing and funding. I ask to what extent there is a moral obligation for society to support the public works of zoos with a form of public funding. I present a conceptual framework for distinguishing between different types of goods and I argue that some of the goods produced by zoos can be described as Public Beneficence Goods. These types of goods benefit society as a whole and do not benefit the private objectives of zoos as private commercial entities.

I explore the normative implications of Legal Moralism and Legal Positivism and I discuss David Wong's Plural Relativism and the universal principle of Reciprocity. I consider the political basis for public funding by populating an argument put forward by Philip Pettit endorsing Option Freedom with the political theories of Robert Nozick and John Rawls respectively. I close the normative section of this study by presenting a Kantian perspective on the moral duty to provide public funds and I consider the extent to which a public funding policy might lead to consensus amongst both pro-zoo and anti-zoo campaigners.

In my conclusions and recommendations I suggest that zoos might benefit from a set of non-binding guidelines on the financial management of these complex organisations, that the Ministry of EL&I ought to consider discouraging municipal councils from imposing captive breeding targets on zoos in exchange for exploitation subsidies, and that a PPP initiative might be a way of both incentivizing and assisting zoos in achieving better results with regard to the legal obligations defined under Article 12, sections 2a, 2b and 6, of the Dutch Zoo Licensing Act. In Appendix XI I present a proposal for a cost-quantification method for determining the production costs of Public Beneficence Goods in zoos.

# CONTENTS

**FOREWORD**

**ACKNOWLEDGEMENTS**

**CHAPTER ONE** - Background and Introduction

**CHAPTER TWO** - Zoos and Licensing

**CHAPTER THREE** - Zoos and Funding

**CHAPTER FOUR** - the Ethics of Zoo Licensing and Funding

**CHAPTER FIVE** - Conclusions and Recommendations

**LIST OF REFERENCES**

**APPENDICES**



## Contents

PAGE - I	MANAGEMENT SUMMARY
PAGE - II	CONTENTS
PAGE - III	FOREWORD
PAGE - V	ACKNOWLEDGEMENTS
	<b>CHAPTER ONE - Background and Introduction</b>
PAGE - 01	1.0.0. introduction
PAGE - 01	1.1.0. rotterdam zoo; a familiar case
PAGE - 01	1.1.1. exploitation subsidies
PAGE - 02	1.1.2. conditions and criteria
PAGE - 03	1.1.3. current impact of cuts
PAGE - 04	1.1.4. prognosis
PAGE - 05	1.2.0. problem definition
PAGE - 05	1.3.0. research questions
PAGE - 07	1.4.0. research methods, structure and scope
PAGE - 07	1.4.1. research methods
PAGE - 08	1.4.2. research structure
PAGE - 08	1.4.3. research scope
	<b>CHAPTER TWO - Zoos and Licensing</b>
PAGE - 09	2.0.0. introduction
PAGE - 10	2.1.0. zoo-licensing and inspection in the netherlands
PAGE - 10	2.1.1. conditions of license
PAGE - 11	2.1.2. the accreditation process
PAGE - 12	2.1.3. inspections
PAGE - 14	2.2.0. education
PAGE - 14	2.2.1. educational directives and guidelines
PAGE - 15	2.2.2. assessment of educational requirements
PAGE - 16	2.2.3. brief discussion
PAGE - 17	2.3.0. scientific research
PAGE - 17	2.3.1. research directives and guidelines
PAGE - 18	2.3.2. assessment of scientific research requirements
PAGE - 19	2.3.3. brief discussion
PAGE - 19	2.4.0. conservation
PAGE - 19	2.4.1. conservation directives and guidelines
PAGE - 20	2.4.2. assessment of conservation requirements
PAGE - 21	2.4.3. brief discussion
	<b>CHAPTER THREE - Zoos and Funding</b>
PAGE - 23	3.0.0. introduction
PAGE - 23	3.1.0. vat, subsidies and anti-trust law
PAGE - 24	3.1.1. vat exemption; a double-edged sword
PAGE - 25	3.1.2. exploitation subsidies and ant-trust law
PAGE - 26	3.2.0. sources of zoo funding
PAGE - 29	3.3.0 growth, vulnerability and dependence
PAGE - 29	3.3.1 growth
PAGE - 29	3.3.2 vulnerability
PAGE - 30	3.3.3 dependence
	<b>CHAPTER FOUR - the Ethics of Zoo Licensing and Funding</b>
PAGE - 35	4.0.0. introduction
PAGE - 35	4.1.0. public beneficence goods
PAGE - 40	4.2.0. normative interpretations of law
PAGE - 42	4.3.0. reciprocity
PAGE - 44	4.4.0. politics
PAGE - 44	4.4.1. nozick
PAGE - 46	4.4.2. rawls
PAGE - 47	4.4.3. nozick vs rawls in pettit
PAGE - 51	4.5.0. kantian ethics
PAGE - 55	4.6.0. convergence
	<b>CHAPTER FIVE - Conclusions and Recommendations</b>
PAGE - 58	5.0.0. introduction
PAGE - 58	5.1.0. conclusions
PAGE - 63	5.1.0. recommendations
PAGE - 66	LIST OF SOURCES AND REFERENCES
	APPENDICES

# FOREWORD AND ACKNOWLEDGEMENTS



## Foreword

In my lifetime I have witnessed the closure of three family zoos: '*Paradiso de Los Animales*<sup>1</sup>' in Fuengirola, Spain (1970), '*Dierenpark Tilburg*' (1973), and '*Vogelpark Oisterwijk*' (1993). The first was owned by my father, O.P. de Souza, the second by my grandfather, Q.P.C. van Dijk, and the third by my uncle, Q.F.M. van Dijk. My grandfather on my father's side of the family, H.H. de Souza, had a fourth zoo in Singapore called '*Mayfield Kennels and Zoo*'. This was mainly an animal trading company that exported wild animals from South-East Asia to zoos around the world.

The first four years of my childhood were spent in Tilburg, the Netherlands. I shared my home with chimpanzees, gorillas and other animals. At the time, I had no reason to think that there was anything unusual about my exotic '*siblings*' who competed so ardently for the attention of my mother, C.A.J. van Dijk. Until the age of three, I grew up with a female lowland gorilla we called Bongo. On a return trip from the Belgian Congo in 1964, a sailor arrived at our doorstep with a tiny gorilla wrapped in a small towel. The infant had been smuggled into Europe through the port of Antwerp and was sold to my mother for the princely sum of 1,000.00 guilders. No doubt her mother had been shot for bush meat in the Congo and Bongo, like so many unfortunate others before and after, had been sold as a pet at a local market. Although her prospects for survival seemed highly unlikely, my mother took pity on her. Against her better judgment, she paid the substantial fee demanded - a small fortune in 1964. As Bongo and I were the same age, our family paediatrician asked if he could make a comparative study charting our respective rates of development<sup>2</sup>. Bongo was raised as part of the family along with a pork-chop thieving chimpanzee called Shirley, two red lesser pandas from Nepal, two basset hounds, and my older sister, Carin.

It was an emotional trauma for the whole family when in 1967, having outgrown our house by the age of 3, Bongo was sent to Molly Badham at Twycross Zoo in England. Molly had a hands-on approach to animal husbandry and kept Bongo in her home until she was ready to be introduced to the other gorillas in her park. Molly specialized in keeping primates and my family had already supplied her with chimpanzees, orang-utans and gibbons. My mother stayed with Molly for more than a week to help Bongo settle into her new environment. Recently, I ordered a DVD of the film '*Project NIM*' - a documentary about the life of a chimpanzee named Nim Chimpsky<sup>3</sup> who was similarly raised in a human family. The film brought back many mixed emotions for my mother - she found the film distressing to watch. Bongo passed away on 5<sup>th</sup> October 2011. She remained at Twycross for the rest of her life reaching the ripe old age of 46<sup>4</sup>.

Fortunately, very much has changed since the 60's. In 1973, 80 representative countries ratified the '*Convention on International Trade in Endangered Species of Wild Fauna and Flora*' (CITES). An IUCN initiative that was started in 1963, CITES took effect from 1975 onwards. Currently, it offers varying degrees of legal protection to over 30,000 species of animals and plants across the globe. CITES continues to gain international force as more and more member states sign up to the convention. To date, some 175 nation states have joined.

From a personal point of view, I experienced the closures of the family zoos as a great loss. As I have grown older, I have increasingly missed the close contact with animals that was so readily available to me as a child. I have sometimes imagined what life might have been like had the zoos remained open to the public. In 1989, during my studies at the University of the West of England, I worked as a part-time keeper at Bristol Zoo. I was lucky enough to work with some of their primates and had some close contact with a four-year old lowland gorilla called Jeremiah<sup>5</sup>.

<sup>1</sup> The zoo still exists as 'Bioparc Fuengirola'. It has recently become a member of EAZA.

<sup>2</sup> Unfortunately I have never been able to find a copy of this study. My mother thinks that the paediatrician may have been called Dr. Verhagen. He had helped my mother in the 60's by treating a chimpanzee with an obstructed bowel.

<sup>3</sup> A play on 'Noam Chomsky'. Project NIM was a language experiment conducted by Columbia University in the 1970's. Nim Chimpsky was raised as a child and taught to communicate using human sign language.

<sup>4</sup> In the wild, a lifespan of 35 to 40 years is the norm

<sup>5</sup> Jeremiah sadly passed away at Belfast zoo on 27<sup>th</sup> August 2002 aged just 16

While I fully support CITES, I am also aware that it is the restrictions in trade that made it increasingly difficult for members of my family to maintain their businesses. At a time when the animal trade was less regulated, zoos were able to supplement their income through the animal trade. In the absence of public funding, trade was certainly an important source of income that was key to the survival of the zoos in my family. Entrance fees alone could not keep the gates open. Like so many people, my attitude towards zoos is somewhat conflicting. While I remain strangely attracted, I feel uneasy if I perceive standards of care to be deficient. These conflicting sentiments might be expressed as follows:

There are few things more uplifting than a visit to a zoo that is well maintained, professionally operated, and well resourced. Coming face to face with wild animals is a sublime experience that cannot fail to touch us all in some way. A zoo that is well funded has ambitions far beyond the scope of its primary concerns of feeding, housing and caring for its animals. They are breeding grounds of wonderment, understanding and empathy; galleries that engage us with the beauty and diversity of the natural world; classrooms in which we are confronted by the fragility of its many eco-systems; and platforms from which we are stimulated to engage in conservation initiatives through an active involvement.

Conversely, there is nothing more wretched than a visit to a zoo that is poorly maintained, financially impoverished, and struggling for its survival. The realization that employees working in such environments are often highly devoted individuals adds another layer of misery to an ailing zoo. Keepers generally work for a modest wage yet maintain a deep commitment to the welfare of the animals in their charge. If a zoo is forced to close its gates, the sense of despair reaches tragic proportions. When keepers are separated from the animals they have nurtured for many years, when healthy animals that cannot be relocated are put to sleep, the level of stifled emotion is hard to erase from the memories of anyone who has experienced the insolvency of a zoo.

Though I consider my childhood experiences a privilege, I have also grown up questioning the ethics of keeping wild animals in captivity. Some might argue that my family's history in the animal trade relinquishes my right to express a view on animal ethics; after all, animal traders are the blight of the wild and free. I could certainly recount a number of grizzly stories that would raise the hairs on the back of one's neck.

Times change. In defence of my family's past, they were born into a business whose practice has changed beyond all recognition. The glamorous days of Buck Rogers's *'Bring 'em Back Alive'* have been replaced by a complex licensing bureaucracy under CITES. It would be unfair to judge the past by the values of the present and the business could not have flourished without a sufficient degree of empathy and care for the animals that were kept and sold.

For my final thesis on the Masters in Applied Ethics at Utrecht University, I have chosen *'The Ethics of Zoo Licensing and Funding in the Netherlands'* as my research subject. I hope to show that, despite conflicting views that may prevail concerning the legitimacy of the zoo as a social institution, there are strong ethical and practical reasons for supporting the institution with a structured form of public funding. In the face of a severe global economic crisis, I appreciate that the timing of such a study is far from ideal. Nevertheless, the ethics of public funding is certainly a different question to the feasibility of public funding. Public attitudes change - as does the size of the public purse.



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In alphabetical order, I would like to thank the following people for their contributions and for their kind help and support during my study: Marielle van Aggelen, Director of de Nederlandse Vereniging van Dierentuinen; Marc Damen, director of Blijdorp Zoo; Stuart Broom, member of the EPEC Executive; Lesley Dickie, Executive Director of the European Association of Zoos and Aquaria; Qriel van Dijk; Cathy Keech; Diane Kraal; Mariëtte van den Hoven, Utrecht University; Mirko Marseille, the European Association of Zoos and Aquaria; Franck Mieboom, Utrecht University; John Regan, Director of John Regan Associates Ltd; Henny van Rij, Ministerie van Economische Zaken, Landbouw en Innovatie; Theo Rosier, Utrecht University; Alide Vergossen-Otten, Ministerie van Economische Zaken, Landbouw en Innovatie; Marcel Verweij, Utrecht University and Jan Vorstenbosch, Utrecht University.

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Oscar de Souza,  
Breda 6<sup>th</sup> July 2012

# CHAPTER ONE

## BACKGROUND AND INTRODUCTION

- 1.0.0. introduction
- 1.1.0. rotterdam zoo; a familiar case
  - 1.1.1. exploitation subsidies
  - 1.1.2. conditions and criteria
  - 1.1.3. current impact of cuts
  - 1.1.4. prognosis
- 1.2.0. problem definition
- 1.3.0. research questions
- 1.4.1. research methods
- 1.4.2. research structure
- 1.4.3. research scope



## 1.0 Introduction

In section 1.1, I consider the management problems that Rotterdam Zoo is currently facing as a result of recent cuts in municipal funding. In section 1.2, I use the case of Rotterdam Zoo to extract the main problem addressed in my thesis. In section 1.3, I define the research questions that I aim to answer. I close this chapter in section 1.4 by describing the research methods and sources used in my study, the structure of the various components of my thesis, and the scope of my research.

## 1.1 Rotterdam Zoo; a Familiar Case

Rotterdam Zoo originally developed from a private bird collection in the centre of Rotterdam. Its earliest history dates back to 1855 when two railway officials, F. van der Valk and G.M. van den Berg, established a bird park on the 'Kruiskade'. As a result of severe financial problems in 1924, the zoo struck a deal with the municipal council. In exchange for its prime land opposite Rotterdam's central railway station, 13 hectares of land were made available in the polder 'Blijdorp'. Rotterdam Zoo received two thirds of the 13-hectare site along with a sum of money in exchange for their prime real estate opposite the central station. The remaining third was leased from the council for a token fee of 1 guilder per year. On condition that the private zoo kept its gates open to the general public, the foundation 'Stichting Volkskracht' helped to provide the initial capital for new investments and assisted financially with the zoo's relocation to the Blijdorp polder.

On 26<sup>th</sup> October 1938, 'Stichting Volkskracht' was dissolved, and in its place, 'Stichting Rotterdamse Diergaarde' was established ('Stichting Koninklijke Rotterdamse Diergaarde' from 1957 onwards). The relocation of the zoo was already well under way when, on 14<sup>th</sup> May 1940, the zoo was badly damaged during the bombing campaigns of the Second World War. Inspired by the Hagenbeck style of zoo architecture, the new zoo was designed by Sybold van Ravestyn. In 2004, many of the buildings were given a protected status as important sites of cultural heritage. Since its relocation, Rotterdam Zoo is generally referred to as 'Diergaarde Blijdorp' (Blijdorp Zoo). Currently, the site covers an area of some 28 hectares.

### 1.1.1 Exploitation Subsidies

Since 1947, Rotterdam Council has supported the zoo by means of an exploitation subsidy. From an initial sum of 7,000 Guilders in 1947, the amount of financial support has fluctuated throughout the years. In 1988, Blijdorp Zoo and Rotterdam Council launched a master plan to transform the zoo into a star attraction for the city of Rotterdam. The master plan involved a total restructuring of the collection into continental divisions - a shift away from the clinical taxonomic ordering that is now outmoded. The master plan was seen to have a positive impact on tourism and local employment, and so the council agreed to support the zoo with 10 million guilders per year. The agreement was valid for an unlimited period and was subject to review on an annual basis. The amount has been inflation indexed on several occasions and was eventually converted into Euros. From 2000 onwards, the level of subsidy was set at 4.8 million Euros annually.

In 2009, as a result of the economic crisis, the council informed Blijdorp Zoo that a cut in subsidy was on the horizon. The initial agreement was to steadily reduce the annual subsidy over a period of three years from 4.8 million to 3.8 million Euros. Although this was bad news for the zoo, in light of economic circumstances, the council's proposal did not seem unreasonable. The plan gave Blijdorp Zoo three years to work on a financial restructuring to make up the one million Euro budget deficit.

Following the elections in 2010, the new council decided that the cuts in funding would need to be more severe. Instead of a reduction from 4.8 to 3.8 million over a three-year period, more painful measures were deemed necessary. Over a four-year period the subsidy would be reduced from 4.8 million to just 0.8 million Euros. The director of Blijdorp, Marc Damen, requested a phased reduction in funding. He suggested that the 4.0 million Euro cut should be spread over 10

years in incremental reductions of 400,000 Euros per year. Although the final level of subsidy would be the same after a 10-year transition period, it offered a more realistic time frame in which to restructure the zoo's operations and spending.

In line with their grand ambitions for the city of Rotterdam, the council has actively encouraged investments in the zoo and has acted as guarantor against the zoo's loans. The land on which Blijdorp is built has been bonded as collateral to the council. If Blijdorp cannot maintain the interest and amortization payments on these loans then the council can claim ownership of the site on which Blijdorp is now established. The council has given their assurance that they will not let the zoo go bankrupt. In consultation with Blijdorp, they will explore ways in which the impact of the planned cuts can be minimized. Since 11 November 2010, the management team of Blijdorp has been engaged in intensive ongoing negotiations with members of Rotterdam Council. As there are no more assets available to put up as collateral, Blijdorp is not in a position to take out additional loans.

From a total sum of 22.8 million Euros in annual revenues in 2010, 9.1 million was spent on personnel costs (39.91% of 2010 revenues) and 4.5 million was spent on interest payments and amortization (19.75% of 2010 revenues). In 2009, Blijdorp received 5.3 million in exploitation subsidies from the council of Rotterdam<sup>1</sup> (a subsidy of 23.25% of 2010 revenues). This amount dropped to 4.8 million in 2010 (a subsidy of 21.05% of 2010 revenues), and was reduced again to 4.0 million in 2011 (a subsidy of 17.54% of 2010 revenues). In the period from 2009 to 2011, the zoo has had to find ways of reducing total annual costs by 1.3 million (5.7% of 2010 revenues).

The current plan is to further reduce the level of subsidy as follows: a reduction in 2012 from 4.0 to 2.9 million (leaving a subsidy of 12.72% of 2010 revenues), a reduction in 2013 from 2.9 to 2.2 million (leaving a subsidy of 9.65% of 2010 revenues), a reduction in 2014 from 2.2 to 1.5 million (leaving a subsidy of 6.58% of 2010 revenues), and a final reduction in 2015 from 1.5 to just 0.8 million (leaving a subsidy of 3.51% of 2010 revenues). For fiscal reasons, Blijdorp has arranged a sale and leaseback construction of the elephant house. The elephant house has been sold to a separate foundation that is part of 'Stichting Blijdorp'. This has increased the cost of interest payments, which in turn has a fiscal benefit. By 2015, Blijdorp Zoo will have to find ways of reducing its annual operating costs by a total of 4.5 million (19.75% of 2010 revenues) compared to 2009 subsidy levels. This is the same amount that was spent in 2010 on the servicing of debt (interest payments and amortization).

### 1.1.2 Conditions and Criteria

Contrary to popular belief, exploitation subsidies are not awarded as gifts. The subsidy demands adherence to a strict set of compliance criteria and there are solid reasons why Rotterdam Council has been subsidizing Blijdorp Zoo. These reasons can be gleaned from the five conditions that had to be met in order for Blijdorp Zoo to remain eligible for its subsidy:

(1) Blijdorp had to continue to exist as a zoo. (2) Blijdorp had to provide lessons to at least 60,000 school children annually. (3) Blijdorp had to contribute to the quality of Rotterdam for its inhabitants. (4) Blijdorp had to make an active contribution to conservation initiatives – a minimum of 80 endangered species (EEPs or ESBs) had to be kept in the zoo and Blijdorp was obliged to coordinate the European breeding programs (EEPs) of at least 10 endangered species. (5) Blijdorp had to contribute to the marketing of Rotterdam city by appearing at least once per month on television, twice per month in the newspaper and several times per month on the radio.

As a result of the pending cuts, the council reduced the set of demands that it had previously placed on Blijdorp Zoo. Only two of the original five criteria remain: (1) Blijdorp must continue to exist as a zoo, and (2) Blijdorp must provide lessons to 50,000 school children; a 16.6% reduction on the previous demand. At first sight, one might infer that a reduced package of council demands would make it easier for Blijdorp Zoo to reduce its operating costs. As will be explained later, I doubt that this will be the case.

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<sup>1</sup> In 2009, an additional subsidy was given by the Ministry of Internal Affairs (Binnenlandse Zaken)

Rotterdam Council supports Blijdorp Zoo because it recognizes the importance of providing an accessible leisure facility to Rotterdam's inhabitants. Subsidies stem from the department of Sport and Recreation, and so one might conclude that the council perceives the zoo to be, in essence, a recreational amenity. From the two remaining criteria (above), one might equally argue that Rotterdam Council ought to regard the zoo as both a recreational and an educational facility - a dual social function contrary to its single classification as a recreational amenity alone. Although alternative classifications may give access to other funds from within different council divisions, as Mr. Damen is quick to point out, all departments are equally short of funds. Though some subsidies for incidental projects and purposes remain, the council is keen to avoid any structural subsidies involving long-term commitments.

As the subsidy stems from the Department of Sports and Recreation, some of the obligations that the council imposed as a condition for receiving their subsidy seem somewhat misplaced. The demand to participate in 80 ESBs and EEPs, for example, had nothing to do with the zoo's function as a recreational amenity. Although the Dutch Zoo Licensing Act places an obligation on zoos to participate in conservation initiatives, the level of participation is not quantified under the act. While Rotterdam Council's previous conservation targets were ambitious and positively influenced the conservation value of Blijdorp Zoo, their demands also established long-term commitments to expensive breeding programs. These ongoing commitments are not easily undone.

Mr. Damen explains that there are both advantages and disadvantages to receiving council support. Having worked in a number of non-subsidized zoos (Burgers Zoo and the Beekse Bergen), Blijdorp is the first subsidized zoo that he has experienced. As a non-commercial entity, an advantage of a subsidized zoo is that it is much easier to attract volunteers. Blijdorp Zoo has a team of 350 dedicated volunteers who are willing to sacrifice their free time for a noble cause. A significant disadvantage of a subsidized zoo is that politicians and the public have a considerable influence on decision-making. This includes decisions on long-term strategic issues such as investment and institutional collection planning (ICP).

### 1.1.3 Current Impact of Cuts

As a result of cuts in subsidies, part of the zoo has been closed off to the public and there has been a freeze on staff recruitment. No less than 40 FTE's have been lost already; the workforce has been reduced from 220 to 180 full-time employees. This is a decrease in staffing levels of 18.18% and represents a saving of 1.65 million Euros on 2010 figures<sup>2</sup>. One elephant has been donated to another zoo and next year two more elephants will leave the collection. As each elephant needs a keeper, this measure will reduce personnel costs by an additional 3 FTEs.

Although the transfer of animals can make substantial long-term savings, transfers can also generate significant short-term costs. While the accepted protocol is that the recipient zoo pays for the cost of transport, Blijdorp sometimes shares the costs if they are keen, on animal welfare grounds, to house a surplus animal at a particular zoo.

Even if, following a positive recommendation from an EEP coordinator, a recipient zoo can be found for a particular animal, transfers can create difficult dilemmas. On the one hand there is a will to minimize the transport distance due to cost and animal welfare considerations, on the other hand there is a will to secure the best accommodation and to find a suitable match within a coordinated breeding programme. With the transfer of Charismatic Mega-Fauna, an additional concern is that the relocation should not negatively affect the zoo's competitive position. In a saturated market of 70 licensed zoos in the Netherlands alone, the zoo must maintain its ability to attract sufficient numbers of visitors at the gate. Three full-time employees are permanently busy with animal transactions (acquisition and relocation). Animal transfers involve a range of complex considerations.

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<sup>2</sup> Based on average personnel costs in 2010

In the face of a severe budget deficit, some might see the sale of animals as a means of easing financial pressures. The European Association of Zoos and Aquaria (EAZA) see animals as the common property of all. There is a code of ethics amongst EAZA affiliated zoos that animals may not be sold to generate income. For this reason, the complete animal collection at Blijdorp is valued at 1 Euro on the balance sheet. Mr. Damen believes that the sale of animals is a slippery slope that can lead to a situation in which animals are sold to the highest bidder; a situation in which animal welfare considerations take a secondary role.

Although there are no financial incentives for following EAZA recommendations, zoos that take their conservation commitments seriously build up a good international reputation. Marc Damen explains the value of a good reputation by citing the example of the polar bears that were donated by Vienna Zoo. Although Blijdorp Zoo was only 17<sup>th</sup> on the list of recommended destinations from the Polar Bear EEP coordinator, because Blijdorp's coordinator of the Asian Elephant EEP worked closely with the African Elephant EEP coordinator in Vienna, the zoos had already established a good working relationship. As Vienna was confident in the quality and standards of care in Blijdorp, in consultation with the EEP coordinator, Vienna chose Blijdorp from the long list of potential recipients.

EAZA maintains a Regional Collection Plan (RCP) and expect affiliated zoos to respect their recommendations. The Pronghorn, for example, has a 'do not obtain' recommendation due to sensitivities concerning humidity; they do not do well in captivity in the European climate. Although Blijdorp may sometimes deviate from these recommendations, the RCP is adhered to as much as possible. Commercial interests (attracting visitors) may require a deviation from the plan in some cases. Institutional Collection Planning (ICP) involves conservation interests, educational considerations and marketing and communication aspects. Blijdorp selects species that are kept in other European zoos and for which the prospects of maintaining a sustainable breeding program are positive. Wuppertal zoo, by contrast, is a zoo that aims to collect species that cannot be seen elsewhere in Europe. It is a real 'collectors zoo' and has a good reputation as such - 80% of its income stems from subsidies.

In line with the previous set of demands imposed by Rotterdam Council, Blijdorp Zoo has been coordinating the EEPs of 10 endangered species. Through necessity, the coordination of the Asian Elephant EEP will be discontinued as a result of the cuts. This will make a further saving of 20 hours per week that are now spent on these coordination tasks (0.5 FTE).

The biggest challenge is to find the right balance between commercial and idealistic goals. Mr. Damen wants to make sure that the zoo remains accessible to a wide general public and wants to avoid increases to entrance fees. Especially for those from a lower socio-economic background, the zoo represents an important social amenity. Likewise, there is no guarantee that an increase in the price of entrance fees will lead to an increase in total annual revenues. In times of recession, an increase in price may well prove to be prohibitive.

#### 1.1.4 Prognosis

The dramatic loss of 18.18% of the workforce represents a painful saving of 1.65 million Euros based on the average of personnel costs in 2010. According to the current prognosis, the zoo will have to find ways of cutting an additional 2.85 million Euros over its annual operating costs by 2015.

If one adds the 7.45 million Euros on remaining personnel costs (9.1 million minus 1.65 million) to the 4.5 million Euros spent on the servicing of debt, one arrives at a total of 11.95 million in fixed costs. From the total revenues over 2010, additional savings must be found from a remaining budget of just 10.85 million Euros; 22.8 million in total revenues, minus 11.95 million in fixed costs (personnel and debt servicing) leaving a sum of only 10.85 million Euros from which further cuts must be made. The additional loss of 2.85 million Euros in subsidy will leave just 8.0 million Euros to cover all operating costs by 2015. This is equal to a 26.27% reduction in operations, 1.27% above of a full quarter.

Since 1940, Blijdorp Zoo has built an outstanding international reputation. Thanks in part to council subsidies, it has been able to coordinate 10 EEPs and participates in no less than 80 EEPs and ESBs. Faced with a 26% reduction in its operations, where is the axe now likely to fall? Participating in EEPs and ESBs is much more expensive than accommodating animals for exhibition purposes only. The establishment of breeding populations requires the careful and costly management of much higher numbers of animals than would be necessary for exhibition purposes alone. Whereas EEPs and ESBs are a valuable contribution to the conservation of biodiversity, an adequate variety of exhibition animals is essential for attracting visitors at the gate. While the former is certainly aspired to on ideological grounds, the latter is the bread and butter of any zoo.

## 1.2 Problem Definition

The case presented above shows that the operators of European zoological parks are subject to a range of demands and conditions imposed externally. European Council Directive 1999/22/EC places a number of obligations on zoological parks as a condition of license. Zoos are required to offer educational programs, conduct scientific research and to participate in ex-situ conservation activities. In the Netherlands, the terms of EU Directive 1999/22/EC have been taken up within the Dutch Zoo Licensing Act ('Dierentuinenbesluit'). This act was passed by parliament on 19<sup>th</sup> April 2002.

In the case of Blijdorp Zoo, Rotterdam Council imposed conditions that went well beyond the bare requirements of the Dutch Zoo Licensing Act. The council explicitly quantified the extent to which Blijdorp Zoo had to participate in ex-situ conservation activities. These obligations did not stem from the Zoo Licensing Act, but instead, were imposed as a condition for receiving the council's exploitation subsidy. The zoo was obliged to coordinate 10 EEPs and to participate in no less than 80 EEPs and ESBs - a sizable commitment. Following the economic crisis, this significant demand was dropped as a result of the council's cuts in exploitation subsidy. The core problem addressed in this thesis can be defined as follows:

Although legislation imposes 'public good' duties on the operators of zoological parks as a condition of license, the public funding required to realize these public goods is either completely lacking, provided on a non-secured basis or provided for the wrong reasons. Fluctuations in funding can severely undermine the long-term planning that is so critical to the success of these public good initiatives; education, scientific research, and in particular, ex-situ conservation programmes. The case of Blijdorp Zoo is both a familiar and prime example.

## 1.3 Research Questions

In order to address the problem described above, my research aims to answer a number of research questions. These questions are presented below with a short description of why they have been selected and where they are addressed within my thesis. My Primary Research Question (PRQ) is formulated as follows:

**PRQ:** *'To what extent is there a moral duty to compensate zoos for the costs incurred in fulfilling their legal obligations under Article 12, sections 2a, 2b and 6, of the Dutch Zoo Licensing Act (Dierentuinenbesluit)?'*

It may be the case that current legislation is the result of shifting attitudes towards zoological parks and that legislation is a means of validating the existence of an institution that is no longer supported by mainstream society. My primary research question queries the moral basis for imposing positive obligations that protect a public good on an institution that is typically private and commercial. The moral and political issues raised by this question are mainly addressed in chapter five of my research.

In addition to my primary research question, there are twelve sub-questions (four per chapter) that I aim to answer in this study. The sub-questions are presented chapter by chapter with a short description of why they have been chosen. My Sub-Questions (SQ) are as follows:

**SQ-01:** *'What is the process of zoo licensing in the Netherlands?'*

**SQ-02:** *'Which organizations are responsible for the monitoring and inspection of Dutch zoos?'*

**SQ-03:** *'What are the factors assessed during zoo inspections?'*

**SQ-04:** *'What kind of obligations are imposed on zoos under the Dutch Zoo Licensing Act and how effective is current legislation in the Netherlands?'*

Sub-questions 01 to 04 are answered in chapter two; 'Zoos and Licensing'. The questions aim to explore the licensing and inspection process, the legal obligations to which zoos must remain compliant, and the adequacy of current legislation in the Netherlands for achieving the goals defined in European Council Directive 1999/22/EC.

**SQ-05:** *'How do zoological parks generate their revenues?'*

**SQ-06:** *'Are exploitation subsidies anti-competitive?'*

**SQ-07:** *'Are there limitations on the commercial operations of commercial and charitable zoos?'*

**SQ-08:** *'How sensitive are zoos to fluctuations in revenues?'*

Sub-questions 05 to 08 are answered in chapter three; 'Zoos and Funding'. The questions intend to reveal opportunities for generating revenues, ethical limitations on commercial activities, and potential vulnerabilities that are typical to the financial management of zoological parks.

**SQ-09:** *'What can be inferred from a legal moralist and a legal positivist interpretation of European Council Directive 1999/22/EC and the Dutch Zoo Licensing Act?'*

**SQ-10:** *'What is the distinction between public goods and private goods and to what extent is a definition based solely on a Lockean property right adequate within the context of legal obligation?'*

**SQ-11:** *'Which political theory presents the strongest case against a policy of public funding and how well does this theory fare against the moral counter-arguments in favour of public funding?'*

**SQ-12:** *'To what extent is there likely to be convergence in favour of a policy for a structured form of public funding amongst pro-zoo and anti-zoo campaigners?'*

Sub-questions 09 to 12 are answered in chapter four; 'The Ethics of Zoos Licensing and Funding'. These sub-questions address the core subject of my thesis - an exploration into the moral basis for a form of compensatory public funding for the 'public works' conducted by zoos. SQ09 explores two interpretations of the law and draws a distinction between law as cultural norm and law as social fact. SQ10 explores the adequacy of the Lockean distinction between public and private goods leading to a more nuanced definition involving the locus of a benefit and the presence of a legal compulsion. SQ11 explores the political basis for granting or denying a compensatory form of public funding, and SQ12 invokes a discussion centred on the likelihood of establishing consensus for a policy of public funding. These sub-questions lead to my main conclusions in chapter five.



## 1.4 Research Methods, Structure and Scope

In the three sections below I give a concise account of my research methods, the sources of qualitative and quantitative data used, and describe the general structure and arrangement of my research in chapters. I also explain limitations on the scope of my research.

### 1.4.1 Research Methods

The qualitative research data stems from both primary and secondary sources of information. Primary data was collected through a series of in-depth interviews conducted with: Mr. Marc Damen, director of Blijdorp Zoo, on 28<sup>th</sup> September 2011; Ms Marielle van Aggelen, director of the NVD (Dutch Association of Zoos), on 31<sup>st</sup> October 2011; Ms Alide Vergossen-Otten, from the Ministry of Economic Affairs, Agriculture and Innovation, on 17<sup>th</sup> November 2011; Ms Lesley Dickie, director of EAZA (the European Association of Zoos and Aquaria), on 24<sup>th</sup> November 2011; and Mr. John Regan, director of John Regan Associates Ltd, on 9<sup>th</sup> July 2012.

As a result of time restrictions, but also due to some reluctance on the part of respondents to participate in my research, I was not able to conduct in-depth interviews with: Mr. Marcel Boekhoorn, owner of Ouwehands Dierenpark; Robin de Lange, CEO Ouwehands Dierenpark; Mr. Haig Balian, director of Natura Artis Magistra; and Mr. Frankwin van Beers, director of Noorder Dierenpark Emmen.

As Noorder Dierenpark and Artis are the two remaining zoos in the Netherlands that receive a form of public funding, I especially regret the absence of the last two respondents in this research. It would have been interesting to note any similarities between the predicaments facing Noorder Dierenpark and Artis when compared to the present situation at Blijdorp Zoo.

In preparation for the in-depth interviews, lists of specific questions were prepared for each respondent. These questions were given to the respondents during interview. The respondents were then asked to speak openly and assured that no information would be included in the research without the respondent's explicit prior consent. The discussions were recorded, after which any relevant facts were extracted from the taped conversations. These facts were then written up in the form of reports and sent to the respondents for verification and approval. Any factual inaccuracies were then corrected. Any sensitive information was removed. A final adjusted copy of the report was sent to each respondent. Appendix II contains the original interview questions; Appendix III contains the edited versions of interview reports. Due to the length and number of interviews, I did not produce transcripts of interviews verbatim.

Secondary sources of qualitative data stem from a wide range of publications, reports and articles as well as online sources of information. A full description of secondary sources is provided in the reference section. The quantitative research data stems (mainly) from two sources: Blijdorp Zoo and ENDCAP. Blijdorp Zoo provided statistics on their ex-situ conservation commitments (see Appendix IV). Quantitative data from ENDCAP was extracted and consolidated from *'the EU Zoo Inquiry 2011'*. This was an independent study commissioned by ENDCAP evaluating the implementation and enforcement of EU Directive 1999/22/EC. By 2005, the directive had been fully implemented by 25 EU Member States. In Bulgaria and Romania, it was implemented in 2007. Statistical information was extracted from the 14 published National reports<sup>3</sup> and presented in a consolidated format showing National and European averages.

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<sup>3</sup> The countries covered in the National reports were: (1) Austria, (2) Belgium, (3) Bulgaria, (4) Cyprus, (5) Estonia, (6) France, (7) Greece, (8) Ireland, (9) Latvia, (10) Lithuania, (11) Poland, (12) Portugal, (13) Romania and (14) Slovenia. Unfortunately, the Netherlands was not included in ENDCAP's 2011 EU Zoo Inquiry.

### 1.4.2 Research Structure

In chapter one I set a context to the research problem by presenting the case of Blijdorp Zoo. This case is used to define the main research problem and to formulate the research questions that are addressed later on in my study. Chapters two and three contain a more detailed exposition of zoo licensing and zoo funding respectively. These chapters can be seen as providing preliminary insights and part conclusions necessary for the main discussion on *'The Ethics of Zoo Licensing and Funding'* in chapter four.

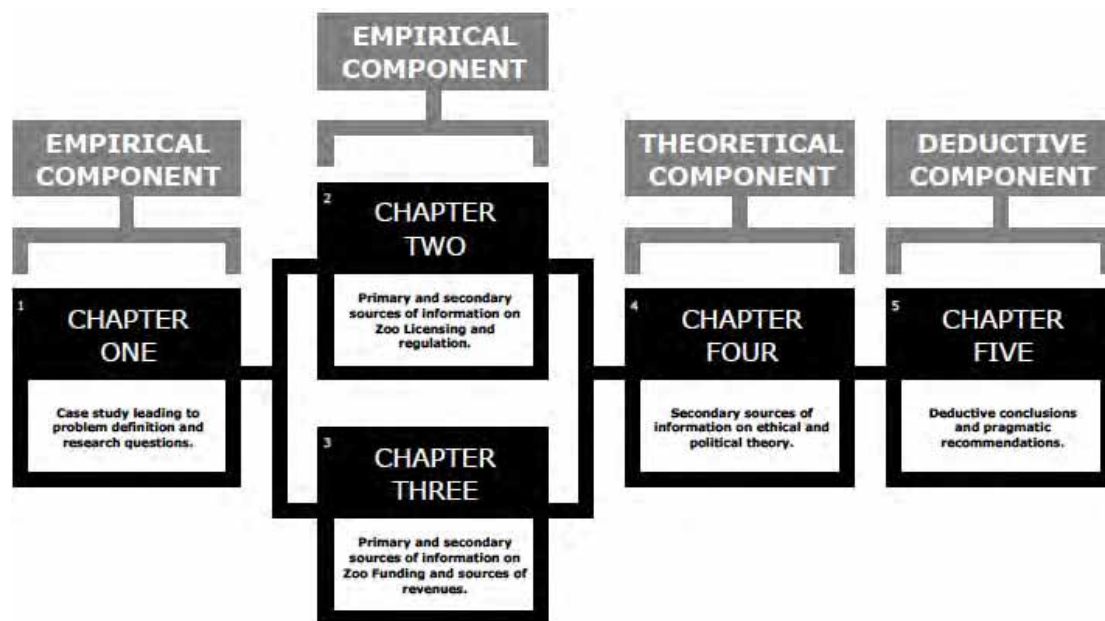


Fig. 1.1

The normative issues raised by my research question are addressed mainly in chapter four. Here I use a number of ethical and political theories to assess the strengths and weaknesses of a case for public funding. My conclusions and recommendations are presented in chapter five.

### 1.4.3 Research Scope

Although I include some ethical considerations of keeping animals in captivity, I do not conduct a thorough research into the ethics of keeping animals captive. This would involve complex discussions of moral status, animal welfare and animal minds - a subject area that is broad enough in scope for a thesis in its own right.

European Council Directive 1999/22/EC (see Appendix V) validates the legitimacy of the zoo as an institution for the preservation of bio-diversity and acknowledges the social significance of the zoo in furthering education, scientific research and ex-situ conservation. Although there are conflicting views concerning the legitimacy and adequacy of the zoo for performing these social functions, I will leave these views largely unchallenged. I take it as given fact that the societal role of the zoo, as outlined in European Council Directive 1999/22/EC, is a legitimate role. The fact that the Dutch Zoo Licensing Act (see Appendix VI) enforces positive obligations aimed at the conservation of biodiversity grounds the validity of this role in social fact. The primary subject of my research is therefore the relationship between these legal obligations and the question of whether society has a moral duty to provide public funds in compensation for the costs incurred through captive breeding programmes that are conducted in compliance to these mandatory requirements.

# CHAPTER TWO

## ZOOS AND LICENSING

- 2.0.0. introduction
- 2.1.0. zoo-licensing and inspection in the Netherlands
  - 2.1.1. conditions of license
  - 2.1.2. the accreditation process
  - 2.1.3. inspections
- 2.2.0. education
  - 2.2.1. educational directives and guidelines
  - 2.2.2. assessment of educational requirements
  - 2.2.3. brief discussion
- 2.3.0. scientific research
  - 2.3.1. research directives and guidelines
  - 2.3.2. assessment of scientific research requirements
  - 2.3.3. brief discussion
- 2.4.0. conservation
  - 2.4.1. conservation directives and guidelines
  - 2.4.2. assessment of conservation requirements
  - 2.4.3. brief discussion



## 2.0 Introduction

When European Commission Directive 1999/22/EC came into effect on 29<sup>th</sup> March 1999, the directive fell under Dutch Environmental Law; the responsible authority was VROM, the Ministry for Housing, Spatial Planning and the Environment ('Volkshuisvesting, Ruimtelijke Ordening en Milieu'). Although VROM conducted much of the preparation phase for the implementation of the directive, the LNV, Ministry of Agriculture, Nature and Food Quality ('Landbouw, Natuurbeheer en Voedselkwaliteit'), also played an important role. The recommendations in the directive encroached on several existing acts of Dutch legislation and so several Directorates within the Ministry of LNV were involved. The 1998 Flora and Fauna Act<sup>1</sup>, for example, fell under the LNV's Directorate NP, Nature and Countryside ('Natuur en Platteland'). The Directorate VDC, Food, Animals and Consumers ('Voedsel, Dier en Consument'), was responsible for animal health and welfare. The final responsibility for drafting the Zoo Licensing Act was assigned to the Directorate VDC.

Although the new act had to incorporate all of the requirements set out in EU directive 1999/22/EC, the Directorate VDC did not want to add additional constraints that might make compliance more difficult for zoo operators. There were already many established zoos in the Netherlands, and especially the smaller zoos were concerned that they might not be able to meet the demands stipulated under the new directive (Vergossen-Otten, A., 2011). The Directorate VDC invited stakeholders to participate in the discussions, and so the NVD, Dutch Federation of Zoos ('Nederlandse Vereniging van Dierentuinen'); D&P, Animal and Park ('Dier en Park'); the Foundation for Animal Protection ('Dierenbescherming'); VOND, the Rescue Foundation for Non-Domesticated Animals ('de Vereniging Opvang voor Niet-gedomesticeerde Dieren'); Sealife Scheveningen; the Commission for Threatened and Non-indigenous Plant and Animal Species ('de Commissie Bedreigde en Uitheemse Plant en Diersoorten'); and the Faculty of Animal Medicine at Utrecht University joined the discussions (Wils, J. et al, 2008, p.23).

To further the interests of the larger zoological parks in the Netherlands, the NVD was founded in 1966. It has 15 members, all of whom are affiliated to EAZA. Membership of both organisations is acknowledged internationally as a quality standard. On behalf of its members, the NVD lobbies government to ensure that future legislation imposes more than the bare minimum of standards on zoo operators. A second alliance of zoo operators, D&P, was established in 1996 to represent the interests of the smaller zoos in the Netherlands. D&P has 13 affiliated members and provides advice on the legal requirements to which Dutch zoos must adhere in order to retain their license to operate. Lacking the resources of their larger counterparts, licensing and inspection procedures can be complex and costly for small park operators (Aggelen, M. van, 2011).

The terms of the European directive gave the Dutch government until 9<sup>th</sup> April 2002 to draft and implement the requirements under Dutch law. The Dutch Zoo Licensing Act was finally passed by parliament on 19<sup>th</sup> April 2002 and took effect from 26<sup>th</sup> July 2002 onwards. An Executive Directorate within the Ministry of LNV was appointed as the zoo licensing authority. The name of the Directorate, 'Dienst Regelingen' (DR), can be roughly translated as the 'Regulations Service'. When the Rutte cabinet took office in October 2010, the LNV was merged with the Ministry of Economic Affairs ('Economische Zaken'). They now form a single Ministry called the Ministry of EL&I, Economic Affairs, Agriculture and Innovation ('Economische Zaken, Landbouw en Innovatie'). The Directorate DR retained its role as the zoo licensing authority within the new Ministry of EL&I. The Directorate provides a broad range of agency services to Ministries, provincial governments and municipal councils. In its role as the zoo licensing authority, it has an executive function and acts on behalf of the Secretary of State (Vergossen-Otten, A., 2011).

On 29<sup>th</sup> July 2003, the Directorate DR issued its first license to 'Stichting Nederlandse Opvang Papagaaien' (The Dutch Parrot Sanctuary). Blijdorp Zoo was licensed on the same day along with 35 other applicants. From 2<sup>nd</sup> November 2004 to 28<sup>th</sup> May 2010 an additional 15 licenses were issued bringing the total number of licensed zoos to 52 by 2010 (see Appendix VII). Collections of

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<sup>1</sup> The Flora and Fauna Act took effect from 1<sup>st</sup> April 2002

(wild) animals that are not open to the general public for more than 6 days per year are not required to have a license under the Zoo Licensing Act.

The implementation of the European directive in the Netherlands has placed a heavy emphasis on animal welfare. The recognized role of the zoo as an institution for the preservation of biodiversity, by contrast, has not been acknowledged to the same extent within the Zoo Licensing Act. In the European directive this role has been stated quite firmly. Although the goals of scientific research, education and conservation as stipulated under Article 3 of the directive have been incorporated within Article 12, sections 2a, 2b and 6 of the Zoo Licensing Act, they remain as loosely defined goals. Section 2b of Article 12, for example, states that zoos must *'participate as much as possible in existing captive breeding programmes'*. The specification *'as much as possible'* is subjective and cannot be measured. Section 2 of Article 12 states that *'zoos must promote the continued existence of species by conducting at least one of the following activities'*. A broad range of activities are then stipulated under sub sections 2a and 2b. It is not clear if *'at least one of the following activities'* refers to all the activities within a complete sub-section, sub-section 2a or 2b, for example, or if the act requires participation in only one of the conservation activities listed within a single sub-section.

The European Commission has recently evaluated its policies on animal welfare. It is currently developing a strategy for shaping future policy and has invited member states to present their proposals. The Ministry of EL&I is drafting a new piece of legislation called the Animal Act ('Wet Dieren'). The Animal Act aims to integrate all legislation involving the keeping of animals within a single law. As the law will include wild animals kept in captivity, the Animal Act is set to replace the Zoo Licensing Act. Wild animals that remain in a 'wild state of nature' will not be included in the Animal Act. The new law will govern the practices of all 'keepers of animals' ('houders van Dieren') in the Netherlands (Vergossen-Otten, A., 2011).

## 2.1 Zoo-Licensing and Inspection in the Netherlands

Following the reorganisation of the Ministry of LNV in October 2010 (see Appendix VIII), the Directorate DR is now one of two Directorates within EL&I's Directorate Generale Executive ('Directoraat Generale Uitvoering')<sup>2</sup>. The activities of the Directorate DR are spread across 16 departments and the zoo licensing authority falls under the department of Licensing and Exemptions ('Vergunning en Ontheffing'). The zoo-licensing agency is one of 16 licensing authorities within the department. A second agency within the Licensing and Exemptions division is responsible for issuing certificates, licenses and exemptions under the CITES convention ('CITES Nederland'). These are required for the purchase, sale or transfer of endangered animal species.

In order to acquire a license to operate a zoo in the Netherlands, operators submit a zoo license application form (see Appendix IX) to the Licensing and Exemptions department of the Directorate DR. There are no costs involved and forms are available online at [www.drloket.nl](http://www.drloket.nl). A full explanation of procedures and requirements is available on the site. To be eligible for a zoo license, operators must satisfy a number of conditions under the Zoo Licensing Act. These are divided into five categories of requirements and are summarized in section 2.1.1 below.

### 2.1.1 Conditions of License

The first category of conditions, Keeping ('Houden'), demands that kept animals must have the opportunity to display most natural behaviour. This includes digging, running, flying, swimming, nesting and sleeping but also social behaviours that may be typical of a given species. Climatic conditions, species-specific biorhythms and the ability to display natural courtship behaviour are also important factors to consider. These requirements are stipulated under Article 7, sub a to e of the Zoo Licensing Act.

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<sup>2</sup> The Ministry of EL&I is composed of six General Directorates and one General Inspectorate (see appendix viii).

The second category of conditions, Accommodation ('Huisvesten'), requires that the construction of enclosures should not present a risk of injury to animals or humans. Compounds should sufficiently contain animals to avoid escapes and prevent unwanted animals from entering. There must be an area of privacy away from human onlookers and opportunities for safe retreats away from other animals. Enclosures should be designed in such a way that aggressive, vulnerable or pregnant animals can be segregated from a group. These requirements are stipulated under Article 8, sections 1 to 4 of the Zoo Licensing Act.

The third category of conditions, Husbandry ('Verzorgen'), requires the presence of professional qualified staff that care for the animals on an individual as well as a species-specific basis. The health and condition of animals should be monitored daily so that any illness can be recognised and treated quickly. Zoos are required to have a treatment room and a quarantine area. These requirements are stipulated under Article 9, sections 1 to 6 of the Zoo Licensing Act.

The fourth category of conditions, Policy Protocols ('Beleidsprotocol'), requires that zoos have a number of policy documents in place. Zoos are required to have a policy on (a) research and captive breeding, (b) animal transactions, (c) contingencies and emergency scenarios, (d) veterinary care, and (e) education. A zoo must contribute to the preservation of species by participating in research or captive breeding programmes. Contingency plans must describe what to do in cases of emergency, such as the evacuation of the zoo. In the interest of education, effort should be made to show animals in their biological and ecological context. These requirements are stipulated under Article 12, sections 1 to 6 of the Zoo Licensing Act.

The fifth and final category of conditions, Animal Registration ('Registratie Dieren'), requires zoos to maintain a register in which the details of animals are kept and managed. The information should include species, dates of birth, identification numbers, an animal's origin and animal health records. The data must be kept for a minimum of 5 years after the death or departure of an animal. These requirements are stipulated under Article 13, sections 1 to 5 of the Zoo Licensing Act.

### 2.1.2 The Accreditation Process

Once the application form has been submitted, the DR informs applicants of the status of their application within a period of one week. If the information provided is satisfactory, the DR deals with the application immediately. If information is missing, the DR sends a letter to the applicant requesting any missing details. Once all the necessary documentation has been submitted, the DR schedules a visit from the Accreditation Commission ('Visitatiecommissie').

The Accreditation Commission used to be composed of five permanent members: (1) a Chairman, (2) a Secretary, (3) a Veterinary, (4) an Educational Advisor, and (5) a Specialist from the LNV with expertise in animal welfare and management. A sixth member was sometimes added if and when the context of the inspection required more specific knowledge; a specialist in primates, for example, would be useful when inspecting the 'Apenheul' in Apeldoorn. In order to reduce costs, the Commission was reduced to two permanent members - a chair and a secretary. Additional members were then added as and when needed (Vergossen-Otten, A., 2011).

The Accreditation Commission inspects the applicant's animal collection to assess if conditions satisfy the requirements of the Dutch Zoo Licensing Act. To help them with this task, the commission may seek the advice of independent experts. During the inspection process, the commission makes use of a question list that serves as a guideline during the inspection process. This list generally covers the criteria outlined in the section 2.1.1 above; applicants can download the list in preparation for inspections from [www.drloket.nl](http://www.drloket.nl) (see Appendix X). The Accreditation Commission reports their findings to the DR along with their recommendations. The DR decides whether or not a license will be issued and communicates their decision to the applicant within a period not exceeding 13 weeks from the submission date of the application. The DR is also

responsible for communicating the results of Accreditation Inspections to applicants. In cases where a license is refused, applicants can appeal directly to the DR within six weeks of being notified of the decision. If the matter is still not resolved, the applicant can lodge a second appeal via the Courts, once again - a six-week period applies<sup>3</sup>.

Because the goals of the European directive were formulated as 'open norms' within the Zoo Licensing Act, the choice of the legislator had mixed results. On the one hand it created problems for the Accreditation Commission who had a great deal of scope when interpreting the specific requirements of the Zoo Licensing Act; there were instances where the Accreditation Commission's judgment was criticised for being arbitrary and subjective. On the other hand, open norms are non-finite targets that provide plenty of scope for creativity and excellence. Precise definitions of standards can lead to an attitude where a bare compliance to a given standard is considered sufficient. It is also difficult to define explicit norms that can be applied to all species, and impractical to develop multiple sets of norms applicable to many categories of species (Wils, J. et al, 2008, p.23).

### 2.1.3 Inspections

On 26<sup>th</sup> February 2009, the VWA, the Food and Wares Authority ('Voedsel en Warenautoriteit'), published a collective year-plan on government inspections. The plan aimed at improving the efficiency of inspections by combining the tasks of inspectorates where possible. This would both reduce the costs of inspections and minimize the inconvenience to institutions - the aim being to conduct all inspections in no more than two visits<sup>4</sup>. The plan involved four government inspectorates<sup>5</sup> from three Ministries. The AID, the General Inspections Service ('Algemene Inspectiedienst'), was given the task of coordinating the activities of inspectorates. The report provides an indication of the range and diversity of government inspections conducted in zoos.

In 2009, 11 types of government inspections were planned to take place in 50 recognized zoos in the Netherlands. These were as follows: compliance to the requirements of the Zoo Licensing Act; satisfaction of the conditions to be recognized as a zoo; safety issues concerning the feeding of animal byproducts; safety of animal foods; safety of foods for human consumption; safety of recreational structures and facilities; safety of playground facilities; safety of consumer products; the sale of alcohol and tobacco; the implementation of the smoking ban in public places; and the inspection of water quality<sup>6</sup> (Jaarplan voor de Horeca & Recreatie 2009; Rijksinspecties, 2009, p 19). In addition to this formidable list, municipal councils also conduct inspections. The fire brigade, for example, checks for potential fire hazards and emergency evacuation procedures.

On 1<sup>st</sup> January 2012, the AID, VWA and PD, the Phytopathology Service ('Plantziektenkundige Dienst'), merged to form a single inspectorate. The new inspectorate was called the NVWA, the Dutch Food and Wares Authority ('Nederlandse Voedsel en Warenautoriteit'). The NVWA is composed of 5 divisions and falls under the Inspectorate Generale of the Ministry of EL&I. The NVWA inspects zoos every three years to check that they continue to meet the standards prescribed in the Zoo Licensing Act (the first of the eleven inspections mentioned above). The criteria examined during inspections are similar to those examined by the Accreditation Commission during license applications. NVWA report the bare facts of their findings without interpretation. The DR is responsible for interpreting the findings and can impose measures as a condition of license.

<sup>3</sup> Source material retrieved on 8<sup>th</sup> June 2011 from <http://www.hetInVloket.nl/onderwerpen/vergunning-en-ontheffing/dossiers/dossier/dierentuinen>

<sup>4</sup> Retrieved from the NVWA on 8<sup>th</sup> June 2012: <http://www.vwa.nl/onderwerpen/bedrijven-en-instellingen/branche/horeca-catering-en-kantines/nieuwsoverzicht/nieuwsbericht/24101/jaarplan-2009-voor-horeca-en-recreatie-van-samenwerkende-rijksinspecties>

<sup>5</sup> The VWA ('Voedsel en Warenautoriteit'), the AI ('Arbeidsinspectie'), the VI ('VROM Inspectie') and the AID ('Algemeen Inspectiedienst'),

<sup>6</sup> This inspection is conducted by the Dutch Water Board 'Rijkswaterstaat' but was included in the government report.

In addition to the government inspections conducted by the NVWA, the NVD conduct their own inspections of NVD affiliated zoos<sup>7</sup>. NVD inspections focus on animal welfare standards and the safety of animals and keepers. In 2011 the emphasis was on the implementation of Health and Safety regulations (ARBO) for workers in general. A list of dangerous animals in the collection formed the basis for these inspections. Animal records are inspected by the NVD only in cases where problems with the use of information systems have been identified. The number of EEPs and ESBs in which a zoo participates is an important factor for the assessment of conservation initiatives. Separate accreditations of educational programmes and initiatives are set to take place in 2013.

M. van Aggelen, Director of the NVD, notes that some inspection criteria require highly specialized domains of expertise involving dimensions that are difficult to quantify, *“inspectors from the Ministry do not always have the necessary knowledge required for all types of inspections”*. The NVD has access to a very broad range of knowledge on the animal husbandry requirements for specific species. This is why the NVD conducts its own inspections independent of the NVWA. As the NVWA does not always have the necessary specialists at hand, the NVD sends copies of their inspection reports to the DR. These can be a valuable source of reference for future NVWA inspections. The NVD enforce 6 policy documents, or codes of conduct, to which its members are strictly bound: NVD Health and Safety Catalogue, NVD Code of Ethics, NVD Sustainability Code, NVD Animal Transaction Code, NVD Guidelines on Dead Animal Material (see Appendix XI), and NVD Educational Memorandum<sup>8</sup>.

In the past, zoos were required to inform the AID (now part of the NVWA) of any new enclosures that they intended to build. The Ministry would then check to make sure that the plans for new enclosures complied with the Zoo Licensing Act. The NVD lobbied the Ministry to change this policy because it involved a complex process for each new enclosure irrespective of its size and complexity. The policy at present is that zoos are required to inform the DR twice a year of any new enclosures that have been built. The NVWA then checks these enclosures for compliance to the Zoo Licensing Act. An exception is when new enclosures involve the construction of major facilities; these must be checked and evaluated by the NVWA before any construction commences (Aggelen, M. van, 2011).

Whereas NVD inspections concern factors that are predominantly related to animal husbandry and animal welfare, the inspections of the NVWA are far broader in scope. The NVD can impose sanctions if a zoo does not meet the quality requirements of NVD inspections. The NVWA make recommendations to the DR. The DR has the authority to impose conditions on licenses that must be satisfied within a defined period of time. If quality standards are found to be lacking, zoo operators are given a reasonable period in which corrective measures can be taken. In the most extreme scenario, the DR has the authority to revoke a zoo license.

Non-governmental organizations concerned with the protection of animal rights also monitor welfare standards in zoos. Whereas the NVWA give a two-day advance notice period before visiting a zoo for inspection, organisations such as Zoo Watch and ENDCAP inspect zoos without notice and (often) covertly without permission. ENDCAP is a broad coalition of animal rights campaigners established by the UK-based Born Free Foundation. In 2011 they coordinated an extensive pan-European investigation into the implementation of European Commission Directive 1999/22/EC. So far, ENDCAP's 'EU Zoo Inquiry 2011' has led to the publication of 14 country-reports containing information on legislation, standards of welfare and levels of commitment to education, scientific research and conservation<sup>9</sup>.

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<sup>7</sup> When the NVD was established in 1966, the organization had not yet formulated its inspection policies and procedures. Some NVD members were not properly accredited at the time of joining. To correct this situation, the NVD is planning a number of retrospective inspections to guarantee uniform standards amongst all of its members (M. van Aggelen, 2011).

<sup>8</sup> Retrieved on 8<sup>th</sup> June 2012 from: <http://www.nvddierentuinen.nl/nvd/beleid/>

<sup>9</sup> For a good overview of all kinds of regulations governing the operations of zoos see: Holst, B. and Dickie, L., 'How do National and International Regulations and Policies Influence the Role of Zoos and Aquariums in Conservation', in Eds. Zimmerman, A., Hatchwell, M. and Dickie, L., *Zoos in the 21<sup>st</sup> Century*. (2007), Cambridge University Press, UK, pp. 22-36.



## 2.2 Education

In section 2.2.1 below, I present the legal requirements on education and a compact summary of directives and guidelines from the NVD and EAZA. In section 2.2.2 I give a summary of conclusions stemming from zoo accreditations and inspections conducted by the Accreditation Commission and the AID respectively. In section 2.2.3 I present a short discussion on the relative value of education amidst other valuable interests.

### 2.2.1 Educational Directives and Guidelines

Article 3 of European Commission Directive 1999/22/EC presents its educational targets as follows: *'[zoos must promote] public education and awareness in relation to the conservation of biodiversity, particularly by providing information about the species exhibited and their natural habitats'*.

Under Dutch law, these targets have been implemented under Article 12, section 6, of the Zoo Licensing Act where they appear as the following requirements: *'[zoos must provide] an informative and educational programme for the species kept in the collection [and] ... this information should present animals in their biological and ecological context'*.

Article 11, section h of the 'EAZA Constitution (2002)' states that members are obligated to: *'provide educational programmes and facilities, whereby animals on display should be accurately identified and the aspects of their biology accurately described'* (EAZA Constitution, 2002).

EAZA's Education Standards 2008 are as follows: *(1) The education role of the zoo is to be clearly stated in its written mission statement; (2) the zoo must have a written education policy, identifying educational components and setting out the methods by which these components are directed towards the different sections of the zoo's visitor audience; (3) the zoo's educational message must be based on scientific facts; (4) education can encourage local action. Wherever possible, the zoo must make environmental issues (e.g. sustainability) relevant to visitors by relating the issues to their own lives and experience; (5) the zoo must use a diversity of techniques to communicate their educational message in ways appropriate to their location, size and budget; (6) via annual reports, the zoo must be able to demonstrate that it is carrying out its education policy, by reference to specific projects, figures of attendance, evaluation procedures and research; (7) at least one member of staff within the zoo should be responsible for a professional implementation of the education policy; (8) a zoo must use scientific methods to evaluate the impact of their education programmes; (9) animal training may be a helpful educational tool. When animal demonstrations form part of the educational programme, the zoo must in all cases be able to report on the educational effectiveness of the demonstration and on the effects on the animal's welfare; (10) animals must be clearly and correctly identified at their enclosures (if practicable); (11) It should be emphasised that for education programmes to be successful, zoo animals must be exhibited in the best conditions in enclosures that enable them to live as natural as possible and to participate in natural behaviours as far as possible; (12) interpretation / education should be an integral part of zoo exhibit planning and the collection planning process; and (13) staff members should be provided with access to relevant information / references (e.g. through a library or internet) appropriate to the size and complexity of the zoo (EAZA, 2008).*

Taking its lead from the New World Zoo and Aquarium Conservation Strategy (WZACS, 2005), the NVD's policy document on education ('NVD Educatie Standaard 2009') presents 7 guiding principles on education that must be adhered to by its members. These principles are as follows: *(1) Education should be an integral part of the organization and policy of the zoo; (2) there should be a sufficient number of educational staff to realise the educational goals of the zoo; (3) education should be adjusted to the needs of the target groups(s) for which it is intended; (4) the general configuration of the zoo supports the educational goals; (5) the animals, the enclosures and accompanying information support the educational goals of the zoo; (6) educational products and activities should sufficiently support the educational goals of the zoo; and (7) the conservation of nature should remain an integral part of education policy (NVD, 2009).*

## 2.2.2 Assessment of Educational Requirements

On 20<sup>th</sup> November 2008, an independent research agency called Research for Policy ('Research voor Beleid') released the results of their investigation into the efficacy of the Dutch Zoo Licensing Act. The 59-page report was commissioned by the LNV to evaluate the practical implementation of the act and to determine the extent to which the Zoo Licensing Act manages to achieve the goals set out in the European directive. The report included a number of conclusions concerning the implementation of the educational requirements in the Zoo Licensing Act.

Educational activities range from hanging signs on enclosures to creating complete biomes in which animal species are presented together in their natural habitats. The educational value of biomes is that visitors are immersed in the life-worlds of animal species and this approach has a positive impact on the public's perception of animal welfare and shows animals in their biological and ecological context. Due to restrictions in budgets, this approach is beyond the reach of smaller zoos, who are usually limited to presenting information on boards. Education does not always have a priority and is sometimes used as a means of attract visitors. As materials tend to cover charismatic animal species only, this can have a negative impact on the quality of education. The Accreditation Commission sees the placing of signs as a compulsory requirement. Signage is therefore the minimum requirement for fulfilling educational obligations. The extent to which signs contribute to educational goals is questionable. (Wils, J. et al, 2008, pp. 43-44).

From accreditation reports it is clear that the Accreditation Commission conduct only marginal checks on education when compared to animal welfare. The Commission checks for the presence of an education protocol, if this is found to be lacking, the operator is required to produce one. There are no demands placed on the content of education protocols and there are no checks on the implementation of education protocols. Given that the AID only inspect for conditions of license, the AID does not check on the implementation of education protocols. The Zoo Licensing Act does not define the goals for education protocols. Educational activities are mostly geared towards general targets and not to specific target audiences. When questioned, some respondents could provide a number of educational goals. Where some zoos see the goal of education as instilling a sense of respect for animals, other zoos interpret the goal as a method of contributing to the preservation of species and biodiversity. (Wils, J. et al, 2008, pp. 43-44).

For NVD-EAZA zoos, the Zoo Licensing Act has had little impact on their education policies. NVD-EAZA directives on education are far more detailed than the requirements under the Zoo Licensing Act. Some NVD-EAZA members would like to see more stringent regulations and believe that zoos are insufficiently stimulated to develop educational programmes. Zoos were originally recreational amenities – through the years additional roles have been added including education. It is not clear to what extent the general public's expectations have grown in tandem. It is also unclear to what extent the general public read information boards or the extent that information is digested and assimilated. If the general public primarily visit zoos to look at monkeys, then it is unlikely that educational messages will hit their intended target. When goals conflict, operators say that animal welfare comes first. Sometimes, however, measures that are in the best interest of animal welfare take second place to educational goals. There is also a field of tension between the recreational role of the zoo and the goals of the Zoo Licensing Act. With regard to education, legislation is insufficiently specific and inspections do not check the quality of educational content'. (Wils, J. et al, 2008, pp. 43-44).

For the consolidated results of ENDCAP's investigation into the implementation of educational goals in zoos across Europe see Appendix XII.

### 2.2.3 Brief Discussion

From much of the literature it seems that the increasing legal requirements placed on zoos are the result of shifting public attitudes concerning the right of the institution to remain in existence. The NVD's policy document on education, for example, states that '*Zoos have experienced a recent evolutionary transition ... there has been a shift in vision concerning the [institution's] right to exist ('bestaansrecht'). The arbitrary collection of animal species has given way to [a situation in which] zoos must contribute towards the conservation of species in captivity (ex situ conservation) and ... to the preservation of species in their natural habitats (in situ conservation)*' (NVD Educatie Standaard, 2009, p.1).

Although education is undoubtedly a valuable means of harnessing public concerns for the need to conserve biodiversity, the obligations defined under the Zoo Licensing Act can require considerable resources and have proven to be difficult to quantify and evaluate. This raises the question of whether or not it is worthwhile incorporating educational goals in the form of legally binding requirements. If the core role of the zoo is the preservation of biodiversity through a combination of research, captive breeding and in situ conservation initiatives, then the obligation to take on the role of an educational facility will consume resources that might be better spent elsewhere. In my case study of Blijdorp Zoo, for example, Rotterdam Council's requirement to provide classes to some 50,000 school children annually is a significant and costly obligation.

In the absence of a legal requirement, educational activities would remain a means of engaging the general public with the collection - one of the many ways in which a zoo can attract visitors in a competitive market. I raise this question not to diminish the social value of educational initiatives, but rather, to raise the issue of priorities and the zoo's core-business. Given the urgency of conserving threatened species, is it wise to compromise available resources on a legal obligation to conduct educational activities. For the small zoo especially, it could impose a burden that reduces their ability to participate in captive breeding programmes.

The directives on education stipulate that educational activities and materials should be targeted to specific groups of individuals. This would seem very difficult to achieve in practice. Perhaps the advent of QR Codes (Quick Response Codes) combined with Smartphone technologies can be harnessed to create target-specific text, audio and video packages pushed digitally to individual visitors. This might be a cheaper long-term solution than producing tangible materials (physical) that have to cater for a broad range of target audiences.

Content that is sent digitally during or after a visit might also be a way of avoiding the potential of swamping visitors with an information overload. Many visitors prefer to spend their time watching the animals instead of reading or watching presentations on monitors. A digital transfer-system would allow visitors to collate a personal diary of their visit as they pass through the collection. The diary, including links to audio and video files, could then be read and looked at from home. In a 1996 study, *'The Modern Zoo; How do people Perceive Animals'*, only 4% of respondents visited zoos to be educated (Reade, L.S. and Warren, N.K., in *Applied Animal Behaviour Science* 47 (1996) 109- 118, page 116). If such an initiative was organized centrally, under the supervision of the NVD for example, then a single database could serve the whole zoo community efficiently and cost effectively.

What seems to be missing from discussions on the educational value of zoos is the value of the face-to-face encounter itself. Just looking into the eyes of a magnificent creature may have equal, or perhaps even more, effect on changing public attitudes than any factual description of an animal's behaviour, its habitat or its vulnerable status in the wild. The writings of Emmanuel Levinas (1906-1995) lead to an interesting thought in this context. But as I could not hope to do any kind of justice to his philosophy within a couple of short paragraphs, I will have to make do with a crass caricature of his ideas instead.

In *'Totality and Infinity'* (1961), Levinas rejects Heidegger's claim that Ontology is first philosophy, proposing instead that first philosophy is Ethics. In other words, Ethics is not a subject subsumed under ontological categories, but rather, Ethics precedes ontology and stands above it. As individual human beings trapped within our own subjective experiences we face an

external world that is not I but is radically Other. Face-to-face encounters with the Other place both demands on the I and are at the same time a source of desire for the I. The I can only come to know and affirm itself by engaging in discourse with the Other, yet the Other is something that the I can never truly comprehend; the medium of language has its limitations. The I acquires its language and its concepts through its engagements with the Other, yet the I cannot know if these concepts are the same in the Other. The confrontation with the face of the other therefore places a demand on the I and this demand is Ethics – a moral relationship.

Under the heading 'Discourse Founds Signification', Levinas writes *'Language thus conditions the functioning of rational thought: it gives it a commencement in being, a primary identity of signification in the face of him who speaks, that is, who presents himself by ceaselessly undoing the equivocation of his own image, his verbal signs, Language conditions thoughts – not language in its physical materiality, but language as an attitude of the same with regard to the Other, irreducible to an intention of thought ...'* (1969, p. 204).

Levinas speaks of an irresolvable disconnect between individuals brought about by subjective experience, an unbridgeable gap of intersubjectivity. Although Levinas refers to human relationships, his ideas might be extended to include human-animal relationships too. After all, nowhere is the distance of inter-subjectivity more profoundly experienced than when one looks into the face of an animal. Temple Grandin is famous for her view that animals think in 'pictures, smells and sounds' rather than linguistic concepts. In 'Animals in Translation', Grandin (2005) describes experiments into animal communication that were conducted by Con Slobodchikoff at Northern Arizona University. Slobodchikoff *'found that prairie dog colonies have a communication system that includes nouns, verbs and adjectives'* (2005, p. 273). The experiment involved the use of sonograms to analyze distress calls generated by a range of stimuli. By comparing sounds to responses, signification could be attached to sounds.

Although animals have minds, we have no way to understand these mind because the absence of a common language denies discourse. The demands of the human face described by Levinas, applies even more so when it comes to an animal. We have no means for *'undoing the equivocation of [an animal's] own image'*; what you see is what you get without further explanation. We can look, we can feel, we can imagine and search for signs. We can project our anthropomorphic<sup>10</sup> concepts onto animal Others and we may empathize. The face-to-face encounter makes strong demands, and although we cannot know, the face demands respect.

## 2.3 Scientific Research

In section 2.3.1 below, I present the legal requirements on scientific research and a compact summary of EAZA's guidelines on research. In section 2.3.2 I give a summary of conclusions stemming from a 2008 report conducted by Research for Policy ('Research voor Beleid') on behalf of the ministry of LNV. In section 2.3.3 I present a short discussion on the relative value of scientific research amidst other valuable interests.

### 2.3.1 Research Directives and Guidelines

Article 3 of European Commission Directive 1999/22/EC presents its scientific research targets as follows: *'[zoos must participate] in research from which conservation benefits accrue to the species, and/or training in relevant conservation skills, and/or the exchange of information relating to species conservation and/or, where appropriate, captive breeding, repopulation or reintroduction of species into the wild'*.

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<sup>10</sup> See Roger Fouts's view on anthropomorphism in scientific research: Fouts, R., 'Science in Zoos; Arrogance of Knowledge versus Humility of Ignorance', in Eds. Hutchins, M., Norton, B., Stevens, E. and Maple, T., *Ethics on the Ark*, (1995). Smithsonian Institution, pp. 277-288.

Under Dutch law, these targets have been implemented under Article 12, section 2a, of the Zoo Licensing Act. The requirements have been formulated as follows: *'[zoos must participate] in scientific research that positively promotes the preservation of species, the training of staff in skills that are relevant to research and the exchange of [research] information with other zoos'*.

Article 11, section f of the 'EAZA Constitution (2002)' states that members are obligated to: *'contribute to the advancement of biological knowledge of species which they keep, and where appropriate, to carry out relevant scientific study thereto'* (EAZA Constitution, 2002).

In 2003, EAZA released its 8-page guidelines on scientific research (EAZA Research Standards, 2003) stating that the aim of the document was to encourage *'good quality research in zoos and to promote the zoological garden as a venue for academic research'*. The document identifies a number of problems that frustrate the achievement of this goal. These include *'the comparative absence of long-term research programmes to conduct research, the lack of funding to pay for the research required and the climate of distrust and non-co-operation that often exists between zoo-staff and academics'*. The document presents some measures that could be taken to encourage the implementation of research in zoos. These include: *'employing scientific staff, setting aside time and money for research, developing contacts with universities and academics and publishing results'* (EAZA, 2003, p.1). Most of the document focuses on two suggested measures: (1) The development of a standardized research proposal form and evaluation protocol, and (2) the development of a research agreement for the use between zoos and external researchers. Example forms and protocols are provided in the document.

### 2.3.2 Assessment of Scientific Research Requirements

In their 2008 study, Research for Policy ('Research voor Beleid') drew a number of conclusions concerning the implementation of the Zoo Licensing Act's requirement concerning scientific research. The report starts by pointing out that the Zoo Licensing Act offers zoos a choice between participating in scientific research and participating in ex-situ conservation. The authors suggest that this choice is intended to provide a means by which smaller zoos, lacking the funds to participate in captive breeding programmes, can still make a contribution to the conservation of biodiversity by conducting research. Another reason for this choice is that some zoos have large collections of animals whose genetic purity is uncertain. As the pedigree of breeding stock is a critical factor for the sound management of captive breeding programmes, the choice of scientific research offers a viable alternative (Wils, J. et al, 2008, pp. 45-47).

During their investigation, one of the experts interviewed raised the question of what exactly was meant by participating in scientific research. Zoos are not scientific research centres and do not have the time or expertise to conduct scientific research. The expert would have preferred the Zoo Licensing Act to require that zoos should actively facilitate and support scientific research. This could involve a financial contribution to organizations such as the Dutch Zoos Conservation Fund, an organization that funds research of species in the wild. Another way in which zoos could facilitate scientific research is to collect genetic material from their animals for genetic research (Wils, J. et al, 2008, pp. 45-47).

Wharton, D. (2007) lists 12 major disciplines that are researched in zoos: Anatomy/Morphology; Behaviour; Ecology; Physiology; Systematic Biology; Genetics; Nutrition; Population Biology; Biogeography; Veterinary Medicine; Social Science and Education (2007, p. 186)<sup>11</sup>.

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<sup>11</sup> See: Wharton, D., 'Research by zoos', in Eds. Zimmerman, A., Hatchwell, M. and Dickie, L., *Zoos in the 21<sup>st</sup> Century*. (2007), Cambridge University Press, UK, pp. 178-191.

### 2.3.3 Brief Discussion

If we consider the case of Rotterdam Zoo, one sees that Blijdorp conducts a lot of research into hormones within their own laboratory. Blijdorp is hosting an international congress on keeping elephants and rhinos and their scientific knowledge is disseminated widely via publications and congresses. Blijdorp also provides blood-testing services for other zoos in the Netherlands, including Dolphinarium Harderwijk, and actively cooperates with external scientists from a range of organizations and universities; external researchers are allowed to conduct research programs within the zoo<sup>12</sup>. Although Blijdorp has their own researchers on the payroll, including veterinary staff who conduct research as part of their standard animal care practice, the number of research staff is now being reduced due to reductions in funding. (Damen, M., 2011).

If one considers Research for Policy's conclusion that the option to participate in research gives zoos a viable alternative to participating in expensive captive breeding programs, then their assumption that research offers a more affordable means for making a contribution to conservation is questionable. Blijdorp's cuts in funding will mean that less research can be conducted by the zoo's own staff. Although some zoos, like Blijdorp, may indeed have in-house facilities to conduct their own scientific research, it would be more practical to reformulate the scientific research requirement under the Zoo Licensing Act as an obligation to be involved. Zoos lacking expertise in scientific research, or zoos lacking the expensive facilities necessary for conducting scientific research, cannot be expected to radically change the nature of their organization to meet this research requirement.

Contrary to the Directorate VDC's intention of not wanting to add additional constraints that might make compliance more difficult for zoo operators, it seems that this requirement is an example of where the implementation of the European Directive imposes obligations beyond the European requirement. Where the EU Directive presents improvements in the training of staff as one of the potential goals for scientific research amongst many research options, the Zoo Licensing Act requires that zoo staff must be trained in skills that are relevant for conducting research. This is a very different requirement.

A final point to consider might be the following. If the zoo's primary social role is to serve as a vessel for the preservation of endangered species through captive breeding programmes, then resources that are taken away from this primary role may compromise the results that zoos are able to achieve in this primary role. If zoos were not legally obliged to actively conduct research, then they could charge external parties for access to the cellular material required for research purposes. In this way, external parties conducting research into the biology of a particular animal species could make a financial contribution to the conservation of the species being studied.

## 2.4 Conservation

In section 2.4.1 below, I present the legal requirements on conservation and a compact summary of directives and guidelines from the NVD and EAZA. In section 2.4.2 I give a summary of conclusions stemming from zoo accreditations and inspections conducted by the Accreditation Commission and the AID respectively. In section 2.4.3 I present a short discussion on the relative value of conservation amidst other valuable interests.

### 2.4.1 Conservation Directives and Guidelines

Article 3 of European Commission Directive 1999/22/EC includes many specific kinds of activities under the umbrella concept of conservation. Conservation targets are presented in very broad terms whereby the more specific targets of education and scientific research are classified as conservation activities also. Conservation activities are defined as follows: *{zoos must*

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<sup>12</sup> More detailed information on Blijdorp's research policies and activities can be seen on pages 10 and 11 of their 2010 annual report.

*participate] in research from which conservation benefits accrue to the species, and/or training in relevant conservation skills, and/or the exchange of information relating to species conservation and/or, where appropriate, captive breeding, repopulation or reintroduction of species into the wild, promoting public education and awareness in relation to the conservation of biodiversity, particularly by providing information about the species exhibited and their natural habitats, accommodating their animals under conditions which aim to satisfy the biological and conservation requirements of the individual species, inter alia, by providing species specific enrichment of the enclosures; and maintaining a high standard of animal husbandry with a developed programme of preventive and curative veterinary care and nutrition, preventing the escape of animals in order to avoid possible ecological threats to indigenous species and preventing intrusion of outside pests and vermin, keeping of up-to-date records of the zoo's collection appropriate to the species recorded'.*

Under Dutch law, conservation targets have been implemented much more specifically under Article 12, section 2b, of the Zoo Licensing Act. The requirements for conservation are presented as follows: *'zoos must participate] as much as possible in existing captive breeding programmes, in the recovery of populations or the reintroduction of species to their natural habitats'.*

Article 11, sections c, d and e of the 'EAZA Constitution (2002)' states that members are obliged: *'if and insofar as a member has staff, to encourage its staff to be actively involved in conservation activities, both nationally and internationally; d. to participate in scientifically based coordinated breeding programmes at national, European and global levels; e. to provide relevant information for breeding programmes, as the Council may require (EAZA Constitution, 2002).*

EAZA upholds the IUCN's 'Technical Guidelines on the Management of Ex Situ Populations for Conservation'. The goal of these guidelines are expressed as follows: *"Those responsible for managing ex situ plant and animal populations and facilities will use all resources and means at their disposal to maximise the conservation and utilitarian values of these populations, including: 1) increasing public and political awareness and understanding of important conservation issues and the significance of extinction; 2) co-ordinated genetic and demographic population management of threatened taxa; 3) re-introduction and support to wild populations; 4) habitat restoration and management; 5) long-term gene and biomaterial banking; 6) institutional strengthening and professional capacity building; 7) appropriate benefit sharing; 8) research on biological and ecological questions relevant to in situ conservation; and 9) fundraising to support all of the above. Ex situ agencies and institutions must follow national and international obligations with regard to access and benefit sharing (as outlined in the CBD) and other legally binding instruments such as CITES, to ensure full collaboration with all range States. Priority should be given to the ex situ management of threatened taxa (according to the latest IUCN Red List Categories) and threatened populations of economic or social/cultural importance. Ex situ programmes are often best situated close to or within the ecogeographic range of the target taxa and where possible within the range State. Nevertheless a role for international and extra regional support for ex situ conservation is also recognised. The option of locating the ex situ programme outside the taxa's natural range should be considered if the taxa is threatened by natural catastrophes, political and social disruptions, or if further germplasm banking, propagation, research, isolation or reintroduction facilities are required and cannot be feasibly established. In all cases, ex situ populations should be managed in ways that minimize the loss of capacity for expression of natural behaviours and loss of ability to later again thrive in natural habitats' (IUCN, 2002).*

#### 2.4.2 Assessment of Conservation Requirements

In their 2008 study, Research for Policy ('Research voor Beleid') drew a number of conclusions concerning the implementation of the conservation requirements in the Zoo Licensing Act. The report stated that in order to assess the extent to which the Zoo Licensing Act is successful in meeting the target demands of the European directive that one would first have to establish what the preservation of species aims to achieve; is the requirement aimed at research and breeding programmes for the preservation of zoo populations, or is the requirement aimed at restocking depleted populations in the wild? From the formulation of the goals this is unclear. If the former is the case then the achievement of the requirement has been quite successful. The authors have their doubts concerning the second scenario.

The restocking of wild populations involves many complexities. Some types of species, apes and carnivores for example, lose the skills required to survive in the wild when kept in captivity. There are also strict demands concerning the genetic purity of animals released back into the wild. The authors give the example of the captive breeding of different species of lion; there are two sub-species of lion, the African and the Asiatic lion. Within these sub-species there are further populations such as the Atlas lion from North Africa and the Ethiopian lion. In order to be released into the wild, released animals must be genetically pure; crossbreeds of Atlas and Ethiopian lions, even though they belong to the same sub-species (Asiatic lions), are not genetically suitable for release. Neither may Atlas lions be released in Ethiopia or Ethiopian lions in North Africa. These factors make breeding for reintroduction purposes much more complex.

A second problem concerns the breeding of so-called 'dinosaurs'; animals that no longer exist in the wild and whose natural habitat has disappeared. Some zoo operators believe that such species should not be bred and should be allowed to become extinct; extinction is a natural process. Others believe that such species retain an educational value and that there may be opportunities for reintroduction in the future. Again, zoos must prevent the loss of genetic purity amongst captive remnant populations. The Zoo Licensing Act makes no mention of any conditions with regard to the genetic purity of species.

One of the experts interviewed expressed the opinion that the government should impose guidelines requiring that zoos breed species for the purpose of reintroduction. Zoos would then be required to take note of regional boundaries between populations in the wild. The present requirements are only sufficient for the purpose of maintaining zoo populations. The act needs to be sharpened if zoos are required to restock populations in the wild (Wils, J. et al, 2008, pp. 45-47)<sup>13</sup>.

For the consolidated results of ENDCAP's investigation into the conservation output of zoos across Europe see Appendix XII.

### 2.4.3 Brief Discussion

European Commission Directive 1999/22/EC states that the role of zoos is to contribute to the conservation of biodiversity. This conservation role is then divided into three main streams of activities; participation in ex situ and in situ conservation programmes, participation in educational activities, and participation in scientific research. Within the directive, education and scientific research are seen as factors contributing to the success of the primary activity, that is, participation in captive breeding programmes and in situ conservation initiatives. One can say then, that captive breeding, the re-stocking of depleted populations in the wild, and in situ conservation initiatives are direct activities. Education and scientific research, by contrast, are indirect activities that are necessary to support these direct activities. Of the three direct activities, ex situ conservation, the restocking of depleted wild populations, and in situ conservation initiatives, it is only the former that is the core-business of zoological parks; the coordinated breeding of captive populations. Although zoos may participate in programmes that aim to replenish and protect wild populations in situ, these activities involve cooperation with (often) external experts working in the field. They are project activities and not the core-business of what takes place in the zoo.

If one accepts all of the above, then it would seem logical to strengthen the legal obligations for the primary activity of captive breeding and to reduce any legal obligations that reduce the potential for achieving this primary goal. The enactment of this primary goal is at the same time educational and knowledge producing. The practical management of captive breeding

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<sup>13</sup> For a discussion on methods of assessing conservation results see: Mace, M. et al, 'Measuring Conservation Success; Assessing Zoo's Contribution', in Eds. Zimmerman, A., Hatchwell, M. and Dickie, L., *Zoos in the 21<sup>st</sup> Century*. (2007), Cambridge University Press, UK, pp. 322-343.



programmes leads to empirical information that is disseminated amongst partner institutions. This process itself produces new knowledge of how best to manage and breed captive populations of species. The dissemination of this empirical information is educational; a source of species-specific information for all zoos involved in the captive breeding of endangered species.

All discreet living entities are momentary expressions of an ongoing gene transfer process. More than most, Richard Dawkins can be thanked for bringing this insight to a wide general public in his best-selling book 'the Selfish Gene' (1976). In the preface to his second edition, Dawkins uses the metaphor of a Necker cube to show the implications of his theory. His theory doesn't reject Darwinism, but rather, presents Darwin's theory of evolution from a very different perspective; it is not embodied individuals that compete for survival, but rather, the genes that give rise to the particulars of individual living entities. The living entity that is the result of gene selection is an insignificant and transitory expression<sup>14</sup>. Genes are the entities that evolve and survive (Dawkins, R., 2006, p. xv).

The careful management of gene pools in captive breeding programmes raises ethical dilemmas. Animal welfare is quite naturally focussed on the welfare of individual animals and not on the welfare of their genes. Yet in order to maintain sustainable populations of endangered species one must manage the integrity of gene pools within populations. This means that some animals, or expressions of genes from Dawkins's perspective, are valuable for the conservation of a given species whereas other animals are regrettably not. Especially amongst the males of a species, captive breeding produces animals that are surplus to requirement.

ENDCAP advocates the abolition of zoos through a process of non-breeding – they endorse the progressive extinction of captive populations through natural death. ENDCAP argues that we are not protecting species for the good of the species, but rather, that we are protecting them for our own selfish human interests. To me, this argument seems quite sound. After all, what interest does an individual animal have in the survival of its species? The fact that an animal is one of the few surviving members of its kind has no bearing on the interests of the individual animal concerned. Like all living beings, an animal has needs and is capable of experiencing degrees of pain and pleasure. An animal has an interest in its own welfare and its welfare may be dependent on the direct presence of other members of its kind. Beyond this point, I cannot see that an animal has an interest in the preservation of its species. This may count equally for human beings.

Neither the EU Directive nor the Zoo Licensing Act specifically mentions whose interest is served by the preservation of biodiversity. If one accepts ENDCAP's observation that conservation serves an anthropocentric interest, then what can be said of such an observation? Is there something inherently wrong in preserving species for the enjoyment of future human generations? Is our will to preserve species a genetic flaw in human beings by Dawkins's theory? Rather than being limited to a concern for the survival of our own genes, it seems that human beings are concerned for the survival of other genes also. Do we violate an animal's rights by keeping it in captivity? Although opinion on such questions is divided, those who argue against keeping animals in captivity do so largely on animal welfare grounds.

When one compares standards of animal welfare in zoos to standards that prevail in agriculture one might conclude that such concerns are directed towards the wrong institution. This is certainly a view that Peter Springer would agree with. That is not to say that our reasons for keeping zoo animals in captivity are justifiable on ethical grounds. In the context of this study, the ethical questions raised by keeping animals in captivity for the enjoyment of future human generations are beyond the scope of my research. All I will say is that a world depleted of the rich diversity of animal species is a world that is significantly impoverished.

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<sup>14</sup> See also: Vrijenhoek, R., 'Natural Processes, Individuals, and Units of Conservation', in Eds. Hutchins, M., Norton, B., Stevens, E. and Maple, T., *Ethics on the Ark*, (1995). Smithsonian Institution, pp. 74-92.

# CHAPTER THREE

## ZOOS AND FUNDING

- 3.0.0. introduction
  - 3.1.0. VAT, subsidies and anti-trust law
    - 3.1.1. VAT exemption; a double-edged sword
    - 3.1.2. exploitation subsidies and ant-trust law
  - 3.2.0. sources of zoo funding
  - 3.3.0 growth, vulnerability and dependence
    - 3.3.1 growth
    - 3.3.2 vulnerability
    - 3.3.3 dependence



### 3.0 Introduction

From the previous chapter one can conclude that the institution of the zoological park is facing a crisis of identity. Its historical role as a place of public recreation has been, if not completely replaced, at least significantly augmented by the forced<sup>1</sup> addition of new social functions under the Zoo Licensing Act. In addition to its traditional role as a recreational facility, the zoo is now a multi-functional institution that operates as an educator, a centre for furthering scientific research, and a vessel for the preservation of biodiversity through captive breeding programmes.

As might be expected, these social roles cannot be performed adequately without a sufficient level of financial resourcing. In this chapter, I explore the various sources of funding that zoos can exploit to finance their many and diverse operations. Some of these sources of funding can involve conflicts of interest where the potential for generating optimum levels of revenue from a given source is significantly compromised. The financial dynamics of operating a zoo is the central theme addressed in this chapter.

In section 3.1 I discuss the tax concessions proposed in the 'Manifesto for Zoos', a joint initiative coordinated by John Regan Associates Ltd on behalf of the Consortium of Charitable Zoos. I also consider if exploitation subsidies are a violation of anti-trust law. In section 3.2 I review existing sources of revenues and advance the merits of a structured form of central funding that is presently absent. In section 3.3 I conclude the chapter by discussing issues of growth and dependence and I assess the vulnerability of zoo finances when compared to the financing and operational dynamics of similar institutions. I also introduce the subject of PPPs.

### 3.1 VAT, Subsidies and Anti-Trust Law

John Regan Associates Ltd. (JRA) is a UK based company that specialize in supporting zoos, botanical gardens and aquaria in the acquisition of external funding. From their impressive list of international clients, JRA has provided services in the Netherlands for Apenheul, Natura Artis Magistra and Noorder Dierenpark Emmen<sup>2</sup>. In 2004, JRA released its 'Manifesto for Zoos', which was the result of a joint research initiative commissioned by a consortium of 9 charitable zoos across the UK<sup>3</sup>. The Consortium of Charitable Zoos (CCZ) are all '*charitable trusts ... [that] ... do not distribute profit, and plough any charitable surplus back into their ethical purpose*' (the Manifesto for Zoos, 2004, p. 5). The manifesto, endorsed by the then Secretary of State John Prescott, is a document aimed at persuading the UK government to enter into a dialogue with the CCZ to further the interests of the progressive zoos. In the Dutch context, Blijdorp, Natura Artis Magistra and Noorder Dierenpark Emmen would fall into the category of a charitable zoo.

Before introducing its two main proposals<sup>4</sup>, the manifesto outlines the social value of zoos by summarizing the institution's economic, conservation, scientific and educational output. It also emphasizes the potential of zoos as vehicles for social regeneration. The manifesto asks the government to consider 'potential avenues of financial encouragement'. The first proposal outlined in the manifesto is a request to grant charitable zoos tax concessions that are linked to visitor numbers. The second proposal is a request to adjust Value Added Tax (VAT) rates to make conditions for capital investments more favourable. The issue of VAT concessions can create paradoxical conditions for zoo financing. These conditions are addressed in the next section.

<sup>1</sup> Forced by law – this is not to deny that many zoos have taken on these social roles voluntarily.

<sup>2</sup> Retrieved on 14<sup>th</sup> June 2012 from: <http://www.johnreganassociates.com/clients>

<sup>3</sup> The Consortium of Charitable Zoos (CCZ) is composed of: The Zoological Society of London (Regent's Park Zoo & Whipsnade Wild Animal Park); The North of England Zoological Society (Chester Zoo); The Royal Zoological Society of Scotland (Edinburgh Zoo); The Bristol and Clifton Zoological Society (Bristol Zoo); The Whitley Wildlife Conservation Trust (Paignton & Newquay Zoos and Living Coasts); Marwell Preservation Trust (Marwell Zoo); Twycross Zoo East Midlands Zoological Society; Dudley Zoological Society and Zoological Society of Wales (Welsh Mountain Zoo).

<sup>4</sup> See the Manifesto for Zoos, 2004, p. 32-35

### 3.1.1 VAT Exemption; a Double Edged Sword

Under EU legislation, VAT exemption is 'permissible under the provisions of EC Sixth Council Directive 77/388/EEC, Annex H (list of supplies of goods or services which may be subject to reduced rates of VAT)'. Although VAT exemptions on revenues from admissions sound quite appealing, in reality they are a mixed blessing. On the one hand VAT exemptions lead to increases in net revenues from admissions, on the other hand, a 0% VAT rate on admissions means that VAT on goods and services from external suppliers cannot be recovered from the Inland Revenue. The table below (Fig. 3.1) shows the VAT rates applied to different types of zoos in a number of European countries (JRA, the Manifesto for Zoos, 2004, p. 34).

<b>VAT RATES</b> Manifesto for Zoos John Regan Associates		BELGIUM	DENMARK	FINLAND	FRANCE	GERMANY	ITALY	NETHERLANDS	SPAIN	SWEDEN	AVERAGES
<b>VAT RATES APPLIED TO CHARITABLE ZOOS</b>											
VAT Rates Charitable Zoos	0.0%	0.0%	8.0%	5.5%	7.0%	0.0%	6.0%	0.0%	6.0%	3.6%	
<b>VAT RATES APPLIED TO COMMERCIAL ZOOS</b>											
VAT Rates Commercial Zoos	6.0%	0.0%	8.0%	5.5%	16.0%	20.0%	6.0%	7.0%	6.0%	8.3%	
<b>STANDARD VAT RATES</b>											
Standard VAT Rates	21.0%	25.0%	22.0%	19.6%	16.0%	20.0%	19.0%	16.0%	26.0%	20.5%	
John Regan Associates											

Fig. 3.1

If the VAT payable on investments, goods and services exceeds the value of VAT over the sale of tickets, then the 6% VAT rate applied in the Netherlands may well be a preferable scenario when compared to Belgium, Denmark, Italy and Spain. Although the charitable zoos in these countries are completely exempt from charging any VAT on entrance fees, as a consequence, they cannot recover VAT over the costs of goods and services. This arrangement is unfavourable for capital investments required for regeneration projects. For example, it is better to be a commercial zoo in Belgium charging 6% VAT on admissions and saving 21% on the costs of goods and services than to be a Belgian charitable zoo charging no VAT on admissions but having to pay an additional 21% VAT on goods and services. VAT exempt revenues for Belgian charitable zoos must be more than 350% of the cost of goods and services before VAT exemption leads to a net benefit. Spanish charitable zoos fare slightly better where revenues must be 229% of costs before a financial benefit is accrued.

With a 20% VAT rate for commercial zoos, and a complete VAT exemption for charitable zoos, Italy has the most extreme difference between charitable and commercial zoos. One can conclude that although the charitable zoos in Italy receive more net revenues at the gate when compared to their commercial competitors, they are at a severe financial disadvantage where large-scale investments are concerned. Although commercial zoos may earn 20% less on net revenues from admissions, the net costs of their investments, goods and services are 20% cheaper when compared to charitable zoos in Italy. Does this mean that Italian commercial zoos are in a better position to maintain and upgrade their collections or does it mean that charitable zoos operate on such favourable terms that they retain more capital for investments? It would be interesting to see if empirical studies reveal substantial differences in levels of regeneration and investment. If the purpose of a reduced VAT rate is to support charitable institutions, a reasonable assumption, then the true benefit of a reduced rate of VAT will depend on the zoo's long-term pattern of income and spending.

Whereas Belgium, Germany, Italy and Spain apply different rates of VAT to charitable and commercial zoos, in the Netherlands, Denmark, Finland, France and Sweden no distinction is made and a single rate of VAT is applied to all. An advantage with the latter arrangement is that

the dynamics of zoo financing, whether commercial or charitable, remains the same. JRA do not deny the good work of reputable commercial zoos; the question of whether or not tax incentives should be a benefit enjoyed by charitable zoos only is presented as an open question in their manifesto.

If one accepts that VAT exemptions aim to boost the revenues of deserving institutions, then there may be better methods of providing support than adjusting the rates of VAT. Although the general public may perceive a tax exemption as a lesser form of government support, a direct form of funding, at the same net cost to the public purse, could be targeted where it is most needed and where it is likely to achieve its intended purpose<sup>5</sup>. If the circumstances of a charitable zoo require large-scale investment in renovations, then the tax exemption aimed at providing a financial boost may have the very opposite effect. This is not the present case in the Netherlands where a 6% rate applies to both kinds of institutions. If VAT concessions are to have an optimum impact on zoo funding, then the rate must be as low as possible whilst always remaining above zero. From the countries listed in fig 3.1, French VAT rates seem the most favourable.

### 3.1.2 Exploitation Subsidies and Anti-trust Law

Where exploitation subsidies are concerned, some of the commercial zoos object to the municipal funding of charitable zoos on the grounds that subsidies are anti-competitive; a potential violation of anti-trust law. Dutch and European anti-trust legislation is highly complex and the NMA ('Nederlandse Mededingsautoriteit'), the Netherlands Competition Authority, has no specific guidelines on the public support of charitable zoos<sup>6</sup>. From the criteria imposed by Rotterdam Council, one sees that subsidies go hand in hand with a wide range of significant obligations. Nevertheless, exploitation subsidies can and do have a large impact on what a zoo is able to achieve. Director of the NVD, M. van Aggelen, observes that *'although some privately funded zoos suggest that subsidies lead to unequal positions, it is generally acknowledged that subsidies also involve additional obligations and complexities. The issue of subsidies, however, can be a source of friction amongst members now and then'* (Aggelen, M. van, 2011).

A way to bypass the complexities of anti-trust law, and of avoiding any allegations of corrupting the natural competition of the market, might be to target public assistance much more specifically. For example, if participation in ESBs and EEPs were a condition for receiving a level of public assistance, then such public support would not lead to allegations of unfair market competition. Rather than providing subsidies based on the type of institution (charitable or commercial), or the number of visitors that a zoo manages to attract at the gate<sup>7</sup>, funds could be allocated in direct proportion to the contribution made to the preservation of biodiversity<sup>8</sup>. The question of whether a particular zoo has been established as a commercial entity or a charitable trust would not be a relevant factor. Any public support for zoos would be given as a form of compensation for works conducted in the public interest, that is, the conservation of biodiversity. It would not be the institution of the zoo itself that receives public support, but rather, the semi-public breeding programmes conducted within its institution. Charitable zoos and commercial zoos would have equal access and would operate on a level playing field.

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<sup>5</sup> It may be the case that politicians are wary of visibly supporting zoos because, contrary to European Commission Directive 1999/22/EC, public opinion on the social importance of zoos is divided. A more active political endorsement could be achieved at the same net cost as a VAT concession. The advantage would be a better targeting of public money, but also, it would provide an opportunity for politicians to take a stand on the importance of preserving biodiversity.

<sup>6</sup> At least I did not receive an answer to my questions on zoo subsidies and market competition and no such information can be found on their website, retrieved on 25<sup>th</sup> June 2012 from: <http://www.nma.nl/default.aspx>

<sup>7</sup> Visitor numbers are largely influenced by geographical factors such as demographics and population densities.

<sup>8</sup> In chapter 4 I explore how such a scheme might be feasible.

## 3.2 Sources of Zoo Funding

The diagram below (Fig. 3.2) shows a funding schematic that does not discriminate between zoos that are established as charitable foundations and zoos that are fully commercial. This is not to say that access to these sources of funding is the same for both types of institution. The first four boxes show existing methods of generating funds that are available in different measures depending on the operations of a given zoo. The fifth source of funding is a proposal for incentivizing the participation in captive breeding programmes; a method of promoting the primary goal of the zoo as established under European Commission Directive 1999/22/EC.

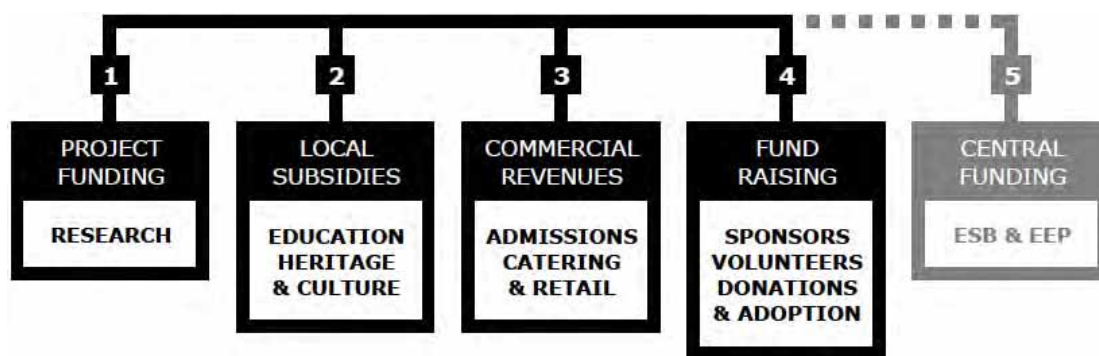


Fig. 3.2

### (1) PROJECT FUNDING:

If one accepts the suggestion that participation in scientific research is sufficient to meet the demands of the Zoo Licensing Act, then the facilitation of scientific research initiatives may be a valid means of acquiring additional funds. The research role of the zoo is then to assist external organisations by providing access to animal species within collections for research programmes conducted primarily by external parties; an arrangement that is implicitly acknowledged within EAZA's policy document on scientific research (EAZA, 2003, p.1). Research for Policy concluded that it was unclear if the scientific research requirement under the Zoo Licensing Act demanded a primary research role or a participatory role only (Wils, J. et al, 2008, pp. 45-47).

If a participatory role can be accepted as satisfying the legal requirement, then project-based funds could contribute to the costs of maintaining animal collections. Universities and other research institutes would then apply for research grants, and parts of these funds could be allocated to the research-partner zoo in exchange for (i) access to the collection and (ii) the supporting services of zoo staff. Needless to say, any research conducted would be in full compliance to the strict animal welfare codes that govern the sound operations of a zoo. An ethics review committee might play a role in determining the kinds of research programmes in which the zoo is willing to participate<sup>9</sup>.

### (2) LOCAL SUBSIDIES:

Zoos may be eligible for local subsidies that are (i) given in return for the provision of educational programmes, (ii) given to support and maintain an important cultural asset within a municipality, or (iii) given to renovate important architectural structures that have a historical significance. Whereas the latter type of subsidy, the protection of national heritage, is given to both commercial and charitable zoos alike, it seems that subsidies for education and culture are reserved for charitable institutions only.

Given the wide-scale privatization of many public facilities and services, it seems strange that the opportunity for providing educational programmes within commercial zoos has not attracted the

<sup>9</sup> See: Hutchins, M., Dresser, B. and Wemmer, C., "Ethical Considerations in Zoo and Aquarium Research, in Eds. Hutchins, M., Norton, B., Stevens, E. and Maple, T., *Ethics on the Ark*, (1995). Smithsonian Institution, pp. 253-276.

same level of attention from municipal councils when compared to zoos that have been established as a charitable trust. There is no good reason why municipal councils should not establish private contracts with commercial zoos to realize the educational potential of commercial zoos for their citizens. Burgers Zoo, for example, offer reduced rates for primary and secondary school children and have a range of free educational materials that can be downloaded from their website<sup>10</sup>. Yet there seems to have been no initiative to negotiate collective and structured educational packages for schools within the municipality. Given the priority that some municipal councils place on education (Rotterdam Council is a prime example), this seems to be a missed opportunity for all parties concerned.

### (3) COMMERCIAL REVENUES:

In addition to the main revenues generated from the sale of tickets at the gate, catering and retail activities also form a significant source of revenues. There are some types of retail activities that the NVD and EAZA restrict as a condition of membership. NVD-EAZA members may not sell off animals within their collections as a means of generating additional funds. For this reason, the book value of all animals in NVD-EAZA collections is registered as 1 Euro in the books of affiliated zoos. Animal transfers are (largely) determined by EEP coordinators who try to find the best match for animals that have a breeding value. In the event that an animal has no breeding value (a surplus animal), then animal welfare issues remain the determining factor governing transfers. Transactions of a commercial nature, by contrast, are driven by the exhibition value of an animal. Zoos may be willing to pay considerable sums of money to acquire an animal that has a high appeal amongst the visiting public. This means that non-members of the NVD-EAZA have a financial advantage because they are not bound by the NVD-EAZA's code of ethics. This is not to say that welfare considerations play no part in the transfer of animals amongst non NVD-EAZA affiliated zoos. It is only to state that there is a contingent possibility that potential revenues from sales may compromise concerns for animal welfare.

The establishment of a zoo as a commercial entity, then, does not determine its policies. Some commercial zoos are members of the NVD-EAZA and conduct their operations by the same strict codes that apply to all NVD-EAZA members. Although such institutions are not charitable trusts, in essence, they strive to achieve the same goals as their charitable counterparts. One cannot conclude that non-members necessarily compromise animal welfare considerations when sources of funding are at stake; it is merely a possibility that exists amongst non NVD-EAZA members only.

An additional limiting factor on the generation of commercial revenues is that some types of commercial activities have a tendency to damage the public's perception of the ideological aims of the zoo. Whereas some zoos exploit all available opportunities for generating revenues, other zoos are more cautious in maintaining an appropriate public image. Commercial opportunities can range from aggressive merchandizing to animal rides and from animal shows to photo opportunities with exotic animals. There is a risk that the over-exploitation of commercial opportunities can cheapen the general experience of the visitor. Some activities that have the potential for generating revenues can invoke a negative impression of the zoo - the notion that animals are a source of entertainment that can be exploited for commercial gain; that animal welfare standards are less important than the need to secure revenues by any means possible.

### (4) FUNDRAISING:

Zoos have become remarkably adept in finding creative ways to raise funds. This counts equally for the commercial zoos as it does for zoos established as a charitable trust. These fundraising methods include donations and bequests, the adoption of individual animals and the complete sponsoring of exhibits by corporate benefactors. It may be the case that the charitable zoos are able to achieve a greater net result through fund-raising activities. This is certainly the case when it comes to attracting volunteers. Although volunteers are not a direct source of revenue, the

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<sup>10</sup> See following link retrieved on 25<sup>th</sup> June 2012: <http://www.burgerszoo.nl/bezoek-het-park/scholen>

value of their voluntary contributions has a positive effect by reducing the total cost of labour<sup>11</sup>. Corporate sponsorship, on the other hand, may be less influenced by the charitable or commercial status of the zoo. In exchange for their financial support, corporate sponsors can create a positive public profile by showing their active involvement in the preservation of endangered species. Whereas the ideological goals of the charitable zoo may positively influence the willingness of volunteers to offer their services, high exposure rates through visitor numbers will be a factor that stimulates corporate sponsoring. Zoo fundraising activities also make a major contribution to the funding In Situ conservation initiatives<sup>12</sup>.

#### (5) CENTRAL FUNDING:

An effective instrument for directly funding ESBs and EEPs is presently missing. Yet such an instrument could provide a valuable means of supporting zoos directly in the achievement of their primary role under European Commission Directive 1999/22/EC and the Zoo Licensing Act. As the coordinating body of ESBs and EEPs across Europe, EAZA would be ideally placed for administering local, national and / or European funds were these to be made available for the preservation of biodiversity. It is quite incredible that an organisation with such an important role and such a wide European reach has a budget of only 800,000 Euros annually<sup>13</sup>. Although governments throughout Europe impose positive obligations on zoos, in the Netherlands, at least, there is no structured funding to support the preservation of endangered species through captive breeding.

At present, national and local government support zoos (i) by applying favourable rates of VAT on their commercial activities, and (ii) by awarding some charitable zoos exploitation subsidies at municipal council level. In the case of Blijdorp Zoo, Rotterdam Council applied conditions on their exploitation subsidy that involved high participation targets in ESBs and EEPs. Although Blijdorp Zoo delivered impressive results, it seems strange that these demands stemmed from Rotterdam Council's 'Department of Sports and Recreation'. The conservation of endangered species is neither the department's responsibility nor its domain of expertise. If public funds are to be spent on supporting zoos, is it not better to establish a structured system in which funds can be carefully managed, prioritized and targeted?

If one takes the case of Blijdorp Zoo as an example, Rotterdam Council prioritized the educational value of the zoo for Rotterdam's inhabitants above the zoo's value as a centre for preserving endangered species. As a result of the financial crisis, the council's conservation requirements were dropped whereas their educational demands remained in place. What can be said about Rotterdam Council's prioritization amongst competing interests? Although the zoo offers a valuable educational opportunity for the citizens of Rotterdam, there are many other potential sources of educational material. Moreover, the process of providing education, once stopped, can easily be resumed. The same cannot be said of ESBs and EEPs once they have been discontinued.

When municipal subsidies are cut, it is often at the cost of captive breeding programmes that may have taken many years to establish<sup>14</sup>. Sufficient varieties of exhibition animals, by contrast, are the bread and butter of any zoo. Exhibition animals are unlikely to be front-line targets for cuts in expenditure. The social role of the zoo has been splintered into many directions. It would make perfect sense to separate the funding of distinctive zoo functions so that temporary periods of economic recession do not undermine the long-term commitments necessary for maintaining populations of critically endangered species. Although a zoological park is a single legal entity, it is better understood as a multi-functional complex of distinctly separate institutions.

Research for Policy concluded that the European Directive was unclear whether the purpose of captive breeding programmes was to maintain viable populations of animals for restocking zoos,

<sup>11</sup> Or by increasing the total package of services offered to the general public.

<sup>12</sup> See: Christie, S., 'Zoo-based Fundraising for In-Situ Wildlife Conservation', in Eds. Zimmerman, A., Hatchwell, M. and Dickie, L., *Zoos in the 21<sup>st</sup> Century*. (2007), Cambridge University Press, UK, pp. 257-274.

<sup>13</sup> Despite its important work EAZA relies on membership fees from affiliated zoos across Europe.

<sup>14</sup> This at least seems to be the case in Blijdorp Zoo.



or whether the directive involved the more ambitious goal of releasing endangered species back into their natural habitats. Whatever the answer to this question, it is clear that zoo populations secure a unique and crucially important opportunity. If a species becomes extinct in its natural habitat, then there is at least a reasonable chance of restoring populations in the wild. There have been many such cases so far.

### 3.3 Growth, Vulnerability and Dependence

A quick Google search using the terms 'zoo' and 'bankruptcy' gives the impression that there is no shortage of zoos facing an uncertain financial future. From this one might conclude that zoos are inherently vulnerable institutions; they certainly attract plenty of media coverage when insolvency looms. In section 3.3.1 I consider market competition and investment. In section 3.3.2 I discuss the extent to which zoos can be considered inherently vulnerable institutions. In section 3.3.3 I close the chapter by responding to concerns that a reliance on public funding might lead to an attitude of dependence and complacency.

#### 3.3.1 Growth

In a saturated market, zoos must compete to attract sufficient numbers of visitors on which the majority of their revenues depend. Competition drives investment in exhibits that are increasingly elaborate and splendid. Burgers zoo has been a forerunner in the Netherlands with its investments in complete biodomes; here animals are shown in their ecological contexts; rain forest, desert and mangrove swamp. Blijdorp's Oceanium and elephant house are similar examples of large-scale investments. For the general public, such attractions offer a whole new level of engagement with a collection - a total immersion into the life-worlds of species.

These large investments help the zoo to meet the educational requirements of the Zoo Licensing Act. While a lesser commitment to educational goals would certainly suffice, such facilities are shining examples of best practice. Market competition and ambitions for quality are but two forces that drive investment and growth. As the case of Blijdorp reveals, there is also a third factor that plays an important role. Municipal councils see growth as a means of boosting the economy through an increased demand for local labour, goods and services. As important visitor attractors, zoos have a considerable impact on local economies.

JRA has calculated that the 9 members of the CCZ provide some 1600 stable full-time jobs for wages that add up to a sum of £23 million annually. 85% of employees work within a 15-mile radius of the zoo. An additional 777 volunteers work an average of 39 days per year; the value of their work is estimated at £1.2 million annually. Annual investments in construction have been estimated at £8.2 million - a significant contribution to local, regional and national economies. Of an estimated £31 million in total operating expenditure, 68% of this sum is spent locally. This equates to a further 247 full-time jobs. Furthermore, *'the accumulator effect of visitors to the zoos spending on other businesses (hotels, shops, restaurants, transport, etc) in the vicinity of the zoos has been calculated at £3.2 million. This in turn represents a further 376 FTE jobs'* (JRA, the Manifesto for Zoos, 2004, p. 11). The three main drivers for growth, then, can be summarised as follows: (1) the forces of free market competition, (2) institutional ambitions for excellence, and (3) active encouragement at municipal council level.

#### 3.3.2 Vulnerability

When market conditions change, some types of organisations are better equipped than others to deal with temporary reductions in demand. Many theme parks, for example, shut down their operations during off-peak seasons. The operations of a zoo involve cost-generating activities that cannot be temporarily suspended in this way<sup>15</sup>. Even when visitor numbers drop below

<sup>15</sup> Blijdorp spent 41.4% of its 2012 revenues on personnel costs (46% in 2009), 23.9% on interest payments and amortization (19% in 2009), and 7.7% on energy costs (7.1% in 2009). Source: Diergaarde Blijdorp, Jaarverslag, 2010.

subsistence level - the level required to break-even, standards of animal husbandry must be maintained. Other types of industries involving the management of animals are better able to downsize their operations. Were the demands for milk, pork or beef to decline, for example, food producers can respond by adjusting their rates of production correspondingly. Although zoos are equally sensitive to fluctuations in market demand, the measures they can take to reduce their operating costs are very limited.

From this one might conclude that the financial management of a zoo involves exposure to greater risks when compared to other types of recreational or agricultural industries. Zoos must remain on guard for potential fluctuations in the market and investment decisions must remain viable under very pessimistic economic forecasts. From the practicalities involved in operating a zoo one can say that zoos are 'institutionally vulnerable'. This relative increase in risk exposure compared to similar industries counts for both commercial and charitable zoos alike.

Charitable zoos such as Blijdorp, however, face an additional exposure to risk if their revenues are partly dependent on the provision of exploitation subsidies. If levels of municipal funding are non-secured and subject to annual review, then the potential loss of these revenues can have an additional impact on a zoo's rate of solvency. If one accepts that reductions in public assistance are very likely to coincide with times of economic recession, then the financial management of publically assisted zoos must take stock of very pessimistic scenarios indeed. Not only are they exposed to the risks of a fluctuating market demand, they must also run the gauntlet of shifts in local government policy. The coincidence of these scenarios can dramatically amplify the sum of lost revenues. In times of economic crisis, managers of assisted zoos must carefully nurture shared commitments that have been founded on mutual trust.

A reliable visual signal that a zoo may be struggling financially is to observe the condition of its gardens, flowerbeds and plantations. As these are not essential for the direct welfare of animals, this is where the first negative impacts of unavoidable cuts are likely to be seen. Although the degradation of garden maintenance may not sound like a very severe problem, cuts in maintenance spending can seriously damage the public's impression of zoo standards. Though animal welfare may remain unaffected, there is an acute danger that the degradation of park facilities will trigger a steady decline in visitor numbers. A tired looking park means that levels of revenues are critically low - the jaundiced symptoms of a potentially cancerous decline.

### 3.3.3 Dependence

The institutional vulnerability of the zoo raises different types of questions concerning financial dependence. There is the question of whether or not exploitation subsidies create a 'culture of dependence' - the fear from right-wing politicians that public funding can undermine the economic viability and commercial acumen of financially assisted institutions. This first type of question is directed at the zoo as a complete entity encompassing the full scope of its multi-functional operations. A second question on dependence, more limited in scope, involves only one of the institution's many functions. To what extent is the success of captive breeding programmes dependent on the provision of financial incentives? Before addressing the broader question, I will explore the more limited question concerning the necessity of financial incentives for the continuation of captive breeding programmes.

#### (1) DEPENDANCE ON FINANCIAL INCENTIVES

It is no small irony that hunting parks have proven to be a highly successful method of preserving endangered species. Supporting over 14,000 jobs across the USA, the industry is estimated to be worth over a billion US dollars. Across the state of Texas there are many reserves in which large, free-roaming populations of endangered species have replaced the traditional raising of longhorn cattle<sup>16</sup>. The Scimitar-horned Oryx (*Oryx dammah*), critically endangered in 1996, has been

<sup>16</sup> There are an estimated 5000 hunting parks across the USA. Source: '60 minutes' documentary by CBS News Online, retrieved on 22<sup>nd</sup> June 2012 at: <http://www.youtube.com/watch?v=4r9-WeNXzTQ>

extinct in the wild since 2000<sup>17</sup>. According to V-Bharre Ranch's 2012 price list, you can shoot one for just \$4000<sup>18</sup>. V-Bharre's website is proud to announce that '*Scimitar-horned Oryx herds in Texas number in the thousands thanks to the good works of Texas game reserves*'<sup>19</sup>.

Whatever one's views are on the ethics of hunting parks<sup>20</sup>, the business model has proven to be an undoubted success. What's more, with the exception of human hunters, the animals enjoy a fairly natural life undisturbed by natural predators. The meat of hunted animals is butchered on site for human consumption and animal welfare standards are certainly good when compared to animals that are factory-farmed<sup>21</sup>. Objections on animal welfare grounds are not straightforward<sup>22</sup>.

The US Fish and Wildlife Service has stated that '*Hunting ... provides an economic incentive for ... ranchers to continue to breed these species*' and that '*hunting reduces the threat ... of the species' extinction*'. Animal welfare activists, such as Priscilla Feral<sup>23</sup>, have been lobbying the government to outlaw the hunting of endangered species in the US. Feral believes that hunting is '*degrading and violent*'. As a result of persistent lobbying, the hunting of Scimitar-horned Oryx is now regulated by a licensing procedure. Hunters are now required to apply for a permit from the US Fish and Wildlife Service, and consequently, the commercial value of the species has dropped by some 50%. Charlie Sheen, a fourth generation rancher estimates that '*in five years there will be half the numbers that you see today ... [and] ... within 10 years there will be virtually none of them left*'. The founder of the initiative to protect Scimitar-horned Oryx, David Bamberger, is not a hunter himself. Yet he is keen to point out that '*if altruism is the only incentive you are not going to get a lot of participation from someone whose livelihood depends on bringing in dollars*' (CBS News.com, June 10, 2012).

To fund the protection of rhinoceros<sup>24</sup>, elephant and other big game animals, similar financing models are used in African game reserves<sup>25</sup>. Although hunting parks represent a stable contribution to the long-term preservation of ungulates and pachyderms, there are relatively few types of species that can be 'protected' in this way<sup>26</sup>. Hunting parks for great apes, for example,

<sup>17</sup> Source – Iucnredlist.org, retrieved on 22<sup>nd</sup> June 2002 from: <http://www.iucnredlist.org/apps/redlist/details/15568/0>

<sup>18</sup> Also extinct in the wild, Père David's Deer (*Elaphurus davidianus*) is a little more expensive at \$7000.

<sup>19</sup> Source – Huntingtexasstrophies.com, retrieved on 22<sup>nd</sup> June 2012 from: <http://www.huntingtexasstrophies.com/texas-hunting-packages/scimitar-horned-oryx-hunting/>

<sup>20</sup> There are certainly questions about the use of bows and arrows and the underlying motives of (some) hunters. Kheel (2008) provides a range of moral arguments against hunting. See: Kheel, M., 'The Killing Game; an Eco-Feminist Critique of Hunting', in Eds. Armstrong, J. and Botzler, R., *The Animal Ethics Reader*. (2008), Routledge, Oxon, pp. 454-463.

<sup>21</sup> I refer to the period of an animal's life and exclude any dubious methods of slaughter from this assessment

<sup>22</sup> For a compact discussion on Prudential Value Theories of life vs Objective and Subjective Value Theories see: Kalderwaj, F., 'Animals and the Harm of Death', in Eds. Armstrong, J. and Botzler, R., *The Animal Ethics Reader*. (2008), Routledge, Oxon, pp. 59-63.

<sup>23</sup> Priscilla Feral is the president of 'Friends of Animals'

<sup>24</sup> On their website, SafariBwana advise potential hunters that '*CITES has recently allowed the trophy export of very strictly controlled BLACK RHINO hunts in South Africa due to their relative stability in that country. Trends indicated that each year there will be at least 2 bull rhino available for hunting however as you can imagine, prices are very high*'. The price for hunting a white rhino is quoted as \$200,000, the price of an elephant hunt ranges from \$22,000 to \$37,000. Retrieved on 22<sup>nd</sup> June 2012 from: <http://www.safaribwana.com/ANIMALS/animpages/rhino.htm>

<sup>25</sup> See Louis Theroux's documentary: '*Louis's African Hunting Holiday*' in '*The Strange and the Dangerous*'; a DVD collection containing 5 of Theroux's BBC documentaries (released in 2008).

<sup>26</sup> In response to my question of what a Dutch hunter would need to do in order to import a 'mounted trophy' of a black rhinoceros head into the Netherlands, CITES Permit Officer, Bart van Honstede (2012) replied as follows: '*The black rhino (Diceros bicornis) is listed on Appendix I of CITES and Annex A of Council Regulation (EC) No 338/97 (CITES-law implemented in EU-law). For the import of Appendix I specimens a CITES import permit and an export permit are needed. Firstly, a (pro-forma) import permit should be applied for at the Dutch CITES Management Authority (us). We can only issue a (pro-forma) import permit if a positive advise has been given by the CITES Scientific Authority. If a positive advise is given you will receive a pro-forma import permit with which you can apply for an export permit in South Africa. If you have received the export permit, you can send us a copy of the permit, so we can issue the actual import permit (with the pro-forma import permit you can not import a specimen). Please take in mind that for the possession of rhino horn (products) in the Netherlands, you need an ownership exemption in accordance with the Dutch national law (Flora- and Faunawet). An ownership exemption is only issued in case you meet certain criteria (it needs to be for a non-commercial purpose: for example education or research). On 12 March 2012 the European Commission has asked member-states to ban all commercial transactions of rhino horn (products). For the Netherlands, rhino horn (products) can only be imported/exported or transferred by non-commercial organisations/institutions (at least until the end of 2012). Furthermore, I would like to state that the amount of money spent on a hunting trophy is not relevant for CITES and/or national laws.*'

have thankfully not appeared! The finite space within zoos represents an important, limited, yet extremely valuable opportunity for preserving species for which there is no other financial incentive to protect.

If one accepts Bamberger's observation on the limitations of altruism, we have good reason to be grateful for the voluntary contributions made by the progressive zoos. From a reading of the Zoo Licensing Act, and from Research for Policy's assessment on the efficacy of legislation, it will be clear to the critical reader that compliance to the non-quantified conservation demands can be achieved fairly easily<sup>27</sup>. It is impressive that progressive zoos have gone well beyond these minimum requirements and are willing to expend resources on participating in ESBs and EEPs. If the precious space in zoos is to be used effectively, then it is crucial to provide an incentive to participate in captive breeding programmes. Although the will to contribute is evidently present, the institutional vulnerability of the zoo is a reality that zoo managers ignore at their peril. When forecasted levels of secure revenues rise, a greater ambition can be carried. With the weight of ideology in one hand and pragmatism in the other, progressive zoo managers walk a tightrope where these weights must remain in balance.

Some conservationists believe that resources spent on captive breeding programmes are better spent on in-situ conservation measures. They argue that there is no point in protecting species if the habitat in which a species lives has disappeared. Although there can be some truth to this claim, the decline of many populations is mostly attributed to the over-exploitation of animals as a source of food or income. It is certainly not a given that habitats and eco-systems have disappeared. Captive zoo populations should be seen as insurance schemes that operate in much the same way as centres for refugees. If local problems can be solved, and if captive populations are sufficiently large, a species can be returned to a habitat that has remained largely intact. In-situ conservation mostly involves attempts to change local attitudes towards the value of nature. It is very often the commercial value of tourism that provides the crucial incentive for protecting indigenous species. There are, of course, some difficulties connected to the reintroduction of certain kinds of species. Some require reintegration programmes to help them regain the skills necessary for survival; nature is not a kind and comfortable place<sup>28</sup>. If a commercially viable method of funding can be established, in-situ conservation often provides valuable employment opportunities locally - a contribution to the economic development of impoverished regions around the world.

The success of in-situ conservation initiatives depends on the presence of financial incentives for preserving species. Despite the paradox of 'hunting to protect', African game reserves are successful examples of such economic models<sup>29</sup> and US hunting parks are ex-situ equivalents. The economic value of eco-tourism, a less contentious means of protecting species, can also be harnessed to change local attitudes towards the value of indigenous species. Despite the strong commitments to conservation that many zoos display, what good reason is there to assume that the motivational dynamics of zoos in general is so fundamentally different? The 'insurance potential' of zoo space is a precious commodity, and as Bamberger correctly points out, altruistic motives have a limited potential only.

## (2) DEPENDENCE CULTURE

The broader issue of a 'dependence culture' concerns the question of whether or not public funding creates a climate that undermines commercial acumen and leads to an attitude of complacency. This argument is often cited by politicians from the right who see free market

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<sup>27</sup> A zoo could remain compliant to the conservation demand by selecting species that are easy and inexpensive to breed and maintain. Maintaining an ex-situ population of an endangered species of frog, for example, does not require large amounts of financial resources.

<sup>28</sup> For a discussion on the successes and problems of reintroduction see: Loftin, R., 'Captive Breeding of Endangered Species', in Eds. Hutchins, M., Norton, B., Stevens, E. and Maple, T., *Ethics on the Ark*, (1995). Smithsonian Institution, pp. 164-180.

<sup>29</sup> Alastair Gunn approves of African Hunting parks and includes the needs of local people within his moral deliberations. See: Gunn, A., 'Environmental Ethics and Trophy Hunting', in Eds. Armstrong, J. and Botzler, R., *The Animal Ethics Reader*. (2008), Routledge, Oxon, pp. 464-473.

competition as the central driving force behind efficiency. When institutions are artificially supported, there is no imperative to improve productivity. Public funding covers the costs of any inefficiencies and this allows assisted institutions to remain commercially viable. In markets in which they would otherwise be unable to compete, assisted institutions would rapidly face insolvency. The hard-line view regards it as economically and socially preferable to let ailing companies die a natural death<sup>30</sup>. The alternative is to support ailing institutions indefinitely with public money. In the UK, these ideas gained force in the 80s under the government of Margaret Thatcher. In the public sector, the drive for the privatization of public institutions has been widespread and has been met with mixed reviews.

In order to establish the empirical truth of the 'danger of dependence argument', there are several factors that one would have to take into account before forming any judgement on a correlation between a declining level of efficiency and a dependence on public funding in zoos. Firstly, performance must be assessed by a means of benchmarking; one cannot compare the profit generating potential of zoos to the equivalent potential of theme parks, for example. The operational dynamics of zoos are quite unique and efficiency must be measured within an appropriate institutional setting. In order to establish a correlation, one would need two representative sets of statistical data from which reliable inferences could be drawn - one for commercial zoos, the control group, and the other for charitable zoos receiving a level of public funding. Even with this data at hand, it would be difficult to draw any objective conclusions. There are simply too many variables to make a reliable measurement possible; variable levels of public funding; divergent demographic factors; time-bound market conditions and so forth.

Given that there are only three assisted zoos in the Netherlands, one would also need to collect a wider range of data from assisted zoos throughout Europe. This would invoke a whole host of other variable factors such as differences in the rates of VAT and differences stemming from the implementation of European Commission Directive 1999/22/EC. A third complicating factor concerns the multi-functional nature of zoological parks. Would the measurement be aimed at assessing the commercial acumen of park operators in general? In this case the measurement might (conceivably) involve the zoo as a complete legal entity. If the aim were to measure the efficiency of captive breeding programmes, education or scientific research, then one would have to isolate these particular streams of activities from the total set of a zoo's operations before a comparative measurement can be made.

In addition to these empirical measurement problems, the decisional history of a park is an important factor. For example, if exploitation subsidies have been given in order to stimulate local development through park investments, one cannot conclude that a zoo is inefficient as a result of being partly dependent on a subsidy. The subsidy, in such a case, will have been granted prior to any investment decision being made; such a conclusion would be a circular argument. If subsidies are first given to actively encourage investment, as was the case in Rotterdam, and if subsidies are subsequently retracted due to a lack of available public funds, then the financial problems that ensue are not indicative of an inefficient and failing organisation. Rather, they are symptomatic of a weak level of public commitment and evidence that relationships of trust are not as secure as they may first appear. Any search for a correlation would need to take the complex histories of such agreements into account. Empirical measurements of this kind are notoriously complex, time consuming and unreliable. Rational arguments based on an economic ideology, by contrast, are quick and easy.

An alternative model for public sector spending is the Public-Private Partnership (PPP). This model had its beginnings in the UK in the 90's under John Major's conservative government. In 1992 the government attempted to reduce public sector borrowing by introducing the Private Finance Initiative (PFI). In 1997, Tony Blair's labour government continued the trend under a

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<sup>30</sup> Although politicians may be guided by a general economic principle, the truth of an efficiency saving can only be determined by an impact analysis taking many factors into account. These factors include the availability of jobs in the region, the costs of social services and the impact of a closure on the local economy (impact of reduced demand from regional providers of goods and services).

new name, and a slightly different structure<sup>31</sup>, the Public Private Partnership. PPP was seen as a method of extracting the maximum value from public sector spending. In the public sector, where there is no market competition, public institutions are not driven by a profit motive. The harnessing of competitive forces in the private sector was thought to increase efficiency, reduce costs and deliver more overall value for public money.

PPPs involve a public sector contractor outsourcing public tasks and responsibilities to companies in the private sector. To date, more than 1400 PPPs have been established throughout the EU amounting to an estimated capital value of £260 billion. The European PPP Expertise Centre (EPEC) was established to advise governments on best PPP practice. EPEC provides a helpdesk service and promotes collaborative working between governments. They describe their 'Institutional Strengthening' activities as follows: *'The EPEC executive ... has some capacity to respond to requests to work with individual members. This might ... be to help countries set up a PPP programme, refine policy or to analyze institutional bottlenecks'* (EPEC, 2011, p.2).

Although there are many potential problems associated with PPPs<sup>32</sup>, in the context of the protection of biodiversity, PPPs may offer an interesting solution for very many of the problems addressed in this chapter. PPPs also raise an intriguing question; what is the essential difference between an exploitation subsidy and a PPP? Both involve the transfer of public money to a private service provider in order to deliver a public good. Could it be that the distinction is merely semantic or normative? Whereas a subsidy sounds very much like an act of altruism; a free handout from local or central government, a PPP sounds much more like the sale of a governmental responsibility. At face value, the types of goods exchanged in the transaction seem identical; public money to provide a public service that is outsourced to the private sector. I explore the nature of public and private goods in finer detail in chapter four. I will revisit the theme of PPPs in my conclusions and recommendations.

In their Manifesto for Zoos, JRA state that *'Although commercially vulnerable to certain external factors, zoos are, compared to other areas of cultural output, extremely financially independent and admirably entrepreneurial. Whilst well run and financially stable, given their ethical purpose and inclusive ethos, the progressive zoos can never simply pursue the maximum commercial return. Rather are they obliged to strike a fine balance between an enterprise culture to maximise income and a gate pricing policy that preserves the democracy<sup>33</sup> of their audience'* (JRA, the Manifesto for Zoos, 2004, p.8).

On the subject of government assistance, the manifesto states that *'It is normally held that the UK's progressive zoos would look askance at any prospect of generalised public subvention. This might undermine their 'self help' philosophy and threaten to gradually weaken their valued financial independence and enterprise culture over a period of time. The stability and track record of these organisations should however represent tempting conduits for specific future developments and defined areas of project investment. The Zoos would also naturally welcome a general financial or fiscal encouragement that would require their own entrepreneurial stance and underwrite their continued delivery of a spectrum of public goods'* (JRA, the Manifesto for Zoos, 2004, p.9).

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<sup>31</sup> There are some differences between PFI and PPP. PFI aims to raise additional investment capital from the private sector in exchange for the leased usage of produced assets (a property, for example). Once the leasehold period expires, ownership of the assets return to the government. PPP outsources public services to a bidder in the private sector. Both methods of funding public services and infrastructures harness the potential of market competition. Capital or service providers compete with one another in order to win a government contract.

<sup>32</sup> Some people believe that private contracting can reduce the quality standards of public services because profit motives can lead private contractors to cut corners. Examples of these problems in the UK have included falling standards of hygiene in hospitals where private contractors have been used instead of permanent cleaning staff; some believe that the spread of MRSA (the superbug) was attributable to private contracting. In the railway industry there have been questions about declining safety standards as a result of the private contracting of railway maintenance works.

<sup>33</sup> A reference to a similar goal expressed by Marc Damen concerning the social value of the zoo and his will to make sure that Blijdorp remains accessible for all socio-economic groups in the Netherlands.

# CHAPTER FOUR

## THE ETHICS OF ZOO LICENSING AND FUNDING

- 4.0.0. introduction
- 4.1.0. public beneficence goods
- 4.2.0. normative interpretations of law
  - 4.3.0. reciprocity
  - 4.4.0. politics
    - 4.4.1. Nozick
    - 4.4.2. Rawls
  - 4.4.3. Nozick vs Rawls in Pettit
- 4.5.0. Kantian ethics
- 4.6.0. convergence



## 4.0 Introduction

In this chapter I examine the ethics of zoo licensing and funding. I ask to what extent there is a moral obligation for society to support the public works of zoos with a form of public funding. In section 4.1 I present a conceptual framework for distinguishing between different types of goods and I argue that some of the goods produced by zoos can be described as Public Beneficence Goods; a type of good that benefits society as a whole and does not benefit the private objectives of zoos as commercial entities.

In section 4.2 I explore normative interpretations of law and consider differences between Legal Moralism and Legal Positivism. In section 4.3 I consider the value of David Wong's Plural Relativism as a 'less destructive' alternative to Moral Relativism. I also reflect on Wong's observation concerning the universality of the principle of Reciprocity.

In section 4.4 I consider the political basis for a policy of public funding. I populate an argument put forward by Philip Pettit on the virtues of *Option Freedom* with the political theories of Robert Nozick and John Rawls respectively.

In section 4.5 I present a Kantian perspective on the moral duty to provide public funds by applying Kant's two formulations of the Categorical Imperative on the duty to preserve biodiversity for the good of present and future generations. I close this chapter in section 4.6 by considering the extent to which a public funding policy might generate consensus amongst both pro-zoo and anti-zoo campaigners.

## 4.1 Public Beneficence Goods

The conceptual framework in fig 4.1 (page 41) incorporates three variable properties of private goods: (1) Labour, (2) Benefit, and (3) Compulsion. The confluence of these factors creates different types of private goods and these differences have normative implications.

The first of these properties, labour, invokes a Lockean private property right over a good in virtue of an amount of human effort deployed in the production of a good. The second factor, benefit, involves differences in the beneficiaries of produced goods; some goods provide a benefit for the producer only, whereas other types of goods generate a benefit for the general public and future generations. This factor is determined by the person(s) in whom a benefit is consumed or experienced - the person(s) that derive a benefit from the good so to speak. The third factor, compulsion, concerns the autonomy of the producer in his or her choice to produce a particular good; some goods are produced voluntarily whereas other types of goods must be produced as a legal requirement.

Labour and benefit are variable properties that can occur in degrees on a gradable scale of extremes. For example, a good might be produced by a mixed input of labour from different sources in a given proportion. Alternatively, a good may lead to both a private benefit for the producer as well as a general benefit for the public at large. The distribution of the benefit in this case can also be described by a distributive ratio.

The property of legal compulsion, by contrast, is a bivalent non-gradable variable that does not occur in degrees. Legal compulsion may interfere with autonomous choice or it may coincide with autonomous choice. If legal compulsion coincides with autonomous choice then the autonomous nature of the choice to produce a particular good will be indistinguishable externally from the production of a good driven by legal compulsion.

A good is a positive state of affairs, something that has an intrinsic or an instrumental value to the possessor of the good in question or has a utility value to any person who might derive a benefit of some kind from the good at hand. Goods come in many varieties and exist in many forms. Some goods occur naturally whereas other types of goods require an amount of human



effort before a utility exists and before a utility can be enjoyed as a benefit. Sunshine is an example of a good that occurs naturally whereas a sunlamp is a good whose benefit can only be experienced after an amount of human effort has been deployed in its manufacture.

In the context of the preservation of biodiversity for the benefit of present and future generations, naturally occurring populations of wild species are examples of natural goods whereas captive bred populations of endangered species are examples of goods<sup>1</sup> that cannot be enjoyed without the human effort required for the management of captive breeding programmes and the propagation of endangered species.

The British Empiricist philosopher, John Locke (1632-1704), wrote extensively on the government's role to protect the institution of private property. In chapter five of his *Second Treatise of Government* (1689, in ed. Goldie, M., 1993, p. 127-140), Locke presents his *Labour Theory of Value* in which he claims that private property is the result of mixing one's labour with a resource. He argues that in order for people to invest an amount of labour required to produce a certain good, that it is important that the labourer be protected by a private property right of ownership over the goods so produced.

In the absence of such a right to private ownership, a labourer would be unwilling to invest the amount of labour required to produce a good because there would be no guarantee that the produced good would lead to a private utility benefit for the labourer. In the absence of a right to private property ownership, all have an equal right to benefit from the utility of any good indiscriminately, and irrespective of who performed the labour invested in the production of the good in question.

So far we have a conceptual definition of a good as something from which a human benefit is derived and a distinction between (1) goods that occur naturally, and (2) goods that require an amount of human effort before they exist as a good from which a human benefit can be derived. On Locke's account, the latter type of good, which does not exist in the absence of human effort, invokes a private property right for its producer; the *sunlamp* in my example. The former type of good, by contrast, invokes no such private property right as the good exists naturally and requires no human effort before a benefit can be derived from it; *sunshine* in my example.

Although the distinction so far might provide an adequate conceptual basis for distinguishing public goods from private goods; *public goods* being goods that require no human effort for their existence, and *private goods* being those over which a producer has a property right in virtue of the labour invested in the good's production, the particular distinction that I require for the purpose of this thesis is in need of some further clarification.

Private goods over which a producer has a property right in virtue of a labour investment can be further categorized according to whom derives a benefit from the private goods produced by the mixing of one's labour. I use two categories of beneficence to make a finer distinction: (1) private goods that lead to a *private* benefit, and (2) private goods that lead to a *public* benefit. Private benefit exists when the producer of a private good is also the beneficiary of a private good produced. Public benefit exists when the general public is the beneficiary of a private good produced. The private good in this instance does not (exclusively) benefit the producer of the private good despite the fact that the producer, in virtue of a quantity of labour invested, has a private property right over the produced good. From this finer clarification, one distinguishes:

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<sup>1</sup> Although it is somewhat distasteful to speak of living entities as goods and products in this way, the intention here is to discuss human rights and obligations regarding the value of human labour and its product.

(1) *Public goods that (i) require no human effort before a benefit can be derived from the good (as is the case with sunshine)*

(2) *Private goods that (i) require an amount of human effort before a benefit can be derived, (ii) invoke a private property right in virtue of the labour invested in the production of the good, and (iii) where the good leads to a private benefit for the producer (as is the case with a sunlamp)*

(3) *Private goods that (i) require an amount of human effort before a benefit can be derived, (ii) invoke a private property right in virtue of the labour invested in the production of the good, and (iii) where the good does not lead to a private benefit for the producer, but instead, produces a good that benefits the public in general (as is the case with a sunlamp that may be used free of charge by the general public)*

From these distinctions, the reader may discern some unfortunate ambiguities governing the appropriate use of the terms *public* and *private*. In the context of 'beneficence', the term 'public' includes goods in both the first and the third categories and the term 'private' refers to goods in the second category only. In the context of 'property rights', the term 'public' refers only to the first category of goods and the term 'private' refers to both the second and the third categories of goods. For the purpose of this thesis, and to avoid any potential ambiguities, I refer to the three distinct varieties of goods as follows: (1) I refer to category one-type goods as '*Public Goods*', (2) I refer to category two-type goods as '*Private Beneficence Goods*', and (3) I refer to category three-type goods as '*Public Beneficence Goods*'.

Public Beneficence Goods are, to some extent, Private Goods also. They are distinguishable from each other only in virtue of the fact that the former type, unlike the latter, provides no exclusive benefit for its producer. If a Public Beneficence Good is produced on a voluntarily basis, then the act of producing a Public Beneficence Good is at the same time an act of altruism. The production of a Public Beneficence Good, in this case, is done for the sake of another and not for the sake of the self. Although the labour vested in the production of a Public Beneficence Good ought in principle to invoke a private property right, this right is relinquished because the Public Beneficence Good produced (i) has no instrumental value to its producer, (ii) is denied on some basis, or (iii) has been surrendered voluntarily as an act of altruism. In all three cases, the Private Good is transformed into a Public Beneficence Good and the private benefit value of the Private Good has been given over to the public domain in the form of a public benefit.

Public Beneficence Goods can be divided into two further categories: (1) Altruistic Public Beneficence Goods; goods that are produced voluntarily as an act of altruism, and (2) Mandatory Public Beneficence Goods; goods whose production is mandatory. If the production of a certain type of good is a mandatory requirement under law, then the implementation of the law can create a problem in distinguishing acts of altruism from mere compliance to the law.

In the absence of a legal compulsion, the production of an Altruistic Public Beneficence Good is clearly visible because there is no compulsion to produce the good in question. When a law is passed making the production of a Public Beneficence Good a mandatory legal requirement, Altruistic Public Beneficence Goods become hidden whereby the altruistic production of the good remains an unknown contingency. The good may be a Mandatory Public Beneficence Good or an Altruistic Public Beneficence Good. Only the producer of the good knows the difference because the law has made the act of altruism a legal requirement.

I refer to Altruistic Public Beneficence Goods that are hidden in this way as Non-Visible Public Beneficence Goods. They are not an additional type of good. They are an unknown type of good. They are either an Altruistic Public Beneficence Good or a Mandatory Public Beneficence Good. Fig 4.1 below shows 5 varieties of private goods.

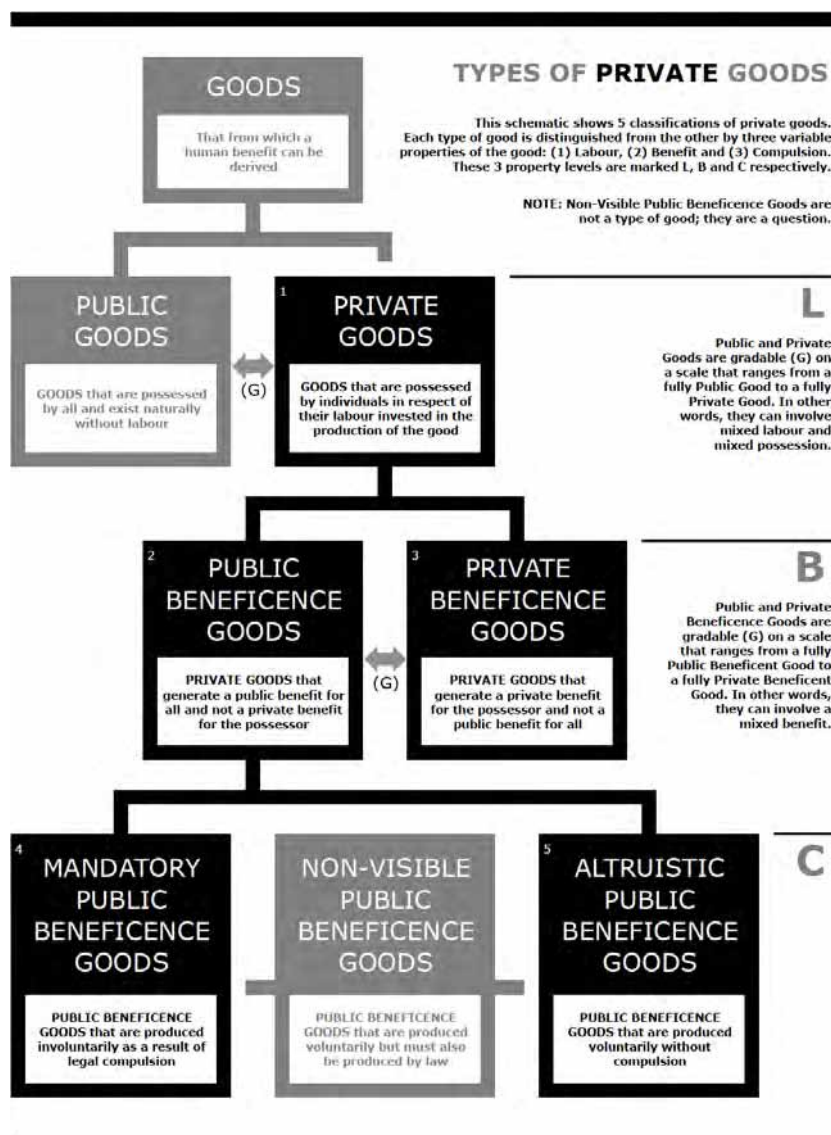


Fig 4.1

The assertion that public funds ought to be provided to zoos to cover the costs of any activities undertaken that are at the same time both (1) “Compulsory under Article 12, sections 2a, 2b and 6, of the Zoo Licensing Act”, and (2) “Do not generate a Private Beneficence Good for the zoo” raise both ethical questions concerning the normative grounds for my assertion, and practical questions concerning the process by which any actions that “do not generate a Private Beneficence Good for the zoo” can be adequately distinguished for the purpose of a compensatory form of funding. I will first address the latter question of how one can distinguish between Private and Public Beneficence Goods in the zoo context.

Animals can be arranged under a complex system of taxonomic classifications. In zoos, there is also a single bivalent classification that can be applied to all zoo animals. There are (1) animals that are kept for exhibition purposes and there are (2) animals that are kept as part of a coordinated captive breeding program<sup>2</sup>. The first category of animals, exhibition animals, can be considered as Private Beneficence Goods because they directly benefit the zoo by attracting visitors and increasing revenues. The second category of animals, captive breeding animals, can be largely classified as Public Beneficence Goods. They are kept, managed and bred for the

<sup>2</sup> For an explanation on the distinction between exhibition animals and captive breeding animals see page 223-224 of Dickie, L. et al, 2007. For the connection between ex-situ and in situ conservation see the full article: Dickie, L. et al, ‘In Situ and Ex Situ Conservation; Blurring the Boundaries Between Zoos and the Wild’, in Eds. Zimmerman, A., Hatchwell, M. and Dickie, L., *Zoos in the 21<sup>st</sup> Century*. (2007), Cambridge University Press, UK, pp. 220-235.

benefit of present and future generations of human beings. The number of animals that are kept as part of a breeding population is often much larger than would be required for exhibition purposes alone and the work involved in managing ESBs and EEPs can be considerably more costly than managing exhibition animals.

From the total number of animals kept for conservation purposes, a percentage of these animals have an exhibition value. An exhibition value is the potential of an animal to attract the general public to the zoo, thereby generating revenues through admissions. Animals within a captive breeding programme are not (always) separated from the general public. The number required for exhibition purposes is lower than the number required for captive breeding. The subtraction of this smaller number from the total number of animals kept in captive breeding programmes produces a number of animals that are kept as a Public Beneficent Good. The costs of managing breeding populations using systems such as ISIS, ARKS, SPARKS and MEDARKS; the coordination tasks involved in participating in ESBs and EEPs; the costs of transporting and licensing animals that are part of a captive breeding program; and the additional costs of accommodating, feeding, cleaning and providing medical care for animals above the number required for exhibition purposes alone all belong to the category of a Public Beneficent Good. These activities produce expenses, lead to a public benefit for present and future generations, but do not contribute to an increase in zoo revenues<sup>3</sup>.

Before the implementation of the Zoo Licensing Act, zoos produced these Public Beneficence Goods voluntarily; they were Altruistic Public Beneficence goods according to the classification in fig. 4.1. Since the introduction of the Zoo Licensing Act, these have been transformed into Non-Visible Beneficence Goods. The altruistic motives behind the production of these goods can no longer be determined because they now must be produced as a legal requirement. Within the set of Mandatory Public Beneficence Goods produced by all zoos, some Public Beneficence Goods will be produced for altruistic motives whereas other goods will be the result of a legal requirement. In Appendix I, I present a proposed method for quantifying the costs of Mandatory Public Beneficence Goods. This category includes potentially Altruistic Public Beneficence Goods also.

One can conclude then, that although zoos are generally private commercial entities, they are legally obliged to produce goods that benefit future generations and the public at large; zoos are effectively compelled by law to function as a charity. This is a significant deviation from the political ideas of Locke and Nozick, for example. According to these philosophers, the primary role of the government is to protect the institution of private property. I present the ideas of Nozick in more detail in section 4.4.1. Charitable zoos, such as the members of the CCZ in the UK, or Blijdorp Zoo, Natura Artis Magistra and Noorder Dierenpark Emmen in the Netherlands, have ideological commitments to the preservation of biodiversity; an Altruistic Public Beneficence Good. All members of the NVD and EAZA are bound by the collective goal of species conservation. Although this binding goal might be seen as a compulsion, the decision to establish a charitable trust, or the choice to become a member of the NVD or EAZA, is a choice that is taken freely. The production of Altruistic Public Beneficence Goods is a voluntary consequence of this free choice.

Before addressing the normative arguments for and against providing a form of public funding for the provision of Public Beneficence Goods, I consider how a law that imposes an obligation to perform charitable works on an essentially private institution might have come to arise. In section 4.2 below, I discuss two normative interpretations of law. After this deviation, the arguments for and against a form of public funding will commence from sections 4.3 onwards.

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<sup>3</sup> Assuming, that is, that the producer is either a member of the NVD-EAZA or chooses not to sell endangered species as a means for generating revenues.

## 4.2 Normative Interpretations of Law

Public opinion on the ethics of keeping wild animals in captivity remains divided. Some people believe that zoos are cruel institutions denying wild animals their rights to live a free life in the wild<sup>4</sup>. ENDCAP, for example, would like to see the end of all zoos through the natural extinction of zoo populations through a policy of non-breeding. A visit to a financially impoverished zoo can amplify concerns for animal welfare; it is certainly true that there are still some sub-standard zoos within the industry across Europe. Yet the Zoo Licensing Act has gone well beyond imposing animal welfare standards. If animal welfare were the primary cause for concern, then improvements to welfare standards in animal farming would have a far greater impact on animal welfare overall. One need only compare the conditions of a factory-farmed pig, for example, to the standards of care enjoyed by captive wart hogs, red river pigs or peccaries. This is not to deny that some species have a higher order of cognitive ability and a greater level of sentience. There may be some valid concerns on animal welfare grounds for specific types of species<sup>5</sup>.

Zoos have responded to public concerns on animal welfare by emphasizing the important works conducted in their institution<sup>6</sup>. It seems, nevertheless, that there has been a shift in political thinking concerning the very right of the zoo to exist as an institution. A. Vergossen-Otten, from the Ministry of EL&I's Directorate Food, Animals and Consumers, sees the legal obligations as conditions that must be met in exchange for the right of operating a zoo '*It is compliance to these goals that give the zoo a 'bestaansrecht' - the right to exist*' (Vergossen-Otten, A., 2011). But why are similar obligations not applied within other sectors? How, for example, might a pig farmer respond if he or she were obliged to educate the general public on the particulars of wild pig species around the world? How would a baker respond if, in exchange for the right to sell bread, he or she were obliged to become actively engaged in the preservation of rare strains of wheat?

I am not denying the undoubted social value of these important activities; I merely ask by what right the government imposes such positive obligations on a private institution. Whereas in the past, the multifunctional nature of the institution was the result of a voluntary choice, now the institution's multi-functionality is deeply embedded within its very definition<sup>7</sup>. It may be that governments have been responding to mixed public attitudes towards the institution and that, within their laws, legislators are including a moral basis for the institution's continued existence.

Baratay and Hardouin-Fugier (2002) trace '*the history of zoological gardens in the west*' from their ethically dubious beginnings as the private collections, trophies and curiosa of aristocrats in the Renaissance to the modern zoological gardens of the present day. The authors chart society's shifting attitudes and a somewhat uncomfortable relationship with an institution that is frequently misunderstood. They claim that as many species are now threatened with extinction as a result of habitat depletion, the social function of the zoo has become less clear: '*Such institutions both present the illusion of wild animals in a natural state to a nostalgic public and find themselves justifying their existence as saviours of endangered species to their detractors*'.

European Council Directive 1999/22/EC is unambiguous about the social function of the zoo. The directive states '*... zoos [must] adequately fulfil their important role in the conservation of species, public education, and/or scientific research ...*'. Not only does the zoo have a clear societal role according to the directive, but it is also a role that is acknowledged to be a socially important one. When placed in the historical narrative of Baratay and Hardouin-Fugier, some might perceive

<sup>4</sup> Dale Jamieson presents a number of objections to zoos, one of which is that '*... zoos teach us a false sense of place in the natural order. The means of confinement mark a difference between humans and other animals. They are there at our pleasure, to be used for our purpose*'. See: Jamieson, D., 'Against Zoos', in Eds. Armstrong, J. and Botzler, R., *The Animal Ethics Reader*. (2008), Routledge, Oxon, pp. 507-512.

<sup>5</sup> Animal enrichment programmes are aimed at occupying animals by introducing problems that take time for the animal to solve; a way of introducing variety into the enclosures. See <http://animalenrichment.eu/enrichment/> for examples of enrichment methods.

<sup>6</sup> See: Hutchins, M., Smith, B. and Allard, R., 'In Defense of Zoos and Aquariums; The Ethical Basis for Keeping Wild Animals in Captivity', in Eds. Armstrong, J. and Botzler, R., *The Animal Ethics Reader*. (2008), Routledge, Oxon, pp. 513-521.

<sup>7</sup> At least within European Countries that comply to European Commission Directive 1999/22/EC

this role to be nothing more than an apologetic justification for the continuation of an ethically dubious institution - the mere validation of an institution as a response to a historical shift in public attitudes. If such a perception is true, then the obligations placed on zoos within the directive and the Zoo Licensing Act might be considered as acts of Legal Moralism.

Himma (2009) defines Legal Moralism as '*... the view that the law can legitimately be used to prohibit behaviours that conflict with society's collective moral judgments even when those behaviours do not result in physical or psychological harm to others. According to this view, a person's freedom can legitimately be restricted simply because it conflicts with society's collective morality; thus, legal moralism implies that it is permissible for the state to use its coercive power to enforce society's collective morality*'<sup>8</sup>.

A legal moralistic interpretation of the social function of law might suggest that society's collective morality no longer endorses the keeping of wild animals in captivity for the sake of entertaining the public. Instead, society's collective morality demands that zoos actively engage in activities that are aimed at conserving biodiversity. There may be an element of truth to the charge of legal moralism; it is certainly undeniable that public attitudes towards the keeping of animals in captivity have changed dramatically throughout the course of recent history. If it is the case that the directive is a mere response to such shifts in public opinion, then one might conclude that the institution is in a historically precarious position. The extent to which it is able to fulfil the demands of a relatively new social role that has been thrust upon it will determine whether or not it will remain supported by society's collective morality in the future. The extent of general compliance is a relevant question here. If zoos adopt a policy of minimal compliance to the Zoo Licensing Act, and if the licensing authority accepts that a minimal level of compliance satisfies the conditions outlined in the Zoo Licensing Act, then the chosen / imposed role of the zoo may be regarded as being only shallowly embedded within the institution. In this case, allegations of *window dressing* may gain increasing levels of popular support.

If one considers the directive and its derivative, the Zoo Licensing Act, from a legal positivist perspective, then one strips the law of any moral content and regards the law instead as bare social fact. Wacks (2006) states that '*... [legal positivism] rejects the view - held by natural lawyers - that law exists independently from human enactment*' (2006, p. 18). Himma (2009) identifies three theoretical commitments in Legal Positivism: (i) the Social Fact Thesis, (ii) the Conventionality Thesis, and (iii) the Separability Thesis. '*The Social Fact Thesis asserts that it is a necessary truth that legal validity is ultimately a function of certain kinds of social facts. The Conventionality Thesis emphasizes law's conventional nature, claiming that the social facts giving rise to legal validity are authoritative in virtue of some kind of social convention. The Separability Thesis ... denies naturalism's Overlap Thesis; according to the Separability Thesis, there is no conceptual overlap between the notions of law and morality*'<sup>9</sup>.

In regarding the law as bare social fact, Legal Positivism has an advantage over Legal Moralism in allowing the law to retain a morally neutral position. In a liberal and pluralistic democracy, some believe that the law should adopt an impartial stance towards the conflicting beliefs and interests of citizens that are subject to its binding authority. Liberal Pluralism is respectful of a diverse range of beliefs and opinions and protects minorities in their civil associations from the potential tyranny of the dominant majority. Legal Moralism denies this plurality of beliefs because it sees the authority of law as being a derivative of society's collective morality. This entails a conviction to the belief that society can indeed possess a definitive collective morality that simultaneously authorises, and determinately governs, the content of law.

On the subject of whether or not zoos should retain the right to continue existing as a social institution, public opinion is divided. Pluralism is an escape from the dilemma of endorsing the values of some at the expense of others. Vegetarians might like to ban the consumption of meat. Does this mean that those who eat meat should be legally prevented from doing so? A law that tolerates meat eating does not impose meat eating on vegetarians. A law that tolerates the

<sup>8</sup> Internet Encyclopaedia of Philosophy, <http://www.iep.utm.edu/law-phil/#SSH2a.i>

<sup>9</sup> Internet Encyclopaedia of Philosophy, <http://www.iep.utm.edu/law-phil/#SH1b>

existence of zoos does not force animal welfare activists to spend time in zoos. The limitation of these freedoms deny such options and the legislator is forced to take a stand.

In the context of this study, one might claim that the author is guilty of legal moralism. After all, this thesis makes a moral appeal for the public funding of Public Beneficence Goods that ensue from the legal obligations of the Zoo Licensing Act. One might conclude that the author is applying moral values to a morally neutral act of positive law and to criticise the moral foundations of the law would be to deny the social fact thesis. By way of vindication, I draw a distinction between (1) criticisms of law on the grounds that a law is substantively immoral, and (2) the act of providing moral reasons as persuasive arguments to endorse the instrumental value of a shift in policy. Some might regard the distinction as a mere difference in semantics, but by regarding ethical reasons as instruments of political and legal persuasion, it leaves intact a commitment to value pluralism and moral autonomy. Although practical determinants may provide persuasive reasons, policies would not be improved by excluding ethical considerations from the realm of political and legal debate. What's more, and as I hope to illustrate in section 4.3 below in my discussion of David Wong's meta-ethical theory of Plural Relativism, ethical reasons as instruments of persuasion are often supported by considerations of a highly pragmatic nature.

### 4.3 Reciprocity

The directives of the European Council allow for an element of Moral Relativism. Although European directives define the goals that contracting parties are obliged to achieve within their own national laws, Nation States are free to draft their laws with a degree of flexibility that respects local mores, customs and traditions. Moral Relativism is the view that social norms and human values are shaped by cultural convention. Himma's (2009) definition of Legal Moralism, which was presented in section 4.2 above, may allude to an element of Moral Relativism within it when he explains that: '*it is permissible for the state to use its coercive power to enforce society's collective morality*'. There is here a notion that a society can possess a *collective morality* that is somehow singular and somehow typical of a society. A critique of Moral Relativism may therefore also imply a critique of Legal Moralism simultaneously; both commitments centre on the belief that social norms and human values are sufficiently similar amongst individuals of a particular society so as to be considered singularly definitive and nationally and/or culturally typical. Where Moral Relativism sees moral norms as being defined by cultural convention, Himma's definition of Legal Moralism posits the authority of law in a society's collective morality.

In his article on "*Plural Relativism*", David Wong (1996<sup>10</sup>) considers the extent to which human values *broadly overlap*. Wong rejects Moral Relativism by denying that human values are fundamentally different across cultures. Wong suggests instead "*[that] ... differences between actual moralities are of such a nature as to allow overlapping values*" (p. 397) and "*[that] ... cultural conflicts over values ... [are not necessarily] ... confrontations between moral codes that are completely alien to one another*" (p. 380). What Wong is suggesting is that moral values, in the form of *conceptual assets*, are broadly understood across all cultures universally. It is not the substantive *values* that are fundamentally different amongst diverse cultures, but instead, it is the *priorities* assigned to particular values that differ along cultural lines. The way in which different cultures make prioritizations amongst a shared body of plural values determines the norms adopted to govern the social practices within a particular culture.

On this account, Wong might be considered a Universalist and not a Relativist. After all, he endorses the view that values are shared across cultures universally to a greater or lesser extent. He is a Relativist only with respect to the process of prioritization amongst universal values and it is these prioritizations, and not the core values, that differ according to cultural convention; the *priority* is culturally relative whereas the *value* is not.

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<sup>10</sup> David Wong. "Pluralistic relativism" In: French, P.A., Uehling T.E., Wettstein, H.K. *Midwest Studies in Philosophy. Volume XX. Moral Concepts*. Notre Dame: University of Notre Dame Press, 1996: 378-399.

Wong presents the principle of reciprocity as a paradigm example of a value that is shared across all cultures universally. He writes: *'Consider that some form of reciprocity is a norm for all cultures that we know of, where reciprocity is conceived as a fitting and proportional return of a good for a good<sup>11</sup>. Its universality suggests that self-interested motivation plays a significant role in human cooperative activity. Reciprocation for the help that any human being needs, if it is a general feature of social interaction, reinforces helping behaviour. It is a powerful element in sustaining the help we need'*. He goes on to suggest, *"not reciprocating, if it were a general feature of social interaction, would quite likely extinguish helping behaviour<sup>12</sup>'* (p. 384).

In the Netherlands, the principle of reciprocity has found its way into the Dutch language in the form of two popular adages that are worth mentioning – *'voor wat hoort wat'* and *'voor niks gaat de zon op'*. The first translates as *'for something one may expect something in return'*. The second is an implicit reference to the principle of reciprocity and is equivalent to *'for nothing the sun rises<sup>13</sup>'*. Although such adages establish the presence of the principle of reciprocity as a feature of the Dutch moral landscape, and so lend support to Wong's universalist claim concerning *broadly overlapping* cultural values, it does not answer the question of how the principle of reciprocity ought to be prioritized in the case at hand.

The claim that *"not reciprocating ... would quite likely extinguish helping behaviour"* seems intuitively plausible and suggests that in the absence of a compensatory form of public funding in exchange for the Public Beneficence Goods produced by zoos, that zoos would fulfil their conservation obligations only minimally. Against this claim, however, one might consider the necessity for cooperation within the context of the European zoo community, recalling Marc Damen's observation that *'a good international reputation is its own incentive'*. This observation, however, does not reduce the social value of reciprocation; it merely suggests that the object of reciprocation is not limited to the payment of a monetary sum. The provision costs of Altruistic Public Beneficence Goods may be reciprocated by an increased willingness of others to cooperate towards one's ideological goals. Cooperation has a benefit value<sup>14</sup> that is contingent on the nature of a cooperative act.

Moral Relativism is a theory that is despised by some for its tendency to undermine the validity of moral appeals that are founded on a core value. The strength of a moral argument is diluted by a dismissive counter-claim suggesting that the truth about the moral value on which the argument depends applies within a limited cultural context only. I think that Wong's Plural Relativism offers a less destructive means for discussing cultural difference and I believe that he is right to identify the principle of reciprocity as being a fundamentally universal human value that is present within all cultures. The principle of reciprocity can be found in all of the world's major religions<sup>15</sup>.

I am not suggesting, by this, that an appeal on religious grounds is a valid basis for endorsing the principle of reciprocity; Wong has presented pragmatic reasons that explain why the principle has a practical importance for encouraging social cooperation. He has also shown that self-interested motives are a feature of the principle. The appeal to *religious similarities* is merely used to illustrate the overwhelming global consensus regarding the principle of reciprocity. Its wide-scale endorsement has led the principle to become known as *'the Golden Rule'*. I conclude

<sup>11</sup> Public funds in exchange for Public Beneficence Goods, for example

<sup>12</sup> Wong acknowledges Lawrence Becker as the source of this observation.

<sup>13</sup> Sunshine being a Public Good as opposed to a Private Good (a sunlamp in my example)

<sup>14</sup> Damen, M. (2011) explains that the ideological nature of Rotterdam zoo, it's status as a not-for-profit institution, makes it very easy to attract volunteers who are willing to work for a noble cause (some 350 in 2011). A case of reciprocation perhaps, where the provision costs of realising ideological goals are compensated by increased levels of cooperation.

<sup>15</sup> In Christianity - the King James Bible, Mathew 7:12, states: *"Therefore all things whatsoever ye would that men should do to you, do ye even so to them: for this is the law and the prophets"*. In Islam - the Qur'an quotes Mohammed, the Light v.22, as saying *"...and you should forgive and overlook: Do you not like God to forgive you?"* In Judaism - the Torah, Leviticus 19:18 states *"You shall not take vengeance or bear a grudge against your kinsfolk. Love your neighbor as yourself: I am the Lord"*. In Hinduism - the Mahabharata, Anusasana Parva, Section CXIII, v.8, states: *"One should never do that to another which one regards as injurious to one's own self"*. In Confucianism - the Analects, XV.24, recounts the following exchange: *"Zi Gong asked, saying, "Is there one word which may serve as a rule of practice for all one's life?" The Master said, "Is not reciprocity such a word?"*



therefore that, although it may be the case that *for nothing the sun rises*, by the universal principle of reciprocity, for a Public Beneficence Good, the public sector ought to pay.

## 4.4 Politics

In section 4.3 above, I suggested that the universal principle of reciprocity was a sufficient moral basis for demanding a form of compensation for the production of Public Beneficence Goods. In section 4.1, these goods were defined as those that generate a private property right in virtue of a Lockean-type labour investment, whilst at the same time, failing to deliver a form of private benefit to the producer of the good in question<sup>16</sup>, and generating instead, a good that benefits the public in general. Under this heading, I provide a more in-depth political account of why Public Beneficence Goods ought to be compensated for by a means of public funding. I elaborate on the political basis for justifying a form of public funding and I examine the strengths and weaknesses of political argument.

As one might anticipate, the first aim of this section encounters an immediate and significant problem. The breadth and diversity of political theory is such that a comprehensive and inclusive analysis is well beyond the scope of this study. This problem requires a careful consideration of which theories to include and which to discount. In order to establish a modicum of credibility within this section, I have chosen to focus on the political theory that, in my view, provides the strongest and most compelling case *against* an appeal for public funding. If such a *strong case* can be convincingly countered, then I hope to have gone some way in establishing a political basis for the public funding of Public Beneficence Goods.

Robert Nozick's *'Anarchy, State and Utopia'*, (Nozick, R., 1974), presents a Libertarian political theory that endorses an *ultra-minimal state*. His *'Entitlement Theory of Distributive Justice'* is presented as an alternative to Rawls's Liberal Egalitarianism. A commitment to Nozick's ultra-minimal state seems inconsistent with a policy of state funding for the provision of Public Beneficence Goods. Such a policy would enlarge the role of the state to include interventions that go beyond the ultra-minimal role of the state as endorsed by Nozick. For these reasons, I have chosen Nozick's Libertarianism as my *strong case* against a policy of public funding.

In the sections that follow, I aim to show, somewhat ironically, that although Nozick's Libertarian principles endorse an ultra-minimal state, these same principles necessarily endorse the state funding of Public Beneficence Goods. The irony is explained by the fact that Public Beneficence Goods, by Nozick's Entitlement Theory of Distributive Justice, invoke a right to private property. If my arguments are sound, then a true Nozickean Libertarian must either (1) endorse a policy of compensatory public funding for the obligations stemming from Article 12, sections 2a, 2b and 6, of the Zoo Licensing Act, or alternatively (2) insist that legislation is amended to remove these obligations, as they are unjust according to Nozick's Entitlement Theory.

### 4.4.1 Nozick

In his preface to *'Anarchy, State and Utopia'* (1974), Nozick asserts *'... a minimal state, limited to the narrow functions of protection against force, theft, fraud, enforcement of contracts, and so on, is justified ... [and] ... that any more extensive state will violate person's rights not to be forced to do certain things, and is unjustified ...'* (p. ix). Taking his lead from Locke's *'Second Treatise of Government (1689)'*, Nozick considers how, in a state of nature, people might come to establish private protective associations amongst themselves to secure their natural rights. He mentions two inconveniences connected to the establishment of such *'mutual protection associations'*. Firstly, that *'everyone is always on call to serve a protective function'*, and secondly that *'any member may call out his associates by saying his rights are being, or have been, violated'* (p. 12). Nozick asks if a private protective agency would *'require that their clients renounce exercising their right of private retaliation if they have been wronged by non-clients of the agency'* or if indeed

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<sup>16</sup> At least not an exclusive benefit

'... a client [would] renounce, by contract, his right of private enforcement of justice against its other clients' (p. 15). Respectively, these two questions concern (i) problems of jurisdiction, and (ii) problems of impartiality.

Nozick argues that solving problems of this kind would give rise to a single *dominant protective association* that would emerge naturally and without planning. He borrows from Adam Smith's, *The Wealth of Nations* (1776), to give an *invisible-hand* explanation for the emergence of a dominant protective association: 'Every individual intends only his own gain, and he is in this, as in so many other cases, led by an invisible hand to promote an end which was no part of his intention' (p. 19). Nozick then asks if such a dominant protective association is synonymous with what we consider to be a state, concluding that there are two significant differences between a dominant protective association and a state: (1) '[the dominant protective association] appears to allow some people to enforce their own rights' and (2) 'it appears not to protect all individuals within its domain' (p. 23), this because protection is limited to its private clients. An ultra-minimal state is achieved when the dominant protective association (i) has a monopoly position in being the only protective association within a geographical area, and (ii) when the dominant protective association provides protection to both clients and non-clients within its geographical domain. At the point when a dominant protective association meets these two conditions it has effectively become an ultra-minimal state. Having presented his ideas of how an ultra-minimal state might arise from within a state of nature, Nozick then presents his ideas on distributive justice.

Although Nozick expresses a high regard for the beauty and elegance of John Rawls's '*a Theory of Justice*' (1971), he rejects the legitimacy of Rawls's theory as a basis for the just distribution of social goods, or indeed, as a legitimate basis for political consent. Nozick presents his Entitlement Theory of Justice as being composed of two fundamental principles of justice that govern a person's *holdings*: (1) the principle of justice in acquisition (of holdings), and (2) the principle of justice in transfer (of holdings) (Nozick, 1974, p. 150).

Nozick observes a fundamental difference amongst theories of justice; whereas some theories provide a *historical* account of distributive justice, other theories are based on an *end-state* that the respective theory aims to bring about. Nozick rejects end-state theories, of which Rawls's Theory of Justice is a prime example, because they rely on a *patterned* form of distribution. Rawls's Difference Principle, for example, aims to bring about an end-state in which the least advantaged in society are the most benefitted in the distribution of social goods. To establish his point against a patterned form of justice, Nozick presents an argument against the plausibility of patterning that was put forward by Indian economist, Amartya Sen:

'... suppose that person A has the right to decide among (X, Y) and person B has the right to decide among (Z, W); and suppose their individual preferences are as follows (and that there are no other individuals). Person A prefers W to X to Y to Z, and person B prefers Y to Z to W to X. By the unanimity condition, in the social ordering W is preferred to X (since each individual prefers it to X), and Y is preferred to Z (since each individual prefers it to Z). Also in the social ordering, X is preferred to Y, by person A's right of choice among these two alternatives. Combining these three binary rankings, we get W preferred to X preferred to Y preferred to Z, in the social ordering. However, by person B's right of choice, Z must be preferred to W in the social ordering. There is no transitive social ordering satisfying all these conditions, and the social ordering, therefore, is non-linear' (Nozick, 1974, p. 165).

Nozick explains: 'The trouble stems from treating an individual's right to choose among alternatives as the right to determine the relative ordering of these alternatives within a social ordering<sup>17</sup>'. Thus Nozick uses Sen's argument to reject Rawls's Theory of Justice on the basis that it is a patterned theory of distributive justice. Nozick agrees with Sen that a relative social ordering of choices is impossible; no *pattern* can satisfy (i) all preferences and (ii) all choices

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<sup>17</sup> There may be connections here with Wong's Plural Relativism – his emphasis on the relativity of prioritization as opposed to values. Sen's argument denies the possibility of a general pattern of cultural priorities that was proposed by Wong as an alternative to Moral Relativism's general patterning of cultural values. Legal Moralism also relies on such a patterning.

over which individuals have the right to choose. Nozick's Entitlement Theory of Justice, by contrast, is a *historical* theory, and not a *patterned* theory, of justice.

The central question addressed by Nozick concerns the extent of state intervention in coordinating social affairs that one ought best to endorse; how ought one to divide the public and the private domains of political association; how large or small should public sector involvement be? In his book *'the General Idea of the Revolution'* (1851), Pierre-Joseph Proudhon proposes a social contract theory that completely denies the need for a state authority. Instead, Proudhon suggests that the contract exists voluntarily amongst citizens and not between citizens and a State<sup>18</sup>. Social order, he argues, can arise through the voluntary and private agreements of people working together in cooperation. People ought to be free to organise themselves as they please and any agreements amongst individuals ought to be founded on the full autonomous consent of the contracting parties. Nozick's ultra-minimal state might be seen as a form of anarchy with the rather modest addition of a monopolized state authority that is required to protect the institution of a Lockean conception of private property.

For Nozick, and Libertarians in general, the act of supporting social institutions with public money might be considered an unjust practice. The attempt to solve social problems by distributing funds in a patterned way would violate Nozick's Entitlement Theory of distributive justice. Distributive justice is historical and cannot be achieved by a patterned distribution aimed at a positive consequence because this would violate Nozick's Entitlement Theory of distributive justice. Central funding for the preservation of biodiversity is an example of such a patterned distribution. Nozick would likely prefer a voluntary form of funding in which resources are distributed in proportion to the concerns for the preservation of biodiversity that exist amongst the population; each member of which is completely free to donate to a cause as and when he or she pleases<sup>19</sup>. This is one side of an argument that I present in section 4.4.3 below.

#### 4.4.2 Rawls

Rawls's Theory of Justice leads to a patterned form of social distribution. The legitimacy of Rawls's contract theory is rooted in what a *perfectly rational agent* would likely and reasonably consent to in *'the Original Position'*, a hypothetical space in which *'...no one knows his place in society, his class position or social status; nor does he know his fortune in the distribution of natural assets and abilities, his intelligence and strength, and the like.'* In the Original Position, a rational agent deliberates from behind a *'Veil of Ignorance'* creating an impartial space for reflective deliberation. By not knowing the existential context of one's place in the world, Rawls suggests, a free and impartial agent would rationally consent to two fundamental principles of justice: (i) the *Liberty Principle*, and (ii) the *Difference Principle*. Whereas the former is aimed at maximizing the amount of personal liberty that is compatible with an equal amount of liberty for all, the latter is aimed at reducing differences in the distribution of social and natural goods. Whereas Nozick's theory is based on the actual consent of contracting parties, Rawls's relies on a derivative form of consent that is implied from what a fully rational agent would likely consent to in respect of what is in his or her best self-interest. Consent is hypothetical.

Whereas social goods can be seen as tangible resources, natural goods are intrinsic talents and dispositions of human beings<sup>20</sup>. According to Rawls, both categories of goods are distributed

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<sup>18</sup> *'... the social contract is an agreement of man with man; an agreement from which must result what we call society'*, Proudhon, (2007, p. 112).

<sup>19</sup> Nozick's famous Wilt Chamberlain argument suggests that social justice is derived from autonomous choice rather than an ideally patterned distributive outcome. See Nozick (1974, p. 161).

<sup>20</sup> Public Benevolence Goods are *social* goods and not natural goods. A *natural* Public Benevolence Good might nevertheless be conceivable in the form of an internally developed virtue that benefits the public - the virtue of altruism, for example. On this view, the virtue of altruism is the result of mixing one's (intellectual) labour with a resource that is the self. The virtue is then a private property of the self that benefits the public. This raises the question of (1) whether or not the ability to develop oneself into a 'public spirited person' is an innate capacity that exists from birth, in which case an absence of such a capacity might require compensation according to Rawls's maximin principle, or (2) whether or not such a capacity to develop a virtue exists equally irrespective of the contingent circumstances of one's nature or nurture. Accepting the former position leads to a paradox; those lacking an innate capacity for developing virtues can make a

unequally by the accidental contingencies of birth. Rawls's theory of justice is egalitarian, proposing that institutions should be configured to ensure that social policies are aimed at benefitting the least advantaged in society; aiming to ensure that people with equal talents and motivations have equal opportunities in life. For this reason, the Difference Principle is based on a '*maximin*' distribution of goods; a maximin distribution should lead to a maximum benefit for those who are the least well off in the *natural*<sup>21</sup> allotment of social and natural goods. The principle involves a form of compensation for those unfortunate in the contingent and arbitrary distribution of natural and social goods as arises through the accident of birth<sup>22</sup>.

Rawls's two principles have a *lexical ordering* whereby the Liberty Principle is given a priority status over the Difference Principle. Rawls assigns a higher priority to his Liberty Principle because he acknowledges that the distribution of social and natural goods governs the extent to which any substantive form of personal liberty can be achieved; the distribution of social and natural goods determine the substantive *options* that one has available to choose from in life. Although one may be free in principle to pursue any given end, the absence of a social or a natural good may form a very real and practical barrier for pursuing the end in question<sup>23</sup>. For this reason, the liberty principle is given a higher lexical priority over the difference principle.

In the Original Position, a perfectly rational agent would both (i) consent to the two principles, and (ii) would consent to the lexical ordering of the two principles. Rawls asserts that because such an arrangement of principles represents what is in the best self-interest of a fully rational agent in the Original Position, that his principles embody a public conception of justice that can and ought to be applied to society as a whole; a means of achieving a "*... well-ordered society ... [that is] ... designed to advance the good of its members and ... [is] ... effectively regulated by a public conception of justice*" (Rawls, 1971, p. 397).

For Rawls, and Egalitarians in general, the act of supporting social institutions with public money is considered to be a just practice. In the context of preserving biodiversity, for example, Rawls's maximin principle might consider that future generations will be less well off in the distribution of natural goods; there will be fewer species to derive a benefit from in the future and this places a heavier burden on present generations to conserve species as a means of compensating future generations who might be disadvantaged as a result of species depletion. To safeguard an important social good, Rawls would endorse the public funding of protective measures by appealing to an argument that would take place behind the Veil of Ignorance in the Original position. If people did not know where or when they would be born, it would be in their best self-interest to preserve resources in case they were unfortunate in being born at a time when biodiversity has been depleted. The choice of a perfectly rational agent would endorse a policy of central funding for the preservation of this natural good. This would be the best choice of a self-interested and fully rational individual and would imply the State's provision of sufficient funds. Rawls's Theory of Justice gives a larger role to the State. The State is responsible for maintaining a well-ordered society for the good of all its members and is effectively regulated by a public conception of justice. This is the other side of the argument that I present in section 4.4.3 below.

#### 4.4.3 Nozick vs Rawls in Pettit

Having outlined in brief the ideas of Nozick and Rawls in the two preceding sections, in this section I consider the respective merits of their opposed conceptions of distributive justice - historical and end-state conceptions respectively. I use both theories to populate each side of an argument put forward by Phillip Pettit in his article '*Agency-Freedom and Option-Freedom*' (2003). Pettit presents a consequentialist account of freedom and identifies three distinctive

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Rawlsian claim to be compensated for their lack of virtue. Although such a lack may be a very practical deficiency, it seems an absurd conclusion to arrive at.

<sup>21</sup> The use of the term natural here refers to the contingent distribution of goods as resulting from the accident of birth.

<sup>22</sup> Kymlicka (2002, p. 66), suggests that critics of Rawls's maximin strategy argue that it is equally rational, or more rational, to gamble on utilitarianism [Hare 1975, Bailey 1997, Barry 1989] or that the 'rational strategy' is a form of Prioritarianism which attaches greater weight to the interests of the less well off; still allowing major gains to the affluent to outweigh minor losses to the poor [Parfit 1998, McKerlie 1994, Arneson 2002].

<sup>23</sup> This problem is picked up in my discussion of Pettit's article on 'Agency Freedom and Option Freedom'.

notions of [political] freedom: (1) *freedom as non-limitation*, (2) *freedom as non-interference*, and (3) *freedom as non-domination*. Pettit suggests that conceptions of freedom have two essential properties: (i) a property of agency and (ii) a property of options.

In my definition of the conceptual distinctions between *public* and *private* goods in section 4.1, I noted the presence of ambiguities concerning the use of the terms *public* and *private*; the terms can be used to denote a *property right* on the one hand, or the locus of a *benefit* on the other. The fact that a Public Beneficence Good has both attributes, a public and a private attribute, generates a problem of bivalence when committing oneself to the use of a single term; neither term seems wholly adequate for a precise definition. To use the term *private* would be to deny the *public* attribute of public beneficence; to use the term *public* would be to deny the *private* attribute of a right to private property. Pettit makes a similar observation regarding the different contextual uses of the term *freedom* in political debate.

Pettit suggests that political philosophers are often guilty of using the term interchangeably, whereby the meaning of the term is rendered indistinct and contextually dependent. In Pettit's own words: '*... Freedom debates often go different ways, not because they hold different intuitions on different topics but because they address different topics under common names. I suggest that social freedom is sometimes understood as option freedom, sometimes as agency freedom and that the different things that theorists have maintained can often be explained by their focussing, now on freedom in the one sense, now on freedom in the other (Pettit, 2003, p. 388).*'

Pettit establishes the merits of Option Freedom over Agency Freedom as follows: '*If I can make it the case that I A or I can make it the case that I B – which I do is up to me, as we say – then A-ing and B-ing are options for me. And if I can make it the case that by A-ing I C or that by B-ing I D – again, this is up to me – then C-ing and D-ing are also options for me. If, however, I can A or I can B but it is up to factors beyond my control whether or not A-ing amounts to C-ing, or B-ing to D-ing, then C-ing and D-ing are not options for me. That I C or that I D, if it turns out that I do, will be a consequence of my choosing A or my choosing B – a consequence that I may have expected and wanted – but it will not itself be a direct matter of choice' (Pettit, 2003, p. 389).*

Pettit's observations illustrate the distinction between the right of choice *in principle* and the options amongst choices *in practice*. Both choice types represent different forms of freedom; the freedom of an agent to perform an act of choosing (Agency Freedom) and the extent of options available to freely choose from (Option Freedom). If we populate Pettit's argument with Nozick Entitlement Theory of Justice, on the one hand, and Rawls's end state Theory of Justice, on the other, we can see what kind of conclusions might be generated from the argument:

*(1) If opting for policy A generates a consequence C, where consequence C is the protection of an important fundamental right (the A-policy implements Nozick's Entitlement Theory of Distributive Justice, for example), and if opting for policy B generates consequence D, where consequence D is a wider patterned distribution of social goods (the B-policy implements Rawls's Theory of Justice, for example), then there is no reason to assume that an autonomous agent would choose for option A over option B if consequence D provides access to social goods that might otherwise be lacking for the agent.*

*(2) If opting for policy A generates a consequence C, where consequence C is the protection of an important fundamental right (the A-policy implements Nozick's Entitlement Theory of Distributive Justice, for example), and if opting for policy B generates consequence D, where consequence D is a wider patterned distribution of social goods (the B-policy implements Rawls's Theory of Justice, for example), then there is no reason to assume that an autonomous agent would choose for option B over option A if consequence C secures an important fundamental freedom that might otherwise be lacking for the agent.*

So far the argument does not seem to lead to a very conclusive outcome. Would an individual prefer a better distribution of social goods or more autonomy in making free choices? In the real world, people's preferences may be divided on this issue; there may be factors that influence the

preferences of individuals. For example, the economic circumstances of an individual may have a bearing on this preference. If a person has access to large amounts of social goods, then the wide distribution of social goods may be less appealing than the protection of a fundamental right. If, by contrast, an individual does not have wide access to social goods, then a choice for a wider distribution of social goods may seem the most appealing of the two options.

Nozick suggests that the State exists at the moment that a protective agency has a monopoly position in enforcing law and that the protective agency of the State acts impartially to protect the interests of both clients and non-clients alike. Nozick endorses a very narrow role of the State for protecting the institution of private property; his Entitlement Theory regards distributive justice as 'historical' and not 'patterned'. Given the different preferences amongst members of society concerning the choice between a wide patterned distribution of social goods, on the one hand, or a protection of a fundamental right to autonomous choice, on the other, Nozick does not seem to offer a viable solution for maintaining an impartial position between opposing views. Rather, the question of whether or not the State has a role in distributing goods is dismissed as being a violation of the right to private property. Value pluralism is a theme that was mentioned in the discussion on Legal Moralism and Legal Positivism. Legal Positivism allows the legislator to maintain a neutral position concerning conflicting values. If one looks at Rawls's Theory of Justice, one sees that Rawls presents a method of maintaining impartiality and a respect for value pluralism. Admittedly, his method involves a hypothetical construction. Nevertheless, if one repeats Pettit's argument incorporating Rawls's method of enforcing value pluralism and impartiality, one comes a small step closer to a solution to the problem:

*(1) If opting for policy A generates a consequence C, where consequence C is the protection of an important fundamental right (the A-policy implements Nozick's Entitlement Theory of Distributive Justice, for example), and if opting for policy B generates consequence D, where consequence D is a wider patterned distribution of social goods (the B-policy implements Rawls's Theory of Justice, for example), then there is no reason to assume that a fully rational agent in the Original Position would choose for option A over option B if consequence D provides access to social goods that might otherwise be lacking for the agent.*

*(2) If opting for policy A generates a consequence C, where consequence C is the protection of an important fundamental right (the A-policy implements Nozick's Entitlement Theory of Distributive Justice, for example), and if opting for policy B generates consequence D, where consequence D is a wider patterned distribution of social goods (the B-policy implements Rawls's Theory of Justice, for example), then there is no reason to assume that a fully rational agent in the Original Position would choose for option B over option A if consequence C secures an important fundamental freedom that might otherwise be lacking for the agent.*

To me, at least, the first of these arguments already seems the stronger of the two. But Pettit's argument actually extends much further than this. In the examples I have presented, the Agency Freedom involved a choice between two theories of distributive justice only. The real strength of Pettit's argument involves assessing the range of tangible social options that would ensue under different conditions. How would the theory affect the Option Freedom of individuals? Rawls's wide distribution of social goods, resulting from the application of the 'maximin' difference principle, would provide a greater net sum of total options in society. In other words, the presence of social goods that are widely distributed would reduce the instances where '*... I can A or I can B but it is up to factors beyond my control whether or not A-ing amounts to C-ing, or B-ing to D-ing*'. I may use my Agency Freedom to protect an endangered species, for example, but if I lack the resources for exercising my freedom of choice, then I do not have Option Freedom to pursue my choice and my Agency Freedom is thereby effectively nullified.

A Libertarian, of course, might reject the view that Rawls's patterned distribution would increase social options. He or she may believe that such a distribution would lead to an inefficient society whereby the net sum of social goods, and levels of Option Freedom, would be reduced for all. The political argument now becomes an economic argument involving highly complex models of unreliable predictions. Some of the economic questions were alluded to in the previous chapter

on zoo funding where I discussed concerns about a ‘culture of dependence’. Whether one bases one’s views on a rational economic theory or on empirical fact, levels of certainty seem low. I think the political argument descends into economic theory at this point.

Pettit’s argument suggests that real options are more important to people than freedoms in principle. I think there would be much empirical evidence to support this view. As an example case I recount a problem that a labour politician faced when she had to make a choice between an important political principle, on the one hand, and a practical consequentialist outcome, on the other. Although the case may seem like a strange deviation from the theme of preserving biodiversity, after presenting the case, I comment on the virtue of the politician’s choice and illustrate the conceptual value of Rawls’s Veil of Ignorance within this example.

*‘Diane Abbott, a Labour Party MP with a constituency in East London, was vilified some years ago when she decided to send her son to a private fee-paying school instead of opting for a state-funded comprehensive. Although, on egalitarian grounds, she vehemently advocated the merits of the state school system in line with Labour Party policy, she did not choose a state school for the education of her own son. When asked to account for her decision, she explained that as a mother of a young Afro-Caribbean boy, she did not want to expose her son to the dangers of gang culture; a problem that she felt was prevalent in state schools within her constituency. Clearly, Abbott put her private interests for the welfare of her son above her political principles. She exposed herself to sustained attacks in the media, faced fierce allegations of hypocrisy, and cast doubts on the merits of the egalitarian principles that underpinned the Labour Party’s education policies. The case is a good example of someone who sacrificed an important general principle, a commitment to egalitarianism in this instance, for the particular good of someone for whom she deeply cared.’*

From the perspective of Virtue Ethics, one might claim that Abbott’s actions were consistent with a parent acting virtuously. Although her actions were unjustifiable in her role as a Labour Party MP, they were perfectly consistent with the actions of a good and caring mother. After all, what kind of a mother would sacrifice the welfare of her own child in order to remain professionally and politically consistent? Virtue Ethics is focused on the kind of person that one ought to be rather than the kinds of acts that one ought to perform. A Virtue Ethicist might claim that Abbott’s actions reveal a number of important virtues in her character. Her choice may have involved an element of courage, for example. She must have anticipated how the electorate, Parliament, and the media would attack her decision. Her choice might be considered as an act of generosity towards her son as it undoubtedly involved a sacrifice; the political damage endured for the sake of her child’s welfare. Her choice was an acknowledgment of the fact that care trumped principle within her deliberations.

In Abbott’s case, the practical dilemma that she faced involved irreconcilable commitments that stemmed from a duality of choices. Here one sees the important issue raised by Pettit concerning the limitations of Agency Freedom as a result of the consequences of available options. In Abbott’s case, these consequences were more urgent than her abstract ideological commitments to an important principle and this story lends support to Pettit’s consequentialist claim. One also notes a significant irony. Abbott was deeply committed to Egalitarianism yet her choice was a rejection of this principle. In my interpretation of Rawls, I recognize that someone can be committed to an abstract principle from behind the veil of ignorance yet behave contrary to these commitments once the veil has been removed. The veil is an instrument that secures impartiality when making policy decisions.

Abbott has been called a hypocrite. I do not agree. I think it is perfectly plausible to have an ideological commitment to what is in the best interest of all whilst behaving in a way that is contrary to this ideological commitment personally. One commitment stems from an impartial look at the world and from considerations of how finite public resources can be used to achieve optimal levels of social benefit, the other responds to one’s embedded position within the world and its many entanglements from close quarters<sup>24</sup>. In ‘Equality and Partiality’ (1991). Thomas

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<sup>24</sup> Kymlicka (2002) presents a communitarian critique of ‘the unencumbered self’; Rawls claims that ‘the self is prior to the ends which are affirmed by it’. This is often called the Kantian view of the self – Kant defended the view that ‘the self

Nagel writes, ‘...we are simultaneously partial to our selves, impartial among everyone, and respectful of everyone else’s partiality’ (1991, p. 38). Nagel continues, ‘When these factors conflict, as they inevitably will, there is for each person an accommodation of his partiality which is reasonable in light of the interests and partiality of others’.

Option freedom is a far more comprehensive form of freedom than agency freedom alone. It is superior not simply in virtue of a moral principle, but rather, it is superior pragmatically in its ability to include considerations of the real and tangible options that are available to individual citizens. This is important politically; it is a significant advantage that establishes the practical superiority of Rawls’s Theory of Justice over the relatively impoverished, and one-dimensional form of agency freedom that is inherent to Nozick’s Libertarianism<sup>25</sup>. In his book on Rawls, Paul Graham (2007, p. 66) quotes Jonathan Wolff as saying that Nozick is a ‘one-value’ political philosopher (Wolff, 1991, p. 3-4). Graham suggests that other philosophers, whilst accepting the importance of freedom, recognize the importance of equality also.

In answer to my main research question, ‘to what extent is there a moral duty to compensate zoos for the costs incurred in fulfilling their legal obligations under Article 12, sections 2a, 2b and 6, of the Dutch Zoo Licensing Act?’ Nozick’s Entitlement Theory of Distributive Justice would certainly endorse the view that there is a moral duty for compensation. Not because the State ought to bring about positive social conditions through the just redistribution of social goods, but rather, because the normative imperative for compensation stems from Nozick’s own historical and non-patterned view of just transactions. Nozick would reject the view that the State has the right to impose a positive obligation to perform works of charity. This, according to Nozick, would involve the imposition of a demand that extends well beyond the limited authority of the minimal State - that of protecting private property. From this one can conclude that a compensatory form of zoo funding does not require any commitment to egalitarianism or any endorsement of a Rawlsian ‘wide distribution of social goods’. Although a Rawlsian distribution of social goods may or may not be preferable to Nozick’s one-value politic of autonomy<sup>26</sup>, Nozick’s Libertarianism is all that is required to argue the case for the public funding of captive breeding programmes in zoos in the event that one remains unconvinced of the social merits of Rawls’s Theory of Justice.

## 4.5 Kantian Ethics

Immanuel Kant’s ‘moral law’ is a deontological theory based on the notion that human beings have *categorical duties* to act according to certain principles that Kant prescribes in his multiple formulations of the Categorical Imperative. These prescriptive principles can be described as *analytical* and *a priori* in the sense that they function somewhat like mathematical equations incorporating logic and the application of *pure reason*. When applied to practical moral problems, however, the application of these principles involve prehensions that stem from inductive forms of reasoning based on empirical and phenomenal experiences of the world. The synthesis of the former and the latter, of both *pure* and *practical* forms of reasoning, is an important element in Kant’s notion of the *synthetic a priori*<sup>27</sup>. Kant believed that an a priori principle is able to generate more than an analytical tautology alone.

The question that I shall briefly address in this short section is to what extent *the preservation of biodiversity* can be regarded as a perfect moral duty under Kant’s Categorical Imperative. This

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is prior to its socially given roles and relationships and is free only if it is capable of holding these features of its social situation at a distance and judging them according to the dictates of reason’ [Taylor 1979]. Communitarians believe that this is a false view. They see the self as being embedded or situated in existing social practices. MacIntyre puts it thus: ‘we all approach our circumstances as bearers of a particular social identity... hence what is good for me has to be good for one who inhabits these roles’ [Hegel’s *Sittlichkeit* - *situatedness*]. Self-determination occurs in this context and communitarians have three arguments against the liberal view of self-determination; [i] the liberal view of the self is empty, [ii] it violates our self-perceptions, and [iii] it ignores our embeddedness in communal practices.

<sup>25</sup> As a rational argument – the empirical question of whether or not Libertarianism produces a higher level of distributed social goods can, in my view, not be answered definitively

<sup>26</sup> Pettit’s presentation in favour of Option Freedom seems to favour Rawls a priori. The question of whether or not such a conclusion would be verified through empirical studies, however, would be far more difficult to establish.

<sup>27</sup> Critique of Pure Reason



question involves the application of Kant's a priori principles, on the one hand, and prehensions of the practical causal consequences of human actions, on the other.

Article 12, section 2b, of the Zoo Licensing Act states that: '[zoos must participate] as much as possible in existing captive breeding programmes, in the recovery of populations or the reintroduction of species to their natural habitats'. Of these obligations, I will use the lesser obligation; the obligation to participate in *Captive Breeding* programmes (CB obligation), and I will assume that any conclusions stemming from Kant's formulations of the Categorical Imperative can be applied equally to the larger obligation of *Repopulating Threatened Species* in the wild.

In trying to establish a moral basis for the CB obligation, one encounters two immediate and significant problems. Firstly, the CB obligation is a legal obligation as opposed to *the moral duty of a natural person*. Secondly, the legal obligation is imposed on *institutions* and not on natural persons. To solve the first of these problems, one might ask if the CB obligation is a duty that applies to natural persons also, independent of the contingencies of legal obligation. If the answer to this question is affirmative, then positive law can be said to converge with the outcome of Kant's moral law. Institutions might then be seen as instruments by which natural persons can pursue an end to which natural persons are duty-bound.

A similar strategy can be deployed to solve the second problem also. Although, for practical reasons, it would be quite ridiculous to impose the CB obligation on natural persons<sup>28</sup>, it is nevertheless reasonable to ask if natural persons have a perfect moral duty to preserve biodiversity for the good of present and future generations. This reformulation of the question asks if the '*practical end pursued by zoos*' under the CB obligation, namely, the preservation of biodiversity, is also required under Kant's conception of '*humanity as an end in itself*'. This question invokes a discussion of Kant's '*Kingdom of Ends*'.

Timmons (2002) presents Kant's 'Universal Law' formulation (UL) of the Categorical Imperative as follows: '*act only in accordance with the maxim through which you can at the same time will that it become a universal law*' (Timmons, 2002, p. 164). If one applies the UL formulation to the problem at hand, then one might formulate a maxim in the following terms: '*natural persons ought to act so as to preserve biodiversity for the good of present and future generations*'. By the UL formulation one ought then to 'will such a maxim' only in the event that one would also will the maxim to become a universal law.

To assess the universalizability of the maxim one might first separate (1) questions concerning the universalizability of the *end* served by the maxim from (2) questions concerning the kinds of *action-duties* invoked by the maxim. When considering the former, one concludes that the end served by the maxim is certainly something that a rational person would will to become a universal law, after all, biodiversity is an important good that contributes to the wellbeing, happiness and flourishing of human beings. A world in which biodiversity is depleted is a world that is significantly less preferable for human beings to inhabit. The first part of the universalizability test would likely lead to the conclusion that the preservation of biodiversity is indeed something that a natural person would will to become a universal law.

The second question concerning the kinds of actions and duties invoked by an acceptance that the end of the maxim is universalizable according to Kant's Categorical Imperative, is much more problematic to answer. Do natural persons have a perfect or an imperfect duty to abstain from actions that deplete biodiversity? Do natural persons have a perfect or an imperfect duty to perform reparative actions aimed at restoring biodiversity? The problem is compounded by the indirect nature of the consequences of human actions that are the cause of biodiversity depletion. The depletion of biodiversity is rarely a direct consequence of actions, but rather, the outcome of highly complex chains of causal relationships and their aggregations.

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<sup>28</sup> A natural person might be able to breed poison arrow frogs from his or her home, for example, but Indian rhinos would present some practical difficulties.

It seems implausible to regard *abstention from any actions that deplete biodiversity* as a perfect moral duty. One ought not to be held morally responsible for the contingent, complex and unpredictable causal chains that follow from one's actions<sup>29</sup>. For this reason, abstention can be an imperfect duty at best involving acts of supererogation amongst abstainers. A duty to *perform restorative acts*, by contrast, may be easier to categorize as a perfect duty. Although the causal paths of specific individual actions may be an unknown contingency, the bare knowledge of the causes of biodiversity depletion might itself invoke a perfect duty to act restoratively. After all, most natural persons apprehend that their combined actions lead to the loss of biodiversity. As each natural person is a unit in Kant's *Kingdom of Ends* each has an equal responsibility to the end that is the self and to the Kingdom of Ends that is humanity.

Kant's notion of a Kingdom of Ends is analogous to Rawls's conception of the original position; it is Kant's version of a social contract theory. In his *Groundwork on the Metaphysics of Morals* (1785), Kant presents a formula of the Kingdom of Ends by prescribing: '*So act as if you were through your maxims a law-making member of a kingdom of ends*'. Paton (1991) explains that: '*So far that rational agents are all subject to universal laws which they themselves make, they constitute a kingdom – that is, a State or commonwealth. So far as these laws bid them to treat each other as ends in themselves, the kingdom so constituted is a kingdom of ends*' (Paton, p31).

A law-making member of the Kingdom of Ends might determine that each member has a duty to preserve biodiversity for the end of herself, and for the ends of other members of the Kingdom of Ends. This would serve the ends, within a Kingdom of Ends, of all present and future members of the Kingdom. In the same way that the loss of biodiversity is the consequence of indirect causal relationships, a law-making member of the Kingdom might plausibly conclude that an indirect form of action constitutes a practical means of fulfilling a perfect duty in this context. Given the impracticalities of a direct form of agency, a law-making person may consider herself duty-bound to act indirectly by making an active contribution<sup>30</sup> to secure the end. To deny this perfect duty to contribute towards the end would be to accept the condition that '*if the consequences of one's actions are experienced only indirectly, then this is a sufficient basis for denying the presence of a perfect moral duty*'<sup>31</sup>. Whether any such contributions are subsequently deployed for preventative or restorative actions is a practical matter of method; the method does not limit the categorical duty of acting towards the end.

A perfect duty to perform restorative acts is a greater obligation when compared to the requirements of the CB obligation. Restorative acts would involve both the captive breeding and the subsequent release of endangered species back into the wild. Where the CB obligation merely involves maintaining sustainable captive populations as insurance against total extinction, a duty to perform restorative acts goes well beyond this requirement. If one accepts that the performance of a restorative act is a perfect moral duty, then the CB obligation involves acts that are certainly less demanding when compared to the repopulation of depleted populations of species in the wild.

Korsgaard (2009) sees agency as the very act of self-constitution; by acting we define the identity of the self<sup>32</sup>. Korsgaard believes that '*the principles of practical reason, if they are to be normative, must be principles of the logic of practical deliberation*' (2009, p. 67). It is practical deliberation that makes actions autonomous. She rejects Hume's claim that '*reason is slave to the passions*'

<sup>29</sup> Normal life, as we know it, would not be possible if one accepted the abstention from depleting biodiversity as a perfect duty. Many human actions involve the use of natural goods that have an unfortunate negative impact on the health of environments and the ability of ecosystems to support a wide diversity of species.

<sup>30</sup> Here I mean a contribution in the form of a tax payment whereby a natural person's perfect duty to act is effectuated by an institution deemed, for practical reasons, more capable of acting on the duty; a direct form of agency is replaced, in this case, by an indirect form of agency that provides the means for the '*act-of-one's-duty*' to be executed by an institution.

<sup>31</sup> Acceptance of this limiting condition would lead to soritical problems when distinguishing between direct and indirect consequences.

<sup>32</sup> An interesting connection here to Virtue Ethics - in the example case of Dianne Abbot, how can the virtue of her action be reconciled with the deontological view that actions have the property of being right actions or wrong actions morally? In Abbot's case, either action would have left a residual obligation. Might the PDE (principle of double effect) in Natural Law Theory be of use in such circumstances?

because this type of reasoning lacks normativity. Hume believed that empirical inductive knowledge of the causal consequences of actions leads to predictions that steer behaviour; reason is merely applied to avoid undesirable causal outcomes and the desirability of the outcome stems from one's 'passions' as opposed to one's ability to reason.

Korsgaard claims that *'what you are determining yourself to 'be when you act' is the cause of some end'*. Agency, for Korsgaard, is not merely the performance of an action, but rather, the combination of reasoning, causality and active willing that forms a unified agent. Korsgaard quotes Kant as saying *'a free will and a will under moral laws are one and the same'* (2009, p. 79). She then states that *'Kant concluded that [a free will cannot be governed by a law that is imposed upon it from outside] and must be its own law, the categorical imperative, the law of imposing laws on itself'*. Free will then, in this particular sense, is a form of positive freedom as opposed to a negative form of freedom derived from a mere absence of external restriction<sup>33</sup>.

If one accepts the arguments above, then one observes that the CB obligation and the duty to preserve biodiversity converge. Where the CB obligation stems from positive law, the latter duty is invoked by Kant's conception of the moral law; a law imposed on the self by an autonomous and positively free natural person. One might also consider that some types of institutions are owned by natural persons, and that the laws that govern institutions thereby also govern the actions of natural persons that own institutions. A natural person who happens to own a zoo is both legally and morally compelled to preserve biodiversity whereas natural persons who do not own a zoo are only morally compelled to do so.

One must ask, then, if the end served by the CB obligation is the end chosen by the rational choice of a 'positively free' human agent whose agency is unified through reason and causality. The question is not whether the obligation would fit with the personal ends of an individual, the Humean view, but rather, would the fulfilment of the obligation be good as a means of *'determining what he or she 'is' when acting as the cause of this end'*. An interesting point to note is that the imposition of an external law, irrespective of whether or not a person ought to follow the law on Kantian grounds, seems to contradict the view that the categorical imperative is *'the law of imposing laws upon itself'*. This reminds us of the principle of autonomy endorsed by Nozick, on the one hand, and Rawls's notion of a perfectly rational agent applying the powers of practical reasoning from behind the veil of ignorance, on the other.

Timmons (2002) presents Kant's 'Humanity as an end in itself' formulation (HEI) of the Categorical Imperative as follows: *'act so that you use humanity, whether in your own person or in the person of any other, always at the same time as an end, never merely as a means'* (Timmons, 2002, p.157). Accepting that the end of the CB obligation is a moral duty, one of many practical methods to act on the perfect duty to preserve biodiversity, the HEI formulation of the Categorical Imperative leads to an anomaly. Does the CB obligation treat zoo operators as a mere means to an end rather than as ends in themselves?

For Kant, 'willing the end' implies 'willing the means to an end' also - to quote from Korsgaard *'... if you will an end, you must will the means to that end'* (2007, p. 68). Yet if one looks at the CB obligation, one sees that although the 'end' is defined as a mandatory legal requirement, the 'means to achieve the end' is left to zoo operators. This might be seen as a violation of Kant's HEI formulation *'act so that you use humanity, whether in your own person or in the person of any other, always at the same time as an end, never merely as a means'*. If the government endorses an end through an act of positive law, then so too should the government endorse the means by which that end is to be achieved. Although all natural persons have a perfect moral duty to preserve biodiversity within Kant's Kingdom of Ends, only natural persons who either happen to own a zoo, or are responsible for operating a zoo, have a legal obligation to do so. The collective perfect moral duty of preserving biodiversity for present and future generations is not shared as a universal duty to act; the burden is placed on zoo operators only.

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<sup>33</sup> Pettit presents a third kind of freedom which he describes as follows: *'The negative conception of freedom as non-interference and the positive conception of freedom as self-mastery are not the only available ideals of liberty; a third alternative is the conception of freedom as non-domination which requires that no one is able to interfere on an arbitrary basis - at their pleasure - in the choices of a free person'* (1997, p. 271).

## 4.6 Convergence

In his chapter on social decision-making procedures, Barry (1965, p. 84-93) presents seven processes by which decisions can be arrived at when political opinion is divided. His second and third methods, 'bargaining' and 'discussion on merit', are the processes that best apply within the context of this study<sup>34</sup>. On the method of 'discussion on merit', Barry writes '*... as an ideal type this involves the complete absence of threats and inducements; the parties to the dispute set out from (initially) incompatible positions ... to reach an agreement on what is the morally right division, what policy is the interests of all of them or will promote the most want-satisfaction, and so on*' (1965, p.87).

The moral and practical merits of a policy for zoo funding have already been discussed in the preceding sections at some length. I argued that Wong's universal value of reciprocity invokes a moral duty for proving public support to zoos in a reciprocal exchange for the important public works that zoos perform. I considered Kant's view that 'ought' implies 'can', and I suggested that the political theories of Nozick and Rawls converge on the question of whether or not the State has a duty to provide compensation for the production of Public Beneficence Goods. Both theories involved a normative imperative founded on a very different conception of a just social distribution, and though fundamentally opposed to one another, both led to an endorsement of a policy for public funding, though for different reasons.

Whereas Nozick's ethic can be regarded as a form of normative rigorism, Wong's plural relativism, the pluralism of legal positivism, and Pettit's consequentialist Option Freedom might be considered as forms of ethical holism. In Abbott's case, the consequences of her options invoked broad considerations of the principles of consequentialism and virtue ethics. Nozick's Entitlement Theory, by contrast, involved a narrower band of normative considerations. In the same way that opposing political theories converged on a common outcome in the preceding sections, in this section, I try to establish that a bargaining process would likely lead to a similar convergence on a funding policy amongst both pro-zoo and anti-zoo campaigners.

In 'Political Argument', Brian Barry states that bargaining '*... cover[s] any situation where one party offers another either some advantage or the removal of the threat of some disadvantage in return for the other party's performing some specific action*' (Barry, 1965, p.86). Despite the fact that pro zoo and anti-zoo campaigners are radically opposed to one another, their common interests converge on the issue of animal welfare. Anti-zoo campaigners would like to see the end of the zoo as they feel that wild animals ought not to be kept in captivity. Poor animal welfare standards in zoos, say the anti-zoo campaigners, causes suffering to sentient beings that ought to be free.

Despite their antipathy against zoos, for anti-zoo campaigners, a funding policy would represent '*the removal of the threat of some disadvantage*' as described by Barry. This 'removal of a threat' does not involve the abolition of the zoo as a social institution, but rather, it involves the alleviation of the threat that a lack of zoo funding might have an adverse impact on standards of animal welfare.

In 1984, Bill Travers and Virginia McKenna launched *Zoo Check*, a charity that was established to monitor the welfare of captive zoo animals. From its humble beginnings in the 80s, the charity has since grown to become a global organisation called the *Born Free Foundation*. Their mission statement reads as follows:

*'The Born Free Foundation is a dynamic international wildlife charity, devoted to compassionate conservation and animal welfare. Born Free takes action worldwide to protect threatened species and stop individual animal suffering. Born Free believes wildlife belongs in the wild and works to phase out zoos. We rescue animals from lives of misery in tiny cages and give them lifetime care.'*

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<sup>34</sup> The other five methods are combat, voting, chance, contest and authoritative determination.

*Born Free protects lions, elephants, tigers, gorillas, wolves, polar bears, dolphins, marine turtles and many more species in their natural habitat, working with local communities to help people and wildlife live together without conflict. Our high-profile campaigns change public attitudes, persuade decision-makers and get results. Every year, Born Free helps hundreds of thousands of animals worldwide.<sup>35</sup>*

In 2006, the Born Free Foundation set up a pan-European coalition of animal welfare NGOs under the umbrella organisation ENDCAP<sup>36</sup>. Members of ENDCAP aim to abolish the institution of the zoo by advocating a strict policy of non-breeding and the non-replacement of zoo animals. ENDCAP is opposed to maintaining populations of wild animals in captivity endorsing instead a policy of protecting natural habitats. Selected extracts from ENDCAP's *Statement of Purpose* read as follows:

*'ENDCAP is an international network of European organizations dedicated to the protection and conservation of wildlife in the wild. ENDCAP is opposed to the unnecessary exploitation of wild animals in captivity ... [and] ... seeks to expose neglect, suffering and cruelty endured by wild animals in zoological collections ... to alleviate animal suffering. Focusing on the implementation and enforcement of Directive 1999/22/EC, the network influences and encourages a change in priorities away from captivity, through a non-breeding and non-replacement policy, towards the protection of wild animals in their natural habitat. ENDCAP collects information and data using science-based investigations and analysis, to provide relevant competent authorities in European Member States and the European Institutions with accurate information in order to influence and encourage higher animal welfare standards. ENDCAP supplies information and technical advice to competent authorities in order to increase their ability to effectively enforce national and international legislation and thus provide greater protection for wild animals in captivity.'*

In 2011, the Born Free Foundation and the coalition of ENDCAP launched the EU Zoo Inquiry involving 21 European member states and 200 European zoos<sup>37</sup>. This ongoing project is managed and coordinated by Daniel Turner of the Born Free Foundation. On 22<sup>nd</sup> November, ENDCAP presented the results<sup>38</sup> of the 2011 EU Zoo Inquiry to, amongst others, members of the European Commission who are responsible for implementing EU Directive 1999/22/EC. Will Travers, CEO of the Born Free Foundation, explains; *'the work has only just begun. This immense study has highlighted widespread and systemic failures in the application of the EU Directive across the EU. It's time now for action to raise standards, reduce suffering, improve training, enforce legislation and eliminate cruelty.'*<sup>39</sup> See Appendix XII for a comprehensive overview of the results of the inquiry. Appendix XII presents data from the 14 published national reports in a highly consolidated format showing national averages for: levels of commitment to conservation (fig. 1); the composition of collections according to IUCN red-list ratings (fig. 2), evaluations of animal enclosures (fig. 3); standards of education (fig. 4); animal welfare standards (fig. 5); and membership of EAZA (fig. 6).

<sup>35</sup> <http://www.bornfree.org.uk/about-us/mission-statement/>

<sup>36</sup> <http://www.endcaptivity.org/>

<sup>37</sup> *'The EU Zoo Inquiry 2011 is an independent study evaluating the implementation and enforcement of the EC Directive 1999/22, relating to the keeping of wild animals in zoos, which was fully implemented in EU Member States (25) in 2005 (and 2007 in Bulgaria and Romania). The Directive requires all zoos (as defined) to be licensed and controlled through regular inspection, to ensure they are engaged in activities to conserve biodiversity, educate the public and maintain high standards in animal welfare. The investigation, which has included a review of national law, law enforcement and compliance in a selected number of zoos in 21 EU Member States, has identified inconsistencies in application and substandard conditions in zoos, which is primarily due to a lack of knowledge and training of enforcement personnel and zoo operators to ensure an understanding of the legal requirements of the Directive. As a result of this work, the European Commission has agreed to provide additional training to veterinarians in fundamental and applied animal welfare science, as well as to meet Born Free's main request to develop a 'best practice' zoo guide to assist Member States and zoo operators to meet the legal requirements. Born Free continues to produce country reports, as a result of the investigations, which will be available online once published. Slovenia.*

<sup>38</sup> The findings so far are composed of 19 country reports, 14 of which are published reports and 5 of which are summary findings of a further 5 EU member states. The countries covered in the 14 published reports are as follows: (1) Austria, (2) Belgium, (3) Bulgaria, (4) Cyprus, (5) Estonia, (6) France, (7) Greece, (8) Ireland, (9) Latvia, (10) Lithuania, (11) Poland, (12) Portugal, (13) Romania and (14) Slovenia.

<sup>39</sup> <http://www.bornfree.org.uk/news/news-article/>

ENDCAP's statement of purpose explains that the organization '*seeks to expose neglect, suffering and cruelty endured by wild animals in zoological collections*'. Will Travers's statement that '*It's time now for action to raise standards, reduce suffering, improve training, enforce legislation and eliminate cruelty*' also shows that the primary concern of such pressure groups is to improve standards of animal welfare. In zoos, standards of animal welfare are highly regulated<sup>40</sup> and progressive zoos are dedicated to maintaining and improving standards where possible. In addition to the primary processes of feeding animals, providing medical treatment, and keeping animal enclosures clean, modern zoos are actively engaged in animal enrichment programmes. Of course, in addition to the expenses involved in the provision of primary care, the level of enrichment provided depends on the presence of sufficient levels of financial resourcing.

Under certain conditions, Barry's second method of political decision-making (negotiation) is likely to lead to convergence on a policy in favour of funding. If zoos continue to exist and continue to be recognized as legitimate social institutions, as they currently are under European Commission Directive 1999/22/EC<sup>41</sup>, then the condition for convergence will have been satisfied. In other words, if, contrary to the wishes of ENDCAP, zoos are allowed to remain in place, then it is in the direct interest of animal welfare activists that zoos receive a sufficient level of financial resources; this will have a positive impact on the zoo's ability to maintain high standards of animal welfare. An additional source of funding for zoos represents what Barry describes as '*the removal of the threat of some disadvantage*' for animal welfare activists. If one accepts this argument, then at least two of the decision-making methods described by Barry would lead to consensus concerning a policy of public funding.

Against this argument on the convergence of objectives, Karen Allen (1995) presents an interesting story recounted by Ingrid Newkirk, Director of PETA. Her story suggests that converging interests may not suffice. Newkirk '*asked a vegetarian community to petition the government to maintain its requirement that cows and steers be given water during their long wait to be butchered at the slaughterhouse, a practice the cattle lobby apparently opposed. Members of the vegetarian community sent their regrets to Newkirk with a note that read: "We are ethically opposed to the slaughter of animals for food, therefore we cannot get involved"*' (Allen, 1995).<sup>42</sup>

Although the purpose of public funding would be to compensate zoos for the costs incurred in the production of Public Beneficence Goods, at the moment the costs of producing Mandatory Public Beneficence Goods are uncompensated and must be paid for from the total operating budget of the zoo. If the costs of these Mandatory Public Beneficence Goods were reimbursed, then finite zoo budgets would be freed for other important tasks, including the continued improvement of animal welfare standards.

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<sup>40</sup> See section 2.2.2 Zoos and Licensing

<sup>41</sup> The directive attributes an important social role to zoos as institutions for the preservation of biodiversity.

<sup>42</sup> For a full discussion on public relations and spin see: Allen, K., 'Putting the Spin on Animal Ethics; Ethical Parameters for Marketing and Public Relations', in Eds. Hutchins, M., Norton, B., Stevens, E. and Maple, T., *Ethics on the Ark*, (1995). Smithsonian Institution, pp. 289-296.

# **CHAPTER FIVE**

## **CONCLUSIONS AND RECOMMENDATIONS**



## 5.0 Introduction

In this chapter I present my conclusions to the four sub questions that were addressed in chapter four. I also provide an answer to the main research question that was presented in chapter one (p. 5). In section 5.2 I present some practical recommendations on: (1) Municipal Funding, (2) Financial Guidelines, (3) Education Requirements, (4) Scientific Research, and (5) Conservation Incentives. I conclude this thesis with a final question in section 5.3.

## 5.1 Conclusions

The conclusions below stem from an analysis of theories presented in chapter four applied to the issues and problems described in chapters one, two and three. The conclusions to sub-questions SQ-09 to SQ-12, and my primary research question (PRQ), are as follows:

### SQ-09

*'What can be inferred from a legal moralist and a legal positivist interpretation of European Council Directive 1999/22/EC and the Dutch Zoo Licensing Act?'*

When interpreted from a legal moralist perspective, the Zoo Licensing Act imposes a collectivistic and majoritarian conception of public values on the institution of the zoo. When interpreted from a legal positivist perspective, the Zoo Licensing Act imposes value neutral obligations governing the operations of the zoo. Although one is free to interpret the law in both ways depending on one's inclination, are there any visible signs that may indicate which of the two interpretations presents the most convincing account of how the law might have come into being? From the discussion in chapter two, one observes that the Zoo Licensing Act was a response to European Commission Directive 1999/22/EC. The question of interpretation therefore applies to the European directive also.

A sign that a legal positivistic interpretation is more fitting than an interpretation based on legal moralism would be that the requirements of law remain value neutral. Evidence in support of the contrary view would involve signs that the law is a response to shifts in popular public attitudes. In addition to its traditional role as a source of public entertainment, the Zoo Licensing Act has imposed a range of additional functions on the institution; these are the roles of education, scientific research and conservation.

Value neutral additions of social functions would be supported by prudential reasons and would be restricted by conceptions of private rights. For example, although it may be prudential to impose an obligation on a private institution to further a particular public good, the imposition of the obligation would have to remain consistent with the private rights of institutions. Legal moralistic additions of social functions, by contrast, would stem from intuitions that the moral basis for the institution is deficient. The addition of a 'morally sound' set of social functions is then required to provide sufficient reason to endorse the continued existence of the institution.

From these distinctions one can discern a number of signs from which a conclusion to the question might be deduced, though tentatively. From the analysis of private goods in chapter four, one can conclude that the Zoo Licensing Act imposes a duty to perform charitable acts - the production of Mandatory Public Beneficence Goods. This is not consistent with a legal positivistic interpretation where one expects the private rights of institutions to be respected. One might also ask to what extent the zoo is equipped for the purpose of education and scientific research. Although there is undoubtedly a prudential value to these important social functions, one could question the prudence of imposing these obligations on an institution whose operations are only marginally geared towards such activities.



If a commitment to one of either camps is owed, then the signs seem to favour a legal moralistic interpretation of the law. Having said this, however, one ought also to bear in mind the author's defence of this thesis against the charge of legal moralism on page 42. It is possible that moral reasons were merely used as persuasive arguments to form policy.

### **SQ-10**

*'What is the distinction between public goods and private goods and to what extent is a definition based solely on a Lockean property right adequate within the context of legal obligation?'*

When asked if zoos ought to receive a form of compensation in return for the 'public goods' that they provide by participating in EEPs and ESBs, A. Vergossen-Otten (2011) suggested that participating in EEPs is in the private interests of zoos because zoos need to maintain a supply of captive-bred animals to stock their collections. This view presents an alternative purpose to participating in EEPs and ESBs that is contrary to the *important role of zoos* as acknowledged in directive 1999/EC/22 (the preservation of biodiversity). Although there are public benefits for participating in breeding programs, viewed in this way, the motivation is primarily private as opposed to public. Research for Beleid also concluded that the Zoo Licensing Act was unclear if the captive breeding requirement was aimed at the reintroduction of species into the wild or merely the management of sustainable populations within zoos.

From a prudential benefit point of view, the motives behind conservation are not relevant. It is in the practical interest of all that endangered species are bred in captivity as an insurance policy against complete extinction. From a moral point of view, the motives for conservation may influence the type of goods produced. Acceptance of the view that captive breeding is conducted for the private interests of zoos would imply that captive bred animals are a Private Beneficence Good. The alternative view, that captive breeding is motivated by an ideological commitment to species conservation, would imply the production of Altruistic Public Beneficence Goods.

From the perspective of legal positivism, it is a social fact that the important function of zoos is to preserve biodiversity<sup>1</sup>. With the addition of legal compulsion, the question of whether or not captive breeding in zoos produces Private Beneficence Goods or Altruistic Public Beneficence Goods becomes a redundant question. If they are Altruistic Public Beneficence Goods, then the addition of legal compulsion transforms them into Mandatory Public Beneficence Goods. If they are Private Beneficence Goods, then the law equally transforms them into Mandatory Public Beneficence Goods. Whereas legal compulsion is a bivalent property of goods, beneficence is a gradable property ranging from a fully public benefit to a fully private benefit. In the same way that altruistic motives become hidden by legal compulsion, potentially private motives become hidden in the same way. Legal obligation involves a duty to act as opposed to any motivational requirement<sup>2</sup>. A motivational requirement would be both impossible to impose or to measure externally.

In answer to SQ-10, and from my conceptual analysis of private goods, I conclude that a public-private distinction based solely on a Lockean-property right stemming from an input of labour is an insufficient conceptual basis for dealing with the normative complexities that arise as a result of 'non-localized' beneficence, on the one hand, and legal compulsion, on the other.

<sup>1</sup> And it is unknown if the preservation of biodiversity serves the interests of species or only mankind.

<sup>2</sup> Korsgaard's ideas on self-constitution are interesting here. For Korsgaard, unified agency involves a rational form of active willing whereby the agent becomes the cause of actions. Here, by contrast, it is positive law that is the cause of actions; the active willing of what is caused by the law is a mere contingency.

**SQ-11**

*'Which political theory presents the strongest case against a policy of public funding and how well does this theory fare against the moral counter-arguments in favour of public funding?'*

From the discussion of Nozick, Rawls and Pettit one cannot conclude that Nozick's Libertarianism represents the strongest political theory against a form of public funding. Many political theories were excluded from the discussion. Neither can one deduce that a Nozickean Libertarian must endorse a *stimulatory form* of public funding to promote the public good of species preservation. A Nozickean would most likely support the view that private individuals ought to be free to contribute voluntarily as and when they see fit; for the staunch Libertarian, it is not the role of the state to divert funds to public causes with the exception of funds required to protect the institution of private property. What one can infer from the discussion, however, is that a Nozickean Libertarian must necessarily endorse a *compensatory form* of public funding to cover the costs incurred through the production of a Mandatory Public Beneficence Good. A Nozickean would be strongly opposed to the State's imposition of obligations requiring citizens to perform unpaid charitable works. If the legal requirement is not removed, then by Nozick's principle of *Justice in the Transfer of Holdings*, compensation is rightly due.

Although Libertarians would endorse only a compensatory form of public funding, Rawls's theory of justice would go a step further to endorse a stimulatory form of public funding required to effect the patterned distribution of social goods in favour of future generations. By his *maximin* principle of distribution, future generations will be disadvantaged by the depletion of biodiversity caused by the actions of present and past generations.

Judged from the criteria of autonomy, Nozick fares considerably better than Rawls. Where Nozick requires an explicit form of consent, Rawls requires a hypothetical form of consent only; a form of implicit consent based on what a fully rational agent would likely consent to in the Original Position. To what extent can such a form of consent be regarded as real and significant? Social Contract Theories lead to a 'paradox of consent'; although law requires explicit autonomous consent to validate and enforce voluntary contracts between contracting parties, the authority of the government rests on an implicit form of consent only. The public authority of the State to impose law is therefore derived from a significantly weaker form of consent than the standard required by the State's laws to enforce private contracts.

When judged from the standard of impartiality, Rawls's theory of justice fares better than Nozick's. Where Nozick's theory is impartial only to the extent that each individual has an equal right to determine what to do with his or her legitimately acquired resources (the principle of *Justice in the Acquisition of Holdings* does not discriminate), Rawls's Theory of Justice is impartial with regard to the social conditions that are likely to influence the partiality of citizens concerning the just distribution of goods. As the distribution of natural and social goods is largely governed by the accident of birth, and given that Nozick's principle of *Justice in the Acquisition of Holdings* invokes complex problems of tracking the historical sequence of Just Acquisitions, one might conclude that Rawls's form of impartiality is greatly superior.

If one considers the ability of the theories to respect value pluralism, as is consistent with a legal positivist interpretation of the function of law, then one might observe that whereas the theories of Rawls and Pettit allow for a great extent of Normative Holism, Nozick's theory is an example of Normative Rigorism. The single value of autonomy, Choice Freedom to use Pettit's terminology, overrides considerations of other important values. Given the social benefit-potential of these overridden values, and given the incommensurability of values in general, one might question the prudence of such a strongly rigorist position.

If one were to take Egalitarianism as a guiding measure, then Rawls's Theory of Justice outshines Nozick's Libertarianism. Whereas a patterned egalitarian distribution of social goods is simply unjust according to Nozick, Rawls sees the State as being responsible for maintaining a '*... well-ordered society ... [that is] ... designed to advance the good of its members and ... [is] ... effectively*

*regulated by a public conception of justice'* (Rawls, 1971, p. 397). This public conception of justice is determined by the difference principle, whose aim is to reduce differences in the distribution of social and natural goods, and the liberty principle, which aims at maximizing the amount of personal liberty that is compatible with an equal amount of liberty for all.

Taking Pettit's consequentialist norm of Option Freedom as a guiding principle, one might tentatively conclude that Rawls's Theory of Justice is likely to generate a greater amount of Option Freedom when compared to Nozick's Libertarianism. Such a conclusion, however, invokes (i) empirical problems of measuring the economic efficiency of economic theories, and (ii) conceptual problems in defining what constitutes 'a greater level of Option Freedom'. Does one measure the number of options, the quality of options or the wide social distribution of options? Does the Option Freedom to choose for a primary social good, one that is important for survival, count more heavily than an Option Freedom to choose for a non-essential social commodity? These are complex questions.

In answer to sub-question 11, I conclude that although Nozick fares considerably better on the single value of autonomy, Rawls scores far better on the values of impartiality, egalitarianism and value pluralism. On the pragmatic value of Option Freedom, Rawls might be considered to provide a wider range of practical Option Freedoms when compared to Nozick. This conclusion, however, would depend on how one quantifies options and how one assigns a relative weighting to different kinds of social options. Although Nozick's Libertarianism presents a case against a stimulatory form of public funding for the preservation of biodiversity, the theory also demands a compensatory form of public funding for the delivery of Mandatory Public Beneficence Goods. On the issue of a *compensatory form* of public funding, both Nozick and Rawls converge on a single conclusion endorsing a compensatory form of public funding.

#### **SQ-12**

*'To what extent is there likely to be convergence in favour of a policy for a structured form of public funding amongst pro-zoo and anti-zoo campaigners?'*

From the discussion on Barry's political decision-making processes, one can draw the following conclusions on the likely success of a negotiated solution. The interests of pro-zoo and anti-zoo campaigners converge on the issue of animal welfare. Where anti-zoo campaigners would like to see the end of the zoo as a social institution because they feel that zoos violate animal welfare interests, zoo operators themselves are both intrinsically motivated to maintain high standards of animal welfare and are compelled to do so by law. From this one can conclude that both parties have a strong interest in maintaining and improving standards of animal welfare. For anti-zoo campaigners, a policy of public funding would constitute *'the removal of the threat of some disadvantage'* as described by Barry.

Ingrid Newkirk's story, recounted by Allen (1995), suggests that the convergence of practical interests may not be a sufficient basis to reach a consensus on policy. Although there is a prudential value for anti-zoo campaigners to support the public funding of zoos as a potential method of maintaining standards of animal welfare, the principles at stake in competing views might override the practical benefits of cooperation on this issue. Given the neutrality of the State, and the duty of the State's legislature to maintain a commitment to value pluralism, pragmatic considerations of animal welfare issues need not involve any partisan judgements in favour of the principles endorsed by either party.

In answer to sub-question 12, I conclude that although pro-zoo and anti-zoo campaigners will remain fundamentally opposed on matters of principle, there is a practical convergence of interests that would endorse a policy of public funding allowing the government to retain a value-neutral position.

**PRQ**

*'To what extent is there a moral duty to compensate zoos for the costs incurred in fulfilling their legal obligations under Article 12 of the Dutch Zoo Licensing Act?'*

There are many reasons supporting the claim that there is a moral duty to compensate zoos for the public works that they conduct under the requirements of Article 12 of the Zoo Licensing Act. From the analysis of theories in chapter four, I answer the primary research question by providing a compact summary of reasons and theories endorsing a policy for a compensatory form of public funding. From my conceptual analysis of private goods, one can conclude that Article 12 of the Zoo Licensing Act imposes a legal obligation to produce Mandatory Public Beneficence Goods. These goods could be driven by altruism or by legal compulsion. The production of Altruistic Public Beneficence Goods is hidden as a result of legal compulsion.

David Wong's Plural Relativism, specifically Wong's observation on the universality of the principle of reciprocity, suggests that by this principle, the public sector ought to reciprocate for the production of Public Beneficence Goods. Wong establishes the practical social benefit of reciprocation as being a necessary prerequisite for social cooperation. The argument is similar in structure to the argument presented by Lock for the protection of private property; in the absence of an expectation for reciprocation, cooperative behaviour becomes unlikely.

Nozick's principle of *'Justice in the Transfer of Holdings'* would endorse a compensatory form of public funding. The State, according to Nozick, has no right to compel private institutions to perform works of public charity and so compensation is due. Rawls's egalitarian *'Theory of Justice'* would not only endorse a compensatory form of public funding, it would actively endorse a stimulatory form of public funding so that future generations are not disadvantaged by the actions of present and past generations. Rawls's *'maximin'* principle of distributive justice would therefore support the present burden of tax funds that are required to equalize the distribution of natural goods. Pettit's consequentialist view on the relative merits of *'Option Freedom'* over *'Choice Freedom'* would likely favour the public funding of ex-situ conservation. In the absence of such funding, the practical Option Freedoms of present and future generations to see endangered species will diminish.

Kant's *'Universal Law'* formulation (UL) of the *'Categorical Imperative'* would favour the public funding of Public Beneficence Goods; the maxim by which one conserves species applies to all members of society universally. Given the impracticalities of conserving species directly, the indirect method of agency through tax contribution is a practical means of compliance to the moral duty of the maxim. Kant's *'Humanity as an End in Itself'* formulation (HEI) would likely reject the use of a private institution as a mere *'means'* of achieving a public *'end'*. Korsgaard's *'Unified Agent Theory'* places an important emphasis on the idea of *'actively willing oneself to be the cause of an end'*. Korsgaard notes Kant's belief that *'willing an end implies willing the means to an end'*. From this one concludes that if the government wills the preservation of biodiversity as an end, then the government has a moral duty to will the means to this end also. The means to the end, in this case, involves a moral duty to allocate the necessary public resources.

In answer to my primary research question, I conclude that there is an extensive range of moral reasons in support of the view that zoos ought to be compensated for the production costs incurred in the production of Mandatory Public Beneficence Goods as required by law under Article 12 of the Zoo Licensing Act.

## 5.2 Recommendations

In the closing section of this thesis I present 5 practical recommendations on the following subjects: (1) Municipal Funding, (2) Financial Guidelines, (3) Education Requirements, (4) Scientific Research, and (5) Conservation Incentives.

**1 MUNICIPAL FUNDING:** The multi-functional role of the modern zoo can lead to confusion regarding the relationships between institutions. It would be advisable for the ministry of EL&I to send a memorandum to municipal councils advising them that they are free (i) to encourage investment in zoos to boost local economies, (ii) to subsidize zoos as key visitor attractions within municipalities, (iii) to provide subsidies or to establish private contracts with zoos for the supply of educational programs, and (iv) to continue part-subsidizing the renovation costs of zoo-buildings that have a historical or cultural value.

The memo should strongly urge municipal councils to refrain from imposing any conservation commitments on zoos as a condition for receiving an exploitation subsidy. The vulnerable status of zoos when compared to similar recreational or agricultural facilities means that the long-term commitments required to participate in captive breeding programmes do not rest well with non-secured forms of public funding. It is important to bear in mind that a commitment to a captive breeding programme is a commitment to an ongoing process that cannot be temporarily discontinued. The imposition of captive-breeding targets can create severe financial problems for zoos should the political will to maintain commitments to levels of public funding decline. Municipal councils do not have the necessary expertise to make decisions about ex-situ conservation programmes and changes in the political and economic landscape can quickly undermine levels of political commitment.

**2 FINANCIAL GUIDELINES:** Given the potentially catastrophic impact of unpredictable financial scenarios, it might be worthwhile for the NVD-EAZA to develop some general guidelines on the financial management of zoos. It seems strange that although much attention is given to standards of animal welfare, scientific research, education and a whole host of other policy documents and guidelines, recommendations on the secure management of revenues required for maintaining these standards are currently lacking.

A policy document might recommend a maximum level of risk exposure, a minimum rate of solvency or a ceiling on debt servicing as a percentage of total revenues, for example. There may be much to learn from historical cases of municipal funding and recommendations could be targeted to the financial and organizational contexts of specific types of zoo operators, whether commercial or charitable, whether large or small. Special attention might be given to establishing trust funds to secure the continued goal of ex-situ conservation.

**3 EDUCATION REQUIREMENTS:** Currently, the Zoo Licensing Act places very many obligations on zoo operators. These obligations increase the organizational complexity of zoos and the multi-functionality of the institution is increasing. From the results of *Research for Beleid's* study, one might consider the benefits of reducing the functional package of zoos so that they can better focus on their core-activities. The provision of education will undoubtedly remain an important means of attracting visitors. One can ask to what extent it is necessary to define this goal as a legal requirement. The opportunity to generate revenues through education is also a factor that will continue to promote the function of education within (some if not most) zoos.

The face-to-face encounter, and the moral demands placed on the visitor by the face-to-face encounter, is the main educational asset of any zoo. The dissemination of factual information on the lifestyles and habitats of creatures, by contrast, is not limited to the confines of the zoo. Research for Beleid concluded that the level of compliance to the educational requirement was difficult to determine because the measurement of educational goals was too subjective. I would recommend the removal of Article 12, section 6 of the Zoo Licensing Act. I do not think that the removal of this obligation is likely to have a great impact on the level of education provided in

zoos. The benefit would be an increase in organizational simplicity, a simplification of inspection processes, and a return to the zoo's core-business of ex-situ conservation.

**4 SCIENTIFIC RESEARCH:** Research for Beleid also concluded that it was unclear whether 'participation' in scientific research involved a primary research role or a secondary role only. In the absence of a legal requirement to conduct scientific research, zoos would still attract a host of external researchers and zoos would be able to augment their revenues with research funding in exchange for access and cooperation. The way in which the Zoo Licensing Act has been drafted means that zoos can presently choose between participating in captive breeding programmes or conducting scientific research. It would be preferable to remove this choice so that all zoos make some contribution to captive breeding; there are plenty of species that do not require large sums of financial resources. I would recommend the removal of Article 12, sub section 2a from the Zoo Licensing Act.

Although empirical research would be needed to establish that this legal obligation reduces the potential for generating revenues from research project activities, one might deduce a-priori that a legal compulsion would make it more difficult to charge for such activities. Participating in research activities is currently a practice that is expected in exchange for the right to operate. If it is the case that this expectation reduces the potential for generating additional revenues through cooperation in research project activities, then a reduction in potential revenues will have a deleterious impact on the zoo's ability to perform its ex-situ conservation role. All potential sources of funding represent valuable opportunities for increasing ex situ conservation output.

**5 CONSERVATION INCENTIVES:** The preservation of biodiversity is a public and not a private responsibility. As the establishment of fully public captive breeding centres would be extremely expensive and impractical for governments to operate, it makes perfect sense to use the facilities of private institutions and to outsource this public responsibility. The fact that zoos attract visitors and conserve species at the same time means that the synergy of their operations can increase overall efficiency. This reduces the net costs of captive breeding compared to a fully public solution. In order to maximize the public benefit of captive breeding programmes in zoos, a system for providing incentives to zoos is crucial. The discussion of hunting parks in Texas and the economic imperatives critical to the success of in situ conservation initiatives showed this to be the case. Although most zoos conduct conservation activities voluntarily and on ideological grounds, a form of public compensatory funding would certainly amplify the level of conservation output. Given the finite space in zoos, and in respect of the urgent need to protect threatened species, zoo space is a highly precious commodity.

I recommend that the Ministry of EL&I liaise with EAZA and EPEC to explore opportunities for establishing a PPP construction for captive breeding programmes. Such a construction could operate on a national or at a European level. If central European funds were made available, for example, then captive breeding could be outsourced to European member states whose economies present the most favourable cost-benefit scenarios. Generally speaking, European countries in which wage averages are relatively low are also the countries in which EAZA is actively trying to improve the general standards of zoos. A European PPP construction could therefore produce a double benefit effect – (i) targeting funds to economic areas that can deliver the most ex-situ conservation output, and (ii) targeting funds to zoos that need additional resources for professionalization and development. In Appendix I, I present a Public Beneficence Good cost quantification method and I consider how a PPP initiative for a compensatory form of funding might be operated.

### 5.3 Closing Question

In the Dutch language there is a popular adage that is particularly apt in the context of this thesis. The expression is used to indicate that a person is placing the responsibility for a given something on the shoulders of someone else, a place where the burden of this responsibility does not fully belong. This Dutch expression, *'De aap bij iemand op zijn schouder leggen'*, translates as *'putting the monkey on someone's shoulder'*. We all share a responsibility to shoulder the burden of protecting monkeys, species and eco-systems. Although modern zoos have proven to be broad-shouldered institutions, on whose shoulder does the monkey belong?

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# APPENDICES

- cost quantification of public beneficence goods - I
- questions used for in-depth interviews - II
- reports from in-depth-interviews - III
- overview of Blijdorp's 2010 EEP and ESB programmes - IV
- European Commission Directive 1999/22/EC - V
- the Dutch Zoo Licensing Act - VI
- list of licensed zoos in the Netherlands - VII
- organogram of the Ministry of EL&I - VIII
- zoo license application form - IX
- Accreditation Commission's questions list - X
- NVD's policy document on dead animal material - XI
- ENDCAP statistics - XII



# List of Appendices

<b>PAGE - 01</b>	<b>APPENDIX I</b>	Cost Quantification of Public Beneficence Goods
<b>PAGE - 07</b>	<b>APPENDIX II</b>	Preparatory Questions for In-depth Interviews
<b>PAGE - 13</b>	<b>APPENDIX III</b>	Reports from In-depth Interviews
<b>PAGE - 26</b>	<b>APPENDIX IV</b>	Blijdorp's Participation in EAZA's EEPs and ESBs
<b>PAGE - 35</b>	<b>APPENDIX V</b>	European Commission Directive 1999/22/EC
<b>PAGE - 39</b>	<b>APPENDIX VI</b>	The Dutch Zoo Licensing Act (Dierentuinenbesluit)
<b>PAGE - 43</b>	<b>APPENDIX VII</b>	Overview of Licenses Issued by Dienst Regelingen
<b>PAGE - 45</b>	<b>APPENDIX VIII</b>	Organogram of Ministry of EL&I
<b>PAGE - 47</b>	<b>APPENDIX IX</b>	Zoo License Application Form
<b>PAGE - 56</b>	<b>APPENDIX X</b>	Accreditation Commission Questions
<b>PAGE - 60</b>	<b>APPENDIX XI</b>	NVD Guidelines on Dead Animal Material
<b>PAGE - 63</b>	<b>APPENDIX XII</b>	ENDCAP's EU Zoo Inquiry 2011



# APPENDIX I

## The Cost Quantification of Public Beneficence Goods and the Potential of a Public Private Partnership Initiative

If one accepts the reasons presented in my conclusions as reasonable grounds for justifying a compensatory form of public funding for the provision of Public Beneficence Goods, then one must also consider the practical problems involved in quantifying the costs of Public Beneficence Goods so that a form of public compensation can be dispensed in proportion to a cost.

An ethical justification alone has little social value in the absence of a means of implementing a principle endorsed on ethical grounds. That is not to suggest that compensation must necessarily cover the full cost of provision, it is merely to state that a compensation amount should be proportionally relative to a cost. If, for example, public funds are available to support a compensation rate of 30% of costs, then the rate of 30% must be applied to a reasonably accurate calculation of costs so that compensation sums can be fairly distributed amongst eligible institutions. Although there may be an ethically sound basis for claiming full restitution, there may be constraints of a practical nature that require the prioritization of finite public funds in the face of competing social demands. In this appendix, (1) I show the feasibility of solving the problem of cost quantification for a compensatory form of public funding, and (2) I consider how a National or European pool of public funds might be administered within a PPP construction.

## 1. Cost Quantification

When asked to estimate the costs involved in coordinating an EEP, Marc Damen (2011) explained that such costs are difficult to quantify. At the time of the interview, Rotterdam Zoo was participating in no less than 82 EAZA breeding programs; 44 EEPs (a 25% participation rate) and 38 ESBs (a 21% participation rate) spread over 36 (out of a total of 42) EAZA TAGs<sup>1</sup>. If the quantification of compensatory sums were to involve the registration of *actual hours* spent on specific tasks, then the process of compensation would invoke an expensive and complex bureaucratic administration that would offer no added value other than the definition of a quantity. For this reason, I consider the extent to which the costs of producing Public Beneference Goods can be estimated non-empirically and with a degree of accuracy by predictive means.

The practical problem of quantifying costs that stem from participation in EAZA breeding programs involve three types of quantification problems: (1) differences in labour costs based on species, (2) differences in labour costs based on the levels of involvement in a breeding program, and (3) differences in the costs of husbandry based on increased stock level requirements for animals kept in the collection (see page 38). I will briefly explain each of these in turn.

**PROBLEM ONE:** *“Differences in labour costs based on species”* arise from the fact that the coordination of breeding programs for some types of animals involve a much higher degree of complexity than other animal species. An elephant, gorilla or polar bear, for example, is matched individually to a potential breeding partner from within the European captive population. A breeding program for a wallaby, penguin or squirrel monkey, by contrast, may merely involve the mixing of a group of animals to introduce new bloodlines as opposed to individual matching. The difference is connected to the issue of animal identification<sup>2</sup>. Many types of charismatic mega-fauna are identified individually by name, Rosie the female elephant in location A, for example, is matched to Jumbo the bull elephant in location B. When captive populations are managed on an individual basis, then the coordination of a captive breeding program will be much more labour intensive.

**PROBLEM TWO:** *“Differences in labour costs based on the level of involvement in a captive breeding program”* occur as a result of differences in the levels of responsibility that a zoo accepts in its voluntary participation in a captive breeding program. There is a difference between the mere participation in a captive breeding program and the complete coordination of a whole program throughout Europe. Participation will merely involve requesting matches from an EEP coordinator when necessary or responding to requests from the coordinator for the animals kept locally within one’s own collection. The complete coordination of a captive breeding program, on the other hand, involves the careful management of a complete set of data<sup>3</sup> for the whole European population of a particular species. It will also require extensive communication with participant zoos across Europe in order to coordinate animal matches and transfers.

**PROBLEM THREE:** *“Differences in the costs of husbandry based on an increased stock level requirement for animals kept in the collection”* arise from the fact that captive breeding programs involve the maintenance of larger populations. Whereas three or four examples of a particular species may suffice for exhibition purposes, the goal of actively growing a captive population

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<sup>1</sup> According to the figures of January 2011, the 36 TAGs are as follows: 1. Fish and Aquatic Invertebrate (2), 2. Amphibian (2), 3. Reptile (11), 4. Ratite (1), 5. Penguin (1), 6. Pelicaniformes (1), 7. Ciconiiformes and Phoenicopteriformes (2), 8. Falconiformes (1), 9. Galliformes (1), 10. Gruiformes (2), 11. Pigeon and Dove (1), 12. Parrot (3), 13. Toucan and Turaco (2), 14. Hornbill (4), 15. Passeriformes (1), 16. Marsupial and Monotreme (2), 17. Prosimian (2), 18. Callitrichid (1), 19. Old World Monkey (5), 20. Gibbon (1), 21. Great Ape (1), 22. Small Mammal (1), 23. Canid (2), 24. Bear (1), 25. Small Carnivore (2), 26. Felid (7), 27. Marine Mammal (1), 28. Elephant (1), 29. Equid (1), 30. Rhino (1), 31. Tapir and Hippo (2), 32. Pig and Peccary (3), 33. Camelid and Cattle (2), 34. Deer (3), 35. Antelope and Giraffe (7) and 36. Sheep and Goat (1). The numbers in brackets represent the number of breeding programs under each TAG (total 82).

<sup>2</sup> For more information on the complexities of Animal Identification Methods see Chapter 5 of *“Zoo Animals; Behaviour, Management and Welfare”* by Hosey, Melfi and Pankhurst, Oxford University Press, 2009, pages 129-152.

<sup>3</sup> For more information on the complexities of Zoo Record Keeping Systems see Chapter 5 of *“Zoo Animals; Behaviour, Management and Welfare”* by Hosey, Melfi and Pankhurst, Oxford University Press, 2009, pages 153-167.

involves accommodating greater animal numbers. Depending on the type of species bred, the husbandry costs of maintaining these additional numbers can be significant. Successes in captive breeding can therefore lead to substantial increases in costs - a significant negative incentive.

The cost-variables above can be quantified by creating three cost indices for calculation purposes. Firstly, '*differences in species-dependent labour costs*' can be estimated by using the categories of EAZA's Taxon Advisory Groups (TAGs) to create averages. Rather than determining the relative costs for *each particular species*, cost averages could be calculated at the level of a TAG. If one looks at the TAG '*old world monkeys*', for example, then the costs of keeping a *Colobus Monkey* will not vary significantly from the costs of keeping a *Francois Langur* or a *Silvered Leaf Monkey*. Although there may be some variations in the costs of species within some TAGs, a fairly accurate general average can be arrived at in this way. As there are only 42 TAGs, this would involve only 42 cost calculations to produce a *Labour Cost* index (LC) for keeping species within a particular TAG. The average cost of keeping a single animal would form the base unit of which cost calculations are a multiple. The index is then the average annual cost of keeping a single animal for the '*species average of a TAG*'.

The second variable, '*differences in labour costs that depend on the level of involvement*', could again be determined by an index per TAG<sup>4</sup>. An *Involvement index* (I), in combination with the LC index would lead to a joint-index composed of two columns showing costs per TAG at two different levels of involvement; a participation level (P), and a coordination Level (C). Whereas the costs of a P-level involvement would be identical to the LC index cost, the costs of a C-level involvement would be determined by a percentage factor multiplied over the P-level rate. To determine this percentage factor, a factor that is equivalent to the average additional costs of coordination per TAG, one would divide the annual costs of coordination tasks by the total number of animals coordinated per TAG. This would lead to a set of average percentage factors corresponding to the additional coordination costs per animal for each of the 42 TAGs. The coordination cost averages are derived from averaging the coordination costs of *all species* within a particular TAG. In other words, the cost of coordinating all species within a TAG during the course of a year is divided by the total number of animals belonging to all species within a TAG. This generates a C-level average adjustment factor; a percentage multiplied over the P rate.

The third quantification variable, '*differences in the costs of husbandry due to an increased stock-level requirement for breeding purposes*', has already been alluded to in chapter four. Here I considered that the definition of Mandatory Public Beneficence Goods involved the deduction of the number of animals of a given species that are kept for exhibition purposes from the total number of that same species kept within the zoo (see page 37-38). Exhibition animals generate costs and revenues whereas animals for captive breeding purposes generate costs only. Husbandry costs include feeding, housing, cleaning, administrating and providing veterinary care.

This final variable, the *Additional Husbandry Cost* variable (AHC), could be determined by defining a standard number of exhibition animals that is deemed reasonable, or alternatively, by empirical research into '*exhibition animal numbers*'. The numbers of all kept species are known from animal records. One could determine the average numbers of animals that are both kept within TAGs and are not part of a captive breeding programme. This would produce an average for each TAG corresponding to the numbers of animals that are kept for exhibition purposes alone - the *Exhibition Number* (EN). This number would provide a base line for calculating the *Additional Husbandry Cost* variable (AHC) and solves the problem of '*gradable beneficence*', circumstances in which beneficence includes a mix of both public and private benefit. Once the three indices have been produced, cost calculations are very easy.

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<sup>4</sup> This index could incorporate the findings of a study conducted by Eeenink, D., Jong, de J. and Papiés, M. from the University of Applied Sciences Van Hall Larenstein, Leeuwarden. Under the supervision of Danny de Man, EAZA, this study led to the development of a Participation Index (PI) for regional collection planning tasks. The tasks were divided into 14 levels with a relative weighting that ranged from 60 to 15 units (of participation / relative workload).

To calculate a *Public Beneficence Value* (PBV), one would take the first list showing the Labour Cost index (LC) choosing from one of two columns depending on the Involvement Index (I); participation rate (P) or coordination rate (C) respectively. The TAG Exhibition Number (EN) would then be used to determine the Additional Husbandry Cost variable (AHC). This is done by subtracting the Exhibition Number value (EN) from the Total Number of animals kept (TN) within a particular TAG. Using the three fixed indices of TAG averages (LC, I and EN), this calculation can be expressed as follows:

$$(LC) \times (I) \times (TN - EN) = PBV$$

In addition to the benefit of being able to quantify costs non-empirically once the indices of averages have been produced, the PBV calculation method would be a useful instrument for quantifying ex-situ conservation output by indicating the economic value of Public Beneficence Goods.

A final compensation factor that cannot be estimated by the predictive means described above is the cost of licensing and transport over a variable distance. The transfer of animals between zoos for breeding purposes can generate significant costs. These costs include the cost of packing and transportation as well as the cost of preparing the necessary licenses and documentation for transport. These cost specifications could be submitted to an appropriate authority annually with accompanying PBV quantifications.

Although the PBV calculation method outlined above may seem initially complex, the relatively modest effort required to produce the three indices (LC, I and EN) is a one-time effort with a long-term payoff. Once the indices have been produced, cost calculations can be made quickly and efficiently using information that is readily available from animal records. The only informational input required for calculating compensatory sums would be (i) the cost of packing, transport and licensing, and (ii) the TN. The PBV is determined by subtracting the EN from the TN and the TN is already known from existing animal records that must be kept by law.

Variations in the costs of labour as a result of time-bound market fluctuations, or any variations stemming from differences in local economic conditions, can be applied as a single factor to adjust the Labour Cost index (LC). National LC indices for European member States can be used to target resources to economic regions that offer the greatest cost-benefit scenario for conservation (see recommendations on page 64).

Given the economic crisis, it is highly unlikely that the political will to provide full compensation for Mandatory Public Beneficence Goods currently exists. The value of determining PBV sums rests in the ability to distribute resources *in a fair proportion* to deserving institutions. Irrespective of whether or not the initial level of funding is large or small, there is a benefit in establishing a fair and fully functioning system for incentivizing ex-situ conservation in the hope that economic conditions, and political will, might be more favourable in the future. Even if a modest means of compensation can be distributed in this way, the very fact that an operational distribution process exists for the provision of public incentives is itself a valuable asset that may encourage a greater level of financial commitment in the future.

The issues discussed in chapter three show that there is at least some political will to support zoos by means of VAT concessions. If the total value of these tax concessions were distributed according to the method described above, then (i) zoos in some European countries would be spared the problem that VAT exemptions create unfavourable conditions for investment in renovations and facilities, (ii) public assistance would not discriminate between fully private and charitable institutions, and (iii) public funds could be directed towards activities for which they are, or at least ought to be, intended. The redistribution of VAT concessions means that this could be achieved without putting additional burdens on the public purse.

## 2. The Administration of a PPP Initiative

If one accepts that the cost quantification method described above is at least feasible, not discounting the possibility that additional research into the problem may provide more efficient and accurate methods of non-empirical cost quantifications, then the question that remains is how a pool of available funds might be administered by an authority. In chapter three I discussed the similarities between PPP constructions and municipal subsidies. I questioned the essential difference between a PPP and an exploitation subsidy; both involved the transfer of a sum of money from the public sector to a private institution in exchange for the delivery of a public service or a public good. Here I continue the discussion of a PPP construction as a method of outsourcing a public responsibility to the private sector. I present some initial ideas for two options, (1) a National PPP initiative, and (2) a European PPP initiative.

The European PPP Expertise Centre (EPEC) is part of the European Investment Bank (EIB) based in Luxemburg. It was established as a collaborative initiative between the EIB and the European Commission. EPEC membership is restricted to public sector authorities across Europe and there are currently 35 members from 30 European countries. In the Netherlands, the Ministry of Finance (Ministerie van Financiën) is an EPEC member, in the UK, Her Majesty's Treasury is a member.

In response to my questions '*Are there any European PPP initiatives involving the preservation of biodiversity?*' ... and ... '*[Are] there are any existing initiatives, or previous suggestions for initiatives, to outsource the preservation of species (or environments) to private European institutions in Europe?*', Stuart Broom, EIB advisor and member of the EPEC executive, responded by stating that: '*Certainly in Europe we are not aware of PPPs being used for zoos or other types of biodiversity protection ... you may be aware there is no single model or definition of PPPs so it may be [that] countries or municipalities have used a PPP structure in an innovative way to promote biodiversity*' (Broom, S., 2012).

Between 2000 and 2011, there have been some 140 PPP initiatives across Europe amounting to a total spend of 27.6 billion Euros<sup>5</sup>. Of this figure, 958 million Euros was spent in the Netherlands and 7.3 billion Euros was spent in the UK. Of the 140 PPP initiatives between 2000 and 2011, 90 initiatives involved the transport sector, 23 involved education projects, 24 were centred on health, and the remaining 9 PPPs focused on water, sewage or solid waste management, energy or public services<sup>6</sup> (EPEC, 2011). One can conclude that PPPs are mostly used to stimulate investments into the realization of public infrastructures. Given that '*there is no single model or definition of [a] PPP*', the opportunity of using '*a PPP structure in an innovative way to promote biodiversity*' is noticeably lacking.

### 2.1 National PPP Initiative

The establishment of a National PPP initiative would involve initial negotiations with the Dutch Ministry of Finance to see if compensatory public funds can be made available for outsourcing the preservation of biodiversity to the private sector. If the political will exists to allocate some resources to this public good, then the next step would be to establish a contract between the Directorate VDC of the Ministry of EL&I and a private agency responsible for the administration and distribution of public funds. A natural choice for such an agency in the Netherlands would be the NVD as they have access to the necessary information from all their members - participation in EEPs and ESBs, TN numbers and so forth.

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<sup>5</sup> Annual totals expressed in billions of Euros are as follows: 2.683 in 2000; 1.540 in 2002; 1.300 in 2002; 2.309 in 2003; 1.604 in 2004; 1.326 in 2005; 3.211 in 2006; 2.575 in 2007; 3.282 in 2008; 1.832 in 2009; 3.686 in 2010 and 2.260 in 2011. These figures have been consolidated from EPEC's 2011 report '*PPPs Financed by the EIB from 2000 to 2011*', retrieved on 12<sup>th</sup> July 2012 from <http://www.eib.org/epec/resources/ppps-financed-by-eib-2000-2010.pdf>

<sup>6</sup> The numbers do not add up to 140 because 6 of the PPP initiatives involved both health and education.

A condition for being eligible for compensatory funding might be that eligible zoos would need to give open access to animal and zoo records. The NVD would then receive a sum of money from central government for coordinating and administering the distribution of public funds using the PBV cost calculation described above. Applicant zoos would present their TN numbers per TAG along with specifications of transport and licensing costs.

To ensure the integrity of the process, the NVD would conduct randomized spot checks to make sure that TN numbers are accurate and a penalty could be imposed for the provision of incorrect data. An example of such a penalty might be the loss of the right to receive compensation for a period of 3 years. An overview of the distribution of public funds would appear in the NVD's annual report and would be signed off by a chartered accountant. The 'Dienst Regeling' might also conduct an audit of figures during zoo inspections. The establishment of a National PPP initiative would involve negotiations between the Ministry of Finance, the Directorate VDC of the Ministry of EL&I, the NVD and her members.

## **2.2 European PPP Initiative**

A European PPP initiative could be achieved by establishing a contract between EAZA and the Directorate Generale Environment of the European Commission. EAZA could be given an agency function whereby EAZA would be authorized to act as an agent in establishing contracts with National Zoo Federations across Europe - these being the National Equivalents of the NVD in the Netherlands or BIAZA in Britain, for example. The contract terms between EAZA and the National Zoo Federations would involve the same operating terms as described above under a National PPP Initiative – EAZA, in this case, taking the commissioning role of the Directorate VDC.

European member States participating in the PPP initiative would transfer central government funds to the DG Environment of the European Commission. These funds would then be transferred to EAZA for administration and pan-European distribution. EAZA would collect all PBV submissions from National Zoo Federations in order to transfer European funds to the National Zoo Federations. Funds would be transferred either (1) in proportion to National PBV contributions, or (2) according to a strategic distribution policy determined by EAZA.

The latter of these two options would involve some additional complexity. As discussed in my recommendations, a double benefit could be achieved by targeting funds to economies that offer the greatest cost-benefit scenarios<sup>7</sup>. In order for EAZA to maximize the social benefit of funds through a strategic distribution of resources, National Zoo Federations would need to establish a broad level of support amongst their members for distributing funds strategically in this way. As the PBV funds are in essence compensatory, it would seem reasonable to first generate popular support at National Zoo Federation level before choosing for this Rawlsian option. The establishment of a European PPP initiative would involve multiple discussions between National Ministries; the European Commission's DG Environment; EAZA and representatives of National Zoo Federations. The process could be facilitated by EPEC providing an advisory and coordinating role amongst its members.

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<sup>7</sup> EAZA has been considering the value of establishing a centralized amphibian-breeding centre where all threatened species are conserved. This would have two aims; (1) to conserve amphibian species and (2) to provide member zoos with exhibition animals to fulfill their education remit. A centralized solution would be much more cost effective (Dickie, L., 2011).

# APPENDIX II

## Preparatory Questions for In-depth Interviews

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### Questions for Interview with Marc Damen

Rotterdam, 14.00-16.00 Wednesday 28<sup>th</sup> September 2011

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Do you have any objections to the recording of interview?  
Do you have any concerns about disclosure?  
Do you have any questions about the purpose or content of research?  
May I ask additional questions by e-mail if necessary?

#### (1) Sources and problems of funding

- 01 What percentage of total annual revenues stem from the subsidy (4.5 mil) received from Rotterdam Council?
- 02 What percentage of profits are used to service debts on investments?
- 03 What is the history of your relationship with Rotterdam Council regarding subsidies?
- 04 Why does Rotterdam Council subsidize Rotterdam zoo?
- 05 Does the Council perceive the zoo to be a Sport and Recreation facility? Do you agree with this classification?
- 06 Would an alternative classification give potential access to other types of subsidies?
- 07 What are your annual revenues from (1) Subsidies, (2) Entrance fees, (3) Sponsoring, (4) Other sources?
- 08 Do you consider (1) the level of funding or (2) the stability of funding to be the most important factor for operating the zoo?
- 09 Would you (hypothetically) accept a 10% reduction in funding in exchange for a guarantee that the level of total revenues remained stable? How much would a stable financial prognosis be worth to you?

#### (2) Operational management issues

- 10 How will the proposed cuts in subsidies likely affect the operational management of the zoo?
- 11 Do you have contingency plans in place to manage potentially severe fluctuations in financial resources?
- 12 If a cut in funding requires the downsizing of the collection, then what kind of practical and ethical problems will such a downsizing entail? (Relocation of animals, Sale of animals, Euthanasia, Employment).
- 13 What are the most challenging problems that you are faced with in managing the zoo?
- 14 Does Rotterdam zoo have collection management guidelines in place?
- 15 How do you decide which animals to keep in the collection? Black Rhinoceros exhibit.

### (3) Legislation and the cost of compliance

- 16 Do the obligations defined in “het dierentuinbesluit” create costs for the zoo that would not exist in the absence of these obligations?
- 17 What (ex-situ) conservation activities does the zoo conduct?
- 18 What educational activities does the zoo conduct?
- 19 What scientific research activities does the zoo conduct?
- 20 Are the budgets for conservation, education and scientific research programs managed separately?
- 21 How many TAGs (Taxon Advisory Groups) is the zoo involved with? Coordinating role for some species?
- 22 What are your thoughts about the legal requirements that are placed on zoo operators as a condition of license?
- 23 Do you think that the zoo provides any essentially “public” goods as opposed to goods that are purely “private”? (conservation of bio-diversity is a collective global interest)
- 24 What are your experiences of the AID (LNV) during inspections?
- 25 Would you advise amendments to current legislation, and if so, what would you change and why?



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## Questions for Interview with Marielle van Aggelen

Director NVD, Amsterdam 14.00 on 31<sup>st</sup> September 2011

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*Do you have any objections to the recording of the interview?*

*Do you have any concerns about disclosure or questions about the purpose of the interview?*

*Interview notes will be forwarded by e-mail for accuracy check (to avoid any potential misquotes).*

*May I ask additional questions by e-mail if necessary?*

### (1) Questions About NVD Organization

- 01 What is the process of becoming a member of the NVD?
- 02 What is the membership fee on an annual basis?
- 03 What services does the NVD provide for its members?
- 04 Does the NVD arrange annual meetings for zoo directors?
- 05 Does the NVD lobby government for changes in policy?
- 06 Which governmental (or other) policy changes are advocated by the NVD?

### (2) Questions About NVD Quality Inspections

- 07 How often are NVD members inspected (visitatie)?
- 08 Who performs NVD inspections (AID or an other body)?
- 09 What criteria are looked at during inspections?
- 10 Are there any documents / checklists available that I could take with me?

### (3) Questions About NVD and Conservation

- 11 How does the NVD Natuurbeschermingsfonds (NNBF) work?
- 12 Do zoos pay a contribution to NNBF / compulsory / voluntary / how much?
- 13 What is the relationship between the NVD and EAZA?
- 14 How are the conservation results of zoos assessed and quantified?
- 15 Is there documentation on results from member zoos that I could take with me (EEP, ESB participation) – if there are confidentiality issues, would it be possible to present results anonymously using statistics?
- 16 Is there a possible correlation between municipal Council funding and increased conservation results?

### (4) General Questions

- 17 How is the fact that some zoos receive exploitation subsidies from local municipal Councils viewed by members who receive no such subsidy?
- 18 Does the NVD have any standards or guidelines concerning a zoo's solvency / financial stability?
- 19 How do you see the future of smaller zoos that are not members of the NVD or EAZA? (*Discussion*)
- 20 What is your opinion of the Dierentuinenbesluit and the obligations it imposes on zoos? (*Discussion*)
- 21 Are there any major problems with current Dutch legislation? (*Discussion*)
- 22 When NVD members disagree with one another, what are the issues that generally cause disagreement?
- 23 Which privately funded, fully commercial zoo should I contact for an interview (as a typical case)?

### Notes:

*The 5 NVD guidelines are as follows: (1) NVD Code of Ethics (Ethische Code), (2) NVD Animal Transaction Code (Code Diertransacties), (3) NVD Guidelines on Dead Animal Material (Richtlijnen Dood Dier Materiaal), (4) NVD Guidelines on Education (Educatieve Nota), (5) NVD Health and Safety Code (Arbocatalogus).*

*The 15 NVD members are as follows: (Publicly Funded Zoos) (1) Diergaarde Blijdorp, Rotterdam, Marc Damen, (2) Natura Artis Magistra, Amsterdam, Haig Balian, (3) Noorder Dierenpark, Emmen, Frankwin van Beers. (Privately Funded Zoos) (1) Burger's Zoo, Arnhem, (2) Dierenpark Amersfoort, (3) Apenheul, Apeldoorn, (4) Aquazoo, Friesland, (5) Dierenpark Wissel, Epe, (6) Dierenrijk, Mierlo, (7) Dolfinarium Hardewijk, (8) GaiaZoo, Kerkrade, (9) Ouwehands Dierenpark, Rhenen, Marcel Boekhoorn (10) Safaripark Beekse Bergen, Hilvarenbeek, (11) Vogelpark Avifauna, Alphen aan de Rijn, (12) Zoo Park Overloon.*

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## Questions for Interview with Alide Vergossen-Otten

Ministerie van Economische Zaken, Landbouw en Innovatie 13.00–14.00 on 17<sup>th</sup> November 2011

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*Do you have any objections to the recording of the interview?*

*Do you have any concerns about disclosure or questions about the purpose of the interview?*

*Interview notes will be forwarded by e-mail for accuracy check (to avoid any potential misquotes).*

*May I ask additional questions by e-mail if necessary?*

### (1) Questions about the Ministry of EL&I

- 01 How is the Ministry of EL&I structured?
- 02 What does your portfolio involve?
- 03 When was the name changed from LNV and why – how is EL&I different to the LNV?

### (2) Questions about legislation and compliance

- 04 In addition to the Balai Directive, CITES, 1999/22/EC and the Dierentuinenbesluit, what other Dutch legislation governs the operations of zoos?
- 05 What is the idea behind the “Wet Dieren” – will it be a single act to replace and integrate other legislation? What will be included in the act? Are there any developments at European Level?
- 06 How is the “Dienst Regelingen” structured and organized? What problems do inspectors face?
- 07 Do you have a copy of inspection forms, or other documents used for “visitaties”?

### (3) Questions about the interests of zoos and organizations

- 08 What are the interests of the NVD, what are they lobbying for?
- 09 What are the interests of EAZA, what are they lobbying for?
- 10 What are the interests of smaller zoos, what are they lobbying for?

### (4) General questions about zoos and funding

- 11 Given the obligations imposed on zoos by the Dierentuinenbesluit, do you think that zoos ought to receive a form of public funding in exchange for their contribution to conservation? (A typically public good)
- 12 Do you think that municipal council subsidies create unfair advantages amongst zoos?
- 13 Do you think that the legal form of a zoo (rechtsvorm) is a relevant issue?
- 14 How would you classify the primary social role of zoos? (Recreational, scientific, environmental etc)
- 15 Do you think there is a public duty for all to fund conservation from central taxation or do think that making a financial contribution to the conservation effort (protection of biodiversity) should be a private choice?

### Notes:

*Hallo Oscar, Ik heb gereserveerd 17 november, 13.00 tot 14.00 uur, kruid 4, kamer Rozemarijn. (halverwege de gang Kruid 4.). Ministerie van Landbouw, Natuur en Voedselkwaliteit, Prins Clauslaan 8, 2595 AJ Den Haag, Telefoon: 070-378 6868, Groeten, Alide Vergossen*

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## Questions for interview with Lesley Dickie

Director EAZA, Amsterdam 11.00 on 23<sup>rd</sup> November 2011

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*Do you have any objections to the recording of the interview?*

*Do you have any concerns about disclosure or questions about the purpose of the interview?*

*Interview notes will be forwarded by e-mail for accuracy check (to avoid any potential misquotes).*

*May I ask additional questions by e-mail if necessary?*

### (1) General questions about EAZA

- 01 What is the process of becoming a member of EAZA?
- 02 What is the membership fee on an annual basis? What services does EAZA provide for its members?
- 03 What kind of institution is the zoo –an essentially public or an essentially private institution?
- 04 Should legislation be seen as a method of validating the existence of zoos or as bare social fact?
- 05 What is EAZA lobbying for (1999/22/EC)?
- 06 What is your opinion of Directive 1999/22/EC and the obligations it imposes on zoos? (*Discussion*)

### (2) Questions about EAZA and ex-situ conservation

- 07 What is involved in coordinating an EEP and an ESP?
- 08 Is involvement purely voluntary? Are there any incentives for participating in captive breeding programs?
- 09 Are there any ways of measuring the financial burdens for participating in EEPs and ESBs?
- 10 Do you think that zoos ought to be compensated for ex-situ conservation activities?
- 11 Is there a possible correlation between municipal Council funding and increased conservation results?
- 12 For whom are we conserving biodiversity? What is EAZA's position on this question?
- 13 What kind of recommendations are included within a RCP? How do Taxon Advisory Groups work?
- 14 Is there documentation on results from member zoos that I could take with me (EEP, ESB participation)?

### (3) Questions about EAZA and education

- 15 What is EAZA's policy on education for its members?
- 16 How do you define minimal standards for educational requirements?

### (4) Questions about EAZA and scientific research

- 17 What are the scientific research obligations placed on zoological parks by EAZA?
- 18 How is knowledge shared amongst EAZA members?
- 19 Is the sharing of scientific knowledge compulsory? Connection to IUCN red list?
- 20 What are the developments in zoo information systems (ARKS, SPARKS, ISIS, ZIMS, MEDARKS).
- 21 What information is needed for managing captive breeding programs?
- 22 What are the recent successes concerning scientific research?

### (5) Questions about zoo funding

- 23 Does EAZA provide any advice / support for the sound financial management of zoos?
- 24 How would you rate funding as a risk factor with regard to a zoo's ability to perform its conservation role?
- 25 Should receive subsidies at European or National level to support them in their conservation tasks?
- 26 Do Council exploitation subsidies do more harm than good in the long term?

### Notes:

*The 15 NVD members are as follows: (Publicly Funded Zoos) (1) Diergaard Blijdorp, Rotterdam, Marc Damen, (2) Natura Artis Magistra, Amsterdam, Haig Balian, (3) Noorder Dierenpark, Emmen, Frankwin van Beers. (Privately Funded Zoos) (1) Burger's Zoo, Arnhem, (2) Dierenpark Amersfoort, (3) Apenheul, Apeldoorn, (4) Aquazoo, Friesland, (5) Dierenpark Wissel, Epe, (6) Dierenrijk, Mierlo, (7) Dolfinarium Hardewijk, (8) GaiaZoo, Kerkrade, (9) Ouwehands Dierenpark, Rhenen, Marcel Boekhoorn (10) Safari park Beekse Bergen, Hilvarenbeek, (11) Vogelpark Avifauna, Alphen aan de Rijn, (12) Zoo Park Overloon.*

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## Questions for interview with John Regan

Director John Regan Associates Ltd. 12.00 on 9<sup>th</sup> July 2012

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*Do you have any objections to the recording of the interview?*

*Do you have any concerns about disclosure or questions about the purpose of the interview?*

*Interview notes will be forwarded by e-mail for accuracy check (to avoid any potential misquotes).*

*May I ask additional questions by e-mail if necessary?*

### (1) Question about CCZ and the Manifesto for Zoos

- 01 What was the result of CCZ's Manifesto for Zoos?

### (2) Question about Financial Dynamics

- 02 Are the financial dynamics of operating a charitable zoo different to operating a commercial zoo?  
 03 Do these benefits apply throughout Europe or only in the UK?

### (1) Question about Zoo Funding

- 04 What did JRA do for the Apenheul, Artis and Noorder Dierenpark?  
 05 Has anyone investigated the possibility of using PPPs as a method of funding zoos?  
 06 By what means can governments and municipal councils support zoos financially?  
 07 How would you describe the financial vulnerabilities of zoos in general?  
 08 What are the key success factors for zoo funding?
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# APPENDIX III

## Reports from In-depth Interviews

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### Notes from interview with Marc Damen

Director Blijdorp, Rotterdam, interviewed from 16.00 to 18.00 on 28<sup>th</sup> September 2011

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#### MD on Blijdorp's history with Council subsidies:

- MD is concerned about comparisons between Burgers, Beekse Bergen and Blijdorp; although zoos are similar in size, Burgers zoo has operated without subsidies since 1913, Beekse Bergen has never been subsidized whereas Blijdorp has received a subsidy since 1947. The subsidy has resulted in a different method of exploitation; although a transition to a fully privately funded park is not unappealing, it cannot be achieved without a reasonable transition period (of 10-15 years perhaps).
- From 22.8 million Euro budget per year in total, in 2009 Blijdorp received 5.3 million Euros exploitation subsidy from Rotterdam Council (and partly from central state funding – Binnenlandse Zaken), 4.8 million Euros in 2010, and 4.0 million Euros subsidy in 2011. In 2012 the subsidy will drop to 2.9 million Euros.
- From 22.8 million Euros in annual revenues, 9.1 million is spent on personnel costs, 4.5 million is spent on interest payments and amortization.
- For fiscal reasons, Blijdorp has arranged a 'sale and leaseback construction' of the elephant house. The elephant house has been sold to a separate foundation (that is part of Stichting Blijdorp). This has increased the cost of interest payments and this in turn has a fiscal benefit.
- Rotterdam Zoo was originally built in the centre of Rotterdam. The council wanted to redevelop the centre and as land prices were very high in the centre, in 1940, the zoo was rebuilt in its present location. In exchange for 3-5 (?) hectares of land opposite the central station, 15 hectares of land were given in the polder "Blijdorp" which was rebuilt after the bombing campaigns of the 2nd World War. Since 1940, Rotterdam Zoo is known as Blijdorp Zoo. "Stichting Volkskracht" (vermogens stichting), a foundation that helped to provide the capital for new investments in the zoo, assisted financially with the zoo's relocation.
- Since 1947 the Council has supported the zoo, initially with a sum of 7,000 Guildens. The sum has fluctuated throughout the years.
- In 1988 Blijdorp and the Council of Rotterdam launched a 'master plan' to transform the zoo into a star attraction ('toonaangevende attractie') for the city of Rotterdam. The master plan involved a total restructuring of the zoo exhibits into continental divisions within the collection – a shift away from the previous taxonomic

- ordering of exhibits.
- The master plan was seen to have a positive impact on employment and tourism and so the Council agreed to support the zoo with 10 million Guilders per year. The agreement was for an unlimited period to be reviewed on an annual basis. The amount was inflation indexed on several occasions and was eventually transformed into Euros. From 2000 onwards, the level of subsidy was 4.8 million Euros annually.
- In 2009, however, as a result of the economic recession, the Council informed Blijdorp that cuts in subsidies were on the way. The initial agreement was to steadily reduce the subsidy over a period of three years from 4.8 million Euros to 3.8 million Euros. Although this was bad news for Blijdorp, in light of the economic circumstances the Council's proposal seemed reasonable; Blijdorp had three years to work on a financial plan to make up the 1.0 million Euro shortfall.
- Following the elections in 2010, the new Council decided that the cuts in funding would be more severe. Instead of a reduction from 4.8 to 3.8 million over a three-year period, there would be a cut from 4.8 million to 0.8 million over a four-year period.
- MD has asked the Council to reduce the funding by 4.0 million over 10 years in annual incremental reductions of 400,000 Euros per year.
- The current planned reductions in the level of subsidies are as follows: in 2011 a reduction from 4.8 to 4.0 million Euros, in 2012 from 4.0 to 2.9 million Euros, in 2013 from 2.9 to 2.2 million Euros, in 2014 from 2.2 to 1.5 million Euros, and in 2015 a reduction from 1.5 to 0.8 million Euros.
- The Council has indicated that they will not let the zoo go bankrupt and that they will, in consultation with Blijdorp, explore ways in which the impact of the cuts in subsidy can be minimized. Since 11 November 2010, the management team of Blijdorp has been involved in intense ongoing discussions with the Council of Rotterdam.
- Council has acted as guarantor for investment loans (Oceanium for example). The land has been bonded as collateral against this loan. If Blijdorp cannot pay the interest and amortization of its loan then the Council will be able to claim ownership of the site on which Blijdorp is established.
- Blijdorp cannot take out additional loans because they have no more assets to put up as collateral.

## MD on the Council's reasons for providing subsidies:

- Rotterdam Council supports Blijdorp zoo because they recognize the importance of providing an accessible leisure facility for all the inhabitants of Rotterdam. Subsidies stem from the department of Sport and Recreation; the Council perceives the zoo to be, in essence, a recreational facility.
- Rotterdam Council finds the educational opportunities within the zoo an important factor for providing subsidies. A condition of the subsidy in 2010 was that the zoo provides lessons to a minimum of 60,000 school children per year; a condition imposed by the council independent of the Dierentuinenbesluit.
- In terms of fulfilling the criteria for gaining the council's subsidy, Blijdorp must score an average of 8 on the Likert scale in terms of visitor satisfaction. Research is conducted using surveys in Blijdorp.
- There are five reasons why the Council provides a subsidy to Blijdorp: (a) for Blijdorp to continue to exist as a zoo, (b) to provide lessons to 60,000 school children annually, (c) to contribute to the quality of Rotterdam for its inhabitants, (d) to conserve nature – a minimum of 80 endangered species must be kept in the zoo and Blijdorp must coordinate the breeding programs of at least 10 endangered species, and (e) to contribute to the marketing of Rotterdam city by appearing at least once per month on television, twice per month in the newspaper and several times per month on the radio.
- With the budget cuts, the council has reduced the demands on Blijdorp to only two criteria: (a) to continue to exist as a zoo, and (b) to provide lessons to 50,000 school children annually (a reduction of 10,000 annually).
- MD suggests that from these two criteria, one might assume that the zoo is regarded by the Council as both a recreational facility under the department of Sports and Recreation, and as an educational facility under the department of education; a dual social function contrary to its single classification (Sport and Recreation).
- MD states that although an alternative classification may give access to other sources of funds from different departments that there is no money from any department at the moment; all pots are empty. Although there are some subsidies for incidental projects and purposes, the Council wants to avoid structural exploitation subsidies that involve long-term commitments.
- MD explains that there are both advantages and disadvantages to receiving subsidies. He has experience of working in a number of zoos (Burgers and Beekse Bergen) and Blijdorp is the first subsidized zoo he has worked for. A disadvantage of a subsidized zoo is that the public, and politicians, have a say about its management; the zoo is public and belongs to everyone. An advantage is that it is an idealistic institution that is non-commercial; this makes it easy to attract volunteers. Blijdorp has 350 volunteers who are willing to sacrifice their free time for what they perceive to be a noble cause.

## MD on the stability and sources of funding:

- MD states that the stability of funding is more important than the level of funding. Although Blijdorp cannot influence the Council in their willingness to subsidize the zoo, there are some sources of funding that can be influenced by focusing more attention on acquisition.
- Some companies sponsor the zoo in return for advertising; exhibit X is sponsored by company Y, for example.
- Donations, tax-free gifts and bequests. Some companies and private individuals donate to a good cause; they enjoy a personal tour of the collection given by MD by way of thanks.
- Monies from sponsoring and adoption are not used to cover exploitation costs; they are not structural in this sense. Funds from these sources are used to finance incidental projects such as the refurbishment of exhibits (MD mentions the Onager enclosure for which 48,000 Euros is currently being sought).
- The Council subsidy is used to cover exploitation costs; staff, energy, interest payments, amortization, operating costs etc. It is a core component of what is needed for exploitation and here lies the problem.

## MD on the impact of cuts in funding:

- Fixed costs very high, 9.0 million spent on personnel costs in 2010.
- There has been a freeze on staff recruitment, 40 FTE's have been lost (from 220 to 180). Part of the zoo has been closed off to the public. One elephant has been donated to another zoo and next year another two elephants will leave the zoo. Each elephant needs a keeper and this measure will reduce personnel costs by 3 FTE's. Three employees are permanently busy with animal transactions – animal acquisition and relocation.
- EAZA see animals as the common property of all. For this reason, there is an ethical code amongst EAZA affiliated zoos that animals may not be sold to generate income. The whole animal collection is valued for 1 Euro in the annual report.
- MD believes that selling animals is a slippery slope; by selling animals a situation will ensue in which animals are sold to the highest bidder. This means that animal welfare considerations will take a secondary role.
- Although the protocol is that the recipient zoo pays for the cost of transport, sometimes Blijdorp contributes to the cost of transport because they are keen, for animal welfare reasons, to house a surplus animal at a particular zoo.
- Previously, Blijdorp coordinated 10 EEP's. Due to the cuts in subsidy, Blijdorp has decided to discontinue the coordination of the Asian Elephant EEP, which cost the zoo a 0.5 FTE. (20 hours per week).
- The Animal Kingdom is divided into taxa. EAZA has a Taxon Advisory Group (TAGs) for each taxa, they make recommendations about which species to keep in zoos. Some species have a positive recommendation which means that zoos are encouraged to breed with that species. A European Endangered Species Program is established for these species (EEP). A European Studbook (ESB) is established to manage the genetic diversity in breeding programs. EEPs and ESBs are managed by individuals from particular zoos that take on the responsibility on a voluntary basis. Recommendations: EEP, ESB, Monitoring, No Research, Phase Out.
- Taxon Advisory Groups advise on the status of animals in the wild and in zoos. EAZA has 26 TAGs for mammals and the TAGs are compiled and coordinated by EAZA (EAZA determine which particular species are clustered together in a TAG). Each TAG makes decisions about which endangered animals should be actively bred in captivity. If an animal is considered worthy of breeding, the TAG makes a recommendation giving the particular species an EEP status. They then look amongst their members to see who is willing to coordinate the EEP on a European level. Members of EAZA TAGs monitor the work of EEP coordinators.
- MD explains that ISIS will be replaced by ZIMS. Whereas ISIS is a platform that is (partly) visible to the public, ZIMS will be accessible for zoo professionals only. There have been cases where criminals have used ISIS to find out where particular animals can be found so that these can be “stolen to order”.
- MD explains that of the 70 licensed zoos in the Netherlands that only 15 are members of the NVD. When an animal is transferred following a recommendation of an EEP, this can create a dilemma. On the one hand there is a will to minimize the distance of the transport (costs and animal welfare), on the other hand there is a will to find the best accommodation for an animal and a concern that the placing of the animal will not affect Blijdorp's relative competitive position as an attraction amongst its competitors. The transfer of Charismatic Mega-Fauna can therefore involve a number of complex and conflicting considerations.
- Biggest challenge is to find the right balance between commercial and idealistic goals. MD wants to make sure that the zoo remains accessible to a wide public and wants to avoid increases to the entrance fees. Especially for those from a lower socio-economic background, the zoo represents an important part of their education and general development.
- EAZA makes a Regional Collection Plan and expect affiliated zoos to respect their recommendations. The Pronghorn, for example, has a “do not obtain” recommendation due to sensitivities concerning humidity; they do not do well in captivity in the European climate. Although Blijdorp may sometimes deviate from these recommendations, the Regional Collection Plan is adhered to as much as possible. Commercial interests (attracting visitors) may require deviation from the plan in some cases.
- Collection planning involves conservation interests, educational considerations and marketing and communication aspects. Blijdorp selects species that are kept in other European zoos and for which the prospects of maintaining an ongoing breeding program are positive. Wuppertal zoo, by contrast, is a zoo that aims to collect species that cannot be seen elsewhere in Europe. It is a real “collectors zoo” and has a good reputation as such. 80% of its income stems from subsidies.
- EAZA membership is paid according to (1) the number of visitors, and (2) the economic wealth of the country in which the zoo is situated. This leads to 9 distinct categories. Visitor numbers are defined as follows: Large Zoos = > 1 Million Visitors, Medium-Sized Zoos = 250,000 -1 Million Visitors, and Small Zoos = < 250,000 Visitors. The economies of countries are ranked as follows: Rich, Average and Poor. Blijdorp pays the highest amount of contribution as it is classified as a large zoo with over 1 million visitors annually and is situated in a country with a Rich economy. EAZA does not take into consideration how many EEPs are coordinated by a zoo. Blijdorp pays the highest contribution and carries a high level of cost for the coordination of EEPs. ARAZPA, by contrast, determine the level of membership contribution by considering the extent to which a zoo has geared its operations in line with the Regional Collection Plan.
- Although Blijdorp has a good reputation in terms of following EAZA recommendations, other than for the sake of reputation there is no incentive for following EAZA recommendations.
- MD explains the value of a good reputation by citing the example of the Polar Bears that were donated by Vienna Zoo. Although Blijdorp was 17<sup>th</sup> on the list of recommended destinations from the Polar Bear EEP coordinator, because Blijdorp coordinated the Asian Elephant EEP and the African Elephant EEP was coordinated from Vienna, the zoos had already established a very good relationship with one another. As Vienna was confident in the quality and standards of care in Blijdorp, in consultation with the EEP coordinator, Vienna chose Blijdorp from the list of potential recipients.
- There have been zoos that being barred from EAZA because they have failed to meet the EAZA guidelines.

## MD on the adequacy of current legislation:

- MD is happy with the Dierentuinenbesluit. He suggests that the law is the result of best practice amongst zoos. The law aims to set minimum standards for zoos; standards which were already in place amongst all of the best zoos in the Netherlands.
- Laws governing the transportation of animals in agriculture stipulate that animals must be offloaded after being in transit for 8 hours. MD gives an example of an elephant transport from Ireland to the south of Spain that took three days. It's not possible to let the elephant out after each 8 hours, for this reason MD is happy that different laws apply to zoos when compared to animals in agriculture.
- MD is part of an advisory group for the Ministry of Economic Affairs, Agriculture and Innovation. MD feels that the industry is still under-regulated and mentions the Dierentuinenbesluit of 2002. The act was intended to restrict the number of zoos by placing obligations on zoo operators, but despite the legislation, there are now more zoos than ever. According to MD, the law is not stringent enough and ought to be tightened.
- MD is concerned that anyone with sufficient financial resources can start a private collection as a hobby (Marcel Boekhoorn, for example). The danger with this kind of zoo is that if the money runs out, or if the hobby becomes less interesting, the zoo will cease to exist. If the Director of a publically funded zoo were to leave, by contrast, a replacement would be found and the existence of the collection would not be endangered.
- MD would increase the threshold for anyone wishing to start a zoological park. There are already 70 zoos in a small country like the Netherlands!

## MD on scientific research activities:

- Blijdorp conducts a lot of research into hormones in their own laboratory. They provide blood-testing services for Dolphinarium Harderwijk and other zoos also. Blijdorp is hosting an international congress on keeping elephants and rhinos. Their scientific knowledge is disseminated widely via publications and such congresses.
- Although Blijdorp has their own researchers on the payroll, including veterinary staff who conduct research as part of their standard animal care practice, the number of research staff is being reduced due to limitations in funding.
- Blijdorp actively cooperates with external scientists from a range of organizations and universities allowing them to conduct research programs within the zoo. See annual reports for more details on research.



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## Notes from interview with Marielle van Aggelen and Mirko Marseille

Director NVD, Amsterdam, interviewed from 14.00 to 16.00 on 31<sup>st</sup> September 2011

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### Questions About NVD Organization

- NVD membership contribution is based on a standard fee plus an amount that varies according to visitor numbers. The contribution fees are being renegotiated at the moment because members are facing a difficult financial period. The contribution fees amount to approximately 200,000 Euros annually, from which the NVD must fund all of its operations and activities.
- There are three main tasks of the NVD: (1) national lobbying to make sure that government policy is in line with the interests of its members (done together with EAZA), (2) maintaining quality by means of zoo inspections that occur once every three years, and (3) promoting a cooperative community spirit amongst its members in order to promote common goals and interests.
- The NVD accomplishes the third goal by organizing meetings and training days for members. These initiatives may target education officers, curators or marketing and PR staff, for example. The NVD organizes annual animal collection and ethics days. Depending on the subjects covered, members are invited to form work-groups on given subjects for all members. These work groups are formed to address specific problems, once the problems have been solved, then the work group is dissolved.
- The NVD has organized a practical course on CITES, 'CITES day', for curators together a consultancy company "Natuur en Recht" to help with the complex processes of animal acquisition.
- NVD has lobbied Dutch EMPs in Brussels for the labeling of food products containing palm oil. This because the rapid growth of palm oil plantations is having devastating effects on natural environments.
- The NVD wants to ensure that legislation does not simply impose a minimum standard for zoos. They want to promote an optimal standard that surpasses the minimum requirements of current legislation.
- One of the conditions for NVD membership is that zoos work with ISIS (including some or all of the following information systems: ZIMS (on-line integrated application), ARKS (old application), SPARKS (old application) and MEDARKS (old application for veterinary information)).

### Questions About NVD and Quality Inspections

- There are many different organizations involved with the inspection and accreditation of zoos. Different authorities, for example, conduct inspections of catering standards and playgrounds.
- The NVD conduct inspections independently of the NVWA - 'Nieuwe Voedsel and Waren Autoriteit'.
- The NVWA also inspect zoos once every three years to check that they comply to the standards defined in the 'Dierentuinenbesluit'. The NVWA is part of the Ministry of EL&I - 'Economische Zaken, Landbouw en Innovatie'.
- The inspection of enclosures is carried out by the NVWA.
- The Balai directive is aimed at preventing the transmission of communicable diseases, and zoos must therefore have adequate quarantine facilities to prevent infection. The Balai directive is meant to be a way to transport animals between institutions that are balai approved without quarantine. The implementation of balai in different EU member states however is complex and different per state and as a result the balai directive is not regulated in a strict and consequent way.
- NVD inspections are centred on (1) animal welfare standards and (2) the safety of animals and keepers. This year the emphasis is also on the implementation of Health and Safety regulations (ARBO) for workers in general (see policy document). A list of dangerous animals in the collection forms the basis for inspections. Conservation initiatives (the number of EEPs and ESBs in which a zoo is participating, also falls within the scope of animal welfare accreditation).
- There are separate NVD inspections for the accreditation of education initiatives and programs. These inspections will take place in 2013 and also include an assessment of conservation activities (see above).
- Animal records are inspected by the NVD only in cases when there are problems with the use of information systems.
- The evaluation report on the Dierentuinebesluit that was conducted by 'Research voor Beleid' concluded that many of the inspection criteria were difficult to quantify. MvA states that also the inspections of the NVD involve criteria that are difficult to quantify and that the process of inspection requires specific expertise and experience. The inspectors from the Ministry do not always have the necessary expertise required for their function. This lack of specialist expertise is the main reason that the NVD has initiated its own system of inspection. The NVD has, or has access to, a very broad range of knowledge concerning the animal husbandry requirements of specific species.
- The NVD sends copies of their inspection reports to the Dienst Regelingen to inform them about the results. This can be a useful and informative source for information for the Ministry's inspectorate who might not always have the required specialist knowledge to conduct their inspections adequately.
- Previously, zoos were required to inform the Ministry of any new enclosures that they intended to build. The Ministry would then check to make sure that new enclosures complied with the Dierentuinenbesluit. The NVD lobbied the Ministry to change this policy because it involved a complex process for each enclosure irrespective of its size and complexity. The policy at present is that zoos are required to inform the Ministry twice a year about all the new enclosures that have been built. The Ministry then checks these enclosures for compliance to the Dierentuinenbesluit. An exception is when new enclosures involve the construction of major

facilities; these must be checked and evaluated by the Ministry before construction commences. Whereas NVD inspections concern factors that are predominantly related to animal husbandry and animal welfare concerns, the inspections of the Ministry are far broader.

- The NVD can impose sanctions if a zoo does not meet the quality requirements of NVD inspections.

## Questions About the NVD and Conservation

- NNBF (NVD Natuurbeschermingsfonds) is a separate foundation that was established in 1996 by the NVD. The NVD members contribute to the NNBF. The total fund for 2010 amounts to approximately 135,000 Euros per year divided equally amongst the 15 members (see brochure 2010 for overview of in-situ conservation initiatives that were supported by the fund).
- The NVD collects records of the number of EEPs and ESBs that member zoos participate in. The value of a zoo's participation is not measured or quantified. The NNBF (Dutch Zoo Conservation Fund) is an organization that monitors the conservation results of zoos. EAZA have a recent study of the sustainability of EEPs and ESBs throughout Europe; the successes of specific breeding programs are assessed on an individual basis by EAZA.
- EAZA has raised 350,00 – 450,000 in funds for the conservation of Amphibians. This is an ex-situ initiative, as release cannot be conducted until the fungal infection problem in the wild abates. The EAZA Amphibian Conservation Fund provides funding for in situ projects.
- Apenheul contributed to the in-situ conservation initiative for the Golden Lion Tamarin in Brazilian rainforest.
- Artis contributed to the in-situ conservation initiative for Ibex in the Austrian Alps.
- Blijdorp and GaiPark is busy with the conservation of 'Korenwolvern' in South Limburg (not an EEP).

## General Subjects

- MvA questions whether zoos want government subsidies for the conservation work that they do. Subsidies can be complex involving many bureaucratic processes that impinge on the zoos domain of professional expertise.
- MvA states that although some privately funded zoos suggest that subsidies lead to unequal positions, it is generally acknowledged that subsidies also involve additional obligations and complexities. A factor of greater significance might be the location of the zoo. The population density of the geographical area in which a zoo is located is a factor that has a large influence on visitor numbers. The issue of subsidies, however, can be a source of friction amongst members now and then.
- Sometimes zoos worry when smaller zoos emerge in their area. There is obviously a finite market for zoos and so sometimes NVD zoos appeal to provincial government to prevent a new zoo from establishing itself in their area. Although the Dierentuinenbesluit sets standards, it is quite possible to open a new zoo with a minimal compliance to the law. It is also possible to establish a wild animal collection, for example, that is not open to the public for more than 6 days per year. In this case the collection would not be recognized as a zoo under current legislation and would not fall under the Dierentuinenbesluit. The problem with smaller zoos can be that if their quality standards are low (this may be the case but is certainly not always the case), then this can put the zoo community as a whole in a bad public light. It is therefore essential for the operators of zoos to make sure that the standards in all zoos are high, irrespective of NVD and EAZA membership. In the eyes of the general public, a zoo is a zoo large or small. Any disreputable practice by one zoo will have a negative impact on all zoos with regard to the public's perception. It is a concern that some smaller zoos may fall under the radar of legislation. For this reason, the NVD lobbies government to focus its attention on the inspection and enforcement of quality standards in non-associated zoos.
- The NVD has no recommendations or guidelines concerning financial stability, rates of solvency or risk management. The commercial exploitation of a zoo is the responsibility of zoo directors individually and the NVD has no role in providing advice concerning financial issues.
- The international implementation of the Balai Directive is a cause for concern for the NVD. Because some countries have accredited their zoos as being Balai compliant without any prior inspections having taken place, no one within the European zoo community can trust that the conditions of the Balai Directive have been adequately met. This can present uncertainties about the spread of potentially infectious diseases when animal transfers occur between European zoos. The Balai directive was aimed at making animal transfers easier by avoiding unnecessary periods in quarantine. As it stands, however, the implementation of the directive by some countries has led to an increased risk in the form of a potentially misplaced sense of trust in the Balai directive (92/65/EEC).
- The report Evaluation Dierentuinenbesluit recommends that Zoos communicate the goals and objectives of ex situ breeding programs to the wider audience in the correct way. The primary goal of breeding programs is to establish healthy and sustainable ex situ populations, possible reintroduction would be a welcome side effect.
- The 'Wet Dieren' will aim to integrate all legislation regarding the keeping of animal within a single law.
- EAZA has a process of screening for new members. It has recently been decided that all zoos will be screened retrospectively; at the time when some zoos joined EAZA there was no screening policy in place.
- The principle of not assigning a monetary value to animals is a principle imposed on zoo operators by the NVD. The principle is aimed at encouraging the exchange of animals according to EAZA's RCP and to separate commercial interests from animal welfare and conservation interests.

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## Notes from interview with Alide Vergossen-Otten

Ministry of EL&I, the Hague, interviewed from 13.00 to 14.30 on 17<sup>th</sup> November 2011

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### Questions about the Ministry of EL&I

- Ms Vergossen-Otten's department is responsible for drafting the AMVB (Algemene Maatregel van Bestuur – the Dierentuinenbesluit).
- The 'Dienst Regelingen' (DR) is a department within the Ministry of EL&I with an executive function. They are responsible for making sure that the legislation is correctly implemented, and, on behalf of the Secretary of State, the department acts as the licensing authority.
- Before a new zoo license is issued, the Accreditation Commission (Visitatie Commissie) of the 'Dienst Regelingen' inspects the applicant zoo that has requested a license to operate. The Accreditation Commission presents their findings and recommendations in a report to the 'Dienst Regelingen'. The 'Dienst Regelingen' then makes a final decision concerning the license application.
- EL&I is in a process of change. Initially there were two separate ministries; the Ministry of Agriculture, Nature and Fisheries (LNV) and the Ministry of Economic Affairs (EZ). These two ministries have been merged into a single ministry called EL&I. At the moment a number of General Directorates (Directoraten Generaal– DG's) are being reorganized within EL&I. Within the General Directorates there are a number of more specialized directorates. Ms Vergossen-Otten works for 'Voedsel, Dier en Consument' (Food Animals and Consumers), a directorate responsible for animal health and welfare legislation. The Flora and Fauna Act falls within the remit of a different directorate; 'Natuur en Platteland'. As of the 1<sup>st</sup> January 2012, the restructuring of these directorates will take on their final form.
- The new VWA (Voedsel en Waren Autoriteit) of EL&I and VWS (Ministerie van Volksgezondheid, Welzijn en Sport) has replaced the AID (Algemene Inspectie Dienst) of the LNV. Once a new zoo has passed the Accreditation procedure of Dienst Regelingen, further inspections are carried out by the new VWA to make sure that the zoo is compliant to the Dutch Zoo Licensing Act and a range of other standards governing the health and safety of food, public amenities and so forth. Municipal Councils will also have a range of inspection criteria to which a zoo must comply - fire regulations, for example.

### Questions about legislation and compliance

- European Commission Directive 1999/22/EC contains aspects that fall under the directorate of 'Voedsel, Dier en Consument' (Food, Animals and Consumers) as well as aspects that fall under the directorate of 'Natuur en Platteland' (Nature and Countryside).
- The European Commission has recently evaluated their policies on Animal Welfare. They are currently drafting a strategy for shaping future animal welfare policy. The Commission has invited all member states to present their wishes concerning animal welfare policy. At the end of 2011, the Commission will announce their strategy.
- The new 'Wet Dieren' (Animal Act) will govern what 'Keepers of Animals' (Houders van Dieren) are legally obliged to do or legally prohibited from doing in the Netherlands. The Wet Dieren will not cover animals that live in a wild state of nature. Wild animals kept in zoos will fall under the law as these animals, although wild, are kept and managed by humans. The Wet Dieren will incorporate the Dierentuinenbesluit and other acts of legislation governing kept animals within a single law.
- Looking specifically at the practical implications of applying the law and evaluating its general effectiveness, Research voor Beleid conducted research into the Dutch Zoo Licensing Act.
- Ms Vergossen-Otten explains that the standards for health and welfare are high in the Dutch Zoo Licensing Act (Dierentuinenbesluit). When the law was drafted there were already many zoos in the Netherlands. Zoo operators had to meet the requirements of the Accreditation Committee and the committee gave zoo operators sufficient time to meet the requirements.
- Ms Vergossen-Otten explains that the Dutch Zoo Licensing Act aimed at incorporating all of the requirements set out in EU directive 1999/22/EC without adding additional restraints that would make compliance even more difficult for zoo operators. It is not common practice to add additional restraints to a draft and the Dutch Zoo Licensing Act met the standards sufficiently. Especially where the smaller zoos are concerned. Ms Vergossen-Otten explains; although they may not be able to make contributions to conservation to the same extent as their larger counterparts, they are still required by the law to make some contribution or do research.
- In the past, the Accreditation Commission was composed of (1) a Chairman, (2) a Veterinary, (3) a Secretary, (4) an Educational specialist, and (5) a specialist from DKI (the Department of Knowledge and Innovation of the former LNV). Piet Bodingius, the specialist from DKI, has a lot of expertise in animal welfare and management. He is still a member of the Accreditation Committee for the 'Dienst Regelingen'. Sometimes a 6<sup>th</sup> specialist was added as an advisor to the Accreditation Committee. Such a specialist was determined by the context of a particular inspection, a specialist on primates, for example, would be useful for inspecting 'de Apenheul'.
- The size of the Accreditation Commission has been reduced and this has led to a reduction in the cost of accreditations. Piet Bodingius now functions as Chairman of the Accreditation Commission and there is still a secretary. Additional specialists and veterinary practitioners are hired only when needed. This measure has significantly reduced the cost of license applications.

- The government may not provide structural subsidies without approval from the EU committee. There are European Directives governing the issuing of subsidies. The EU does not permit 'Staatsteun'.

## Questions about the interests of zoos and organizations

- At the time that the Dutch Zoo Licensing Act was drafted, all the stakeholders were invited to participate in discussions. These stakeholders included 'Dier en Park', a representative body of the smaller non-EAZA/NVD affiliated zoos, animal rescue centres and animal protection organizations. There were very many participants in the discussions leading up to the drafting of the Dutch Zoo Licensing Act.

## General questions about zoos and funding

- When asked if zoos ought to receive a form of compensation for the 'public goods' that they provide by participating in EEPs and ESBs, Ms Vergossen-Otten suggested that participating in EEPs is also in the private interest of zoos because zoos need to maintain a supply of captive bred animals to stock their collections. This view presents an alternative purpose to participating in EEPs and ESBs that is contrary to the *important role of zoos* as acknowledged in directive 1999/EC/22 (the preservation of biodiversity). Although there could be public benefits for participating in breeding programs, viewed in this way, the interest is primarily private as opposed to public. Ms Vergossen-Otten believes that a policy of funding would not fit well within current policy. The subject of funding has not yet been discussed as input for shaping policy.
  - Ms Vergossen-Otten suggested to contact the directorate Natuur en Platteland. This directorate deals with wildlife, and the reintroduction of wildlife falls within their remit. For this reason, Ms Vergossen-Otten cannot say anything about funding or policy.
  - Ms Vergossen-Otten agrees that there is some ambiguity concerning the social role of zoos as institutions. An important role is education and the conservation of biodiversity. Although the Act meets the requirements of the directive 1999/EC/22, the Dutch Zoo Licensing Act does not acknowledge this role to the same extent as the EU Directive. Conservation and education are an important part of the Act, as is animal health and welfare.
  - Ms Vergossen-Otten sees the legal obligations of conservation, education and scientific research that are imposed by the Dutch Zoo Licensing Act as conditions that must be met in exchange for the right of operating a zoo. It is compliance to these goals that give the zoo the right to exist (bestaansrecht).
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## Notes from interview with Lesley Dickie

Director EAZA, Amsterdam, interviewed from 11.30 to 15.00 on 23<sup>rd</sup> November 2011

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### General questions about EAZA

- EAZA's annual budget is just 800,000. Members must actively contribute towards the work of EAZA. EAZA has to ensure that zoos do their fair share, otherwise you end up with zoos like Rotterdam who provide an enormous amount of conservation output and others that get away with doing very little. If all zoos did as much as Rotterdam, there would be a huge conservation output.
- EAZA communicates with the European Commission, Directorate General for Health and Consumers (DG SANCO). EU Animal by-products legislation, for example, meant that if you had a rabbit in your collection that was put on view to the public, then this rabbit could not have been fed to carnivores. Zoo animals were categorized as category one whereby you could not feed one zoo animal to another.
- There is a public interest in what zoos do, people are especially concerned about animal welfare. Zoos need public acceptance in order to operate and if a member zoo creates a bad impression to the general public, then EAZA can and will take measures to protect the public image of zoos in general. All members have a strong duty of care towards the animals.

### Questions about EAZA and ex-situ conservation

- LD believes that we are conserving animal species for the good of humanity. These are self-interested motives and present generations have a duty to preserve biodiversity for the good of future generations. LD sees no problem with the anthropocentric motive for conservation. When discussing an article in which an author suggested that it would not matter if the Giant Panda became extinct, LD suggested that we also have a responsibility of care towards an entity that has taken millions of years to evolve.
- EAZA conduct research into the conservation output of zoos. Member zoos can request this information so that they can compare their own conservation output with national and regional averages. Dutch NVD-EAZA members are over-performing compared to European averages.
- As a result of time demands, Marc Damen had to give up the coordination of the Giraffe EEP. LD explained that it was very difficult to find a replacement as MD had performed this task so extremely well.
- Because of the large amount of work involved, it sometimes happens that EEPs are left without a coordinator. EAZA can't force people to take on these voluntary tasks.
- EAZA organize training days on Institutional Collection Planning to make sure that animals within collections have a useful purpose. Some species may be kept for conservation goals through captive breeding programs, other species may have educational value within the collection. LD mentions Chester zoo as having excellent guidelines on collection planning, Mark Pilgrim, Director of Chester zoo was actively involved in the training.
- Collection Planning Tasks have been quantified by institution and by country. Team EAZA is membership driven (the office does not do everything). It is not fair to just pay your membership fee without making significant contributions. Executive office maintains important links with partners, such as the IUCN for example.
- TAGs conduct space surveys in zoos. The availability of space is one of the criteria for creating RCPs. For some taxa there may be a waiting list for a species due to space limitations.
- EAZA has released a new Euthanasia statement that is open to the public. There is evidence that when you contracept certain species to control numbers, that contraception can be detrimental to animal welfare. Breeding is an important aspect of natural behaviour and for maintaining natural social groups. Some taxa experience increases in disease, tumors and uterine pathologies as a result of not being allowed to breed. EAZA advocates natural breeding with responsible policy for dealing with surplus animals. The aim is place surplus animals within other EAZA-affiliated collections. If the animal would end up in a poor welfare condition, then EAZA advocates Euthanasia as a preferable alternative to compromising standards of animal welfare. Some people find this unpalatable. Legislation in Germany has led some zoos to be prosecuted for this practice.
- Research was conducted into the genetic purity of Amor Tigers. It was found that some tigers were hybrids going back two generations. It was decided not to breed with these hybrid animals (Magdeburg Zoo). The female tiger was already pregnant and EAZA had to consider that although the cubs still had an education value, they would take up valuable space needed for the protection of this critically endangered species. After many discussions and consultation with the relevant authorities, Magdeburg Zoo decided to euthanize the cubs at birth. Animal welfare activists then started a legal case against Magdeburg Zoo. The Director of the zoo was successfully prosecuted because under German law, one may only euthanize animals when it is reasonable. Reasonable is not defined under German law – the ruling suggests that it is not reasonable under German law to euthanize animals for conservation purposes. Members of the IUCN wrote letters of support claiming that they fully support zoos in this. The case raised many ethical issues in Germany and has a consequence for effective conservation management. German legislation allows euthanasia for many different reasons, but here, the ruling stemmed from opinion rather than fact; tigers are cute.
- EAZA has an informal system called Spartacus. If a member is attacked for performing euthanasia after the appropriate consultation, then other member zoos step forward and explain that they also follow this practice.
- Animal rights groups can present simple statements 'Cute Tiger Cub Killed By Nasty Zoo', whereas the goals of

- zoos and EAZA are much more complex, confusing and subtle to explain to the public.
- All the governments of the world are signing up to targets for the protection of biodiversity and zoos help them achieve these targets, whether the governments recognize this or not. For example, a recent article showed the massive decline in taxa from the IUCN red list ratings for amphibians. Zoos can breed amphibians, but who will give zoos the resources to do that? Zoos can do this using their own resources, and many EAZA members do just that, but where is the support for that? There are some grants available for 'life funding', but grant application procedures are complex, there is much competition, and ex-situ conservation is not seen as a priority.
- ESBs and EEPs involve different levels of animal management. Until recently, ESB coordinators didn't make management decisions. EEP is the highest and strictest level of management. If an EEP coordinator says that X is going to happen, then member zoos must follow the instructions of the coordinator unless the zoo presents very strong arguments and reasons against the instruction. With ESBs, the coordinator makes a recommendation that is less binding than an EEP decision. What generally happens is that a breeding program starts off as an ESB. Once the program becomes established, it may be transformed into an EEP. The establishment of an EEP also depends on the needs of a species. If a species needs strict management then an ESB may be changed into an EEP.
- Once an EEP reaches 'carrying capacity', the maximum numbers required for conserving the species, the EEP then has to closely manage population numbers whilst preserving genetic diversity in the captive population. EAZA has two training programs for EEP coordinators to show them how small populations can be managed.
- In the discussion on the choice between contraception and euthanasia as a means of population management, there is a difficulty in identifying a clear line amongst species on this policy. As the case of Magdeburg zoo showed, euthanizing carnivores led to much public controversy. Euthanizing a primate, although there may be good reasons on animal welfare grounds or in terms of zoo-space management, would be out of the question. The emotional aspects connected to such decisions are relevant factors. Decisions are not purely based on logic and reason. For keepers and veterinary staff it is sometimes a lot to ask of them that an animal be euthanized.

## Questions about EAZA and education

- Despite the potential for minimal compliance to the Zoo Licensing Act, LD strongly believes that all zoos should take part in education, scientific research and conservation. The obligation, in her view, is proportional to the size of the zoo. The extent of obligation is determined by the experience of the zoo inspector. An inspector at ZSL, for example, will have much higher expectations of London zoo when compared to small operators. Inspectors will want to see very high standards of education, criteria for evaluating education, participation in in-situ conservation as well as ex-situ and so forth.
- When discussing the role of education, LD stated that what she wants when people visit zoos is for them to feel something. This is more than the presentation of factual information about the habitats and behaviours of animal species. What matters is not that people go away knowing what the gestation period is of an elephant, for example, but rather, that people go away caring that elephants exist.

## Questions about EAZA and scientific research

- EAZA (Executive Office) provides services such as collating and disseminating information (zooquaria magazine), facilitating committees, and strategic thinking.
- If research conducted in one member zoo has a bearing on the management and husbandry practices of a species, then the information is disseminated to other zoos keeping the species via the EEP coordinator and the TAG.
- There is an ongoing project at the moment involving the IUCN's Species Survival Commission - EAZA wants to connect their TAGs (Taxon Advisory Groups) to SSC's specialist groups to stimulate closer cooperation and cross-over on research.
- EAZA has recently earmarked some funds for the establishment of a research journal with a section on 'husbandry evidence'. It is intended for articles that, although potentially useful for keepers of specific species, are insufficiently academic to find their way into peer reviewed academic publications. The aim is to disseminate 'low end' research information that may have a practical value for zoos in terms of best husbandry practice. EAZA's Research Committee is busy with this project will lead to the establishment of an e-journal to disseminate practical knowledge on husbandry. This open-access journal can be of great value, especially in countries where the costs of academic journals may be prohibitive; Zoo Biology, for example, is a great journal but it is also very expensive. The economies of some countries cannot afford access to some important sources of scientific knowledge.

## Questions about zoo funding

- In collaboration with the European Commission, Kew Gardens and a French partner organization, EAZA has made a proposal for improving ex-situ conservation initiatives.
- EAZA has been considering the value of establishing a centralized amphibian-breeding centre where all threatened species are conserved. This would have two aims; one aim would be to conserve amphibian species and a second aim would be to provide member zoos with exhibition animals to fulfill their education remit. A centralized solution would be much more cost effective.
- The TEEP Reports (?) from the European Central Bank show that the loss of biodiversity represents financial losses that are far greater than the costs involved in protecting biodiversity. The EU 2010 targets on biodiversity were not met and now all member states have signed up to the 2020 targets. Are these paper targets? How serious are we about them?
- There are a lot of potential sources of funding for in situ conservation but there are very few accessible sources

of funding for ex-situ conservation work; even if ex-situ breeding is an IUCN mandated action. While some species won't benefit from ex-situ work because the real issue is a wild issue, other species can benefit greatly from ex-situ programmes. The zoos themselves have to find the money somehow.

- LD is unsure if animal welfare campaigners would support the funding of zoos based on the argument that increases of funding would facilitate animal welfare (enrichment programmes, etc).
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## Notes from interview with John Regan

Director John Regan Associates Ltd., Interviewed from 12.00 to 13.00 on 9<sup>th</sup> July 2012

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### Question about CCZ and the Manifesto for Zoos

- The first aim of the Manifesto for Zoos was to arm senior champions with material needed to recover VAT charges. There were some legal complications, but the initiative led to somewhere between 30 and 40 million pounds of VAT charges being returned to UK zoos; Chester Zoo received approximately 8 million, ZSL received about 7 million.
- The CCZ won its case at the European Court of Justice to align UK VAT rates with European equivalents for charitable zoos. They managed to recover VAT charged since 1991. The initiative changed the financial landscape for many organisations.
- Under European law, VAT exemption is different to a zero VAT rate. In the UK, each organisation had to make a decision about its financing. Institutions that were about to make large capital investments would be disadvantaged by VAT exemption as they would not be able to claim back VAT on the cost of investments.

### Question about Financial Dynamics

- There is a considerable difference in the financial dynamics of operating a charitable zoo compared to a fully commercial institution. It is very attractive in the UK to establish a zoo as a charitable trust. Charitable zoos do not pay corporation tax, are exempt from VAT on admissions, and, as a charity, zoos are able to attract 'Gift Aid'.
- Originally, the entrance fee to any site that was run by a charity for wildlife or heritage was considered a gift from the public. As a gift, no taxes were levied on revenues from admissions. The government wanted to tighten regulations, and as a consequence, the law was subsequently changed.
- Now charitable zoos must prove that admission fees are actually intended as gifts. To solve the problem, charitable zoos offered two different entrance fee rates, one for 15 pounds, for example, and the other for 16 pounds. The 16-pound rate included a 1-pound gift. When visitors opt for the 16-pound entrance fee including the gift, then the complete entrance fee is counted as Gift Aid and no tax is charged. The public is informed of the implications for choosing a tax-free gift as a payment option.
- Gift Aid does not exist in other European countries and the advantages of being a charitable trust or an NGO is different in every European member-State. The term charity is only used in the UK, in the Netherlands the term 'Stichting' translates as a foundation with a non-profit mission.

### Question about Zoo Funding

- Artis were part of a pan-European six-member partnership to apply for EC funding under the 'Intereg' project. If different institutions across Europe have a common problem to address the value of these interests apply at a European level as opposed to a National level only. Intereg is an initiative to bring European institutions together to solve jointly shared problems.
- JRA's role was twofold. On the one hand JRA explained the benefits, problems and interests of zoos to politicians in Brussels, on the other hand, JRA looked into all of the funding opportunities within the European Commission and gave feedback to zoo operators concerning these opportunities.
- Within DG Environment there is the 'Life Plus' programme; a series of funding programmes exclusively aimed at EU environmental matters. If a zoo wanted to conduct an in-situ conservation project for a European species, then depending on the priority of the species and the competition throughout Europe, the potential of funding was available from the Life Plus programme.
- Another programme called 'Information and Communication' provides funding to create awareness for European environmental issues.
- Another source of funding was 'FP7', a research initiative in the European Union. Zoos can apply for scientific research funds from FP7.
- Outside the European Union, 'Aidco' is a source of funding for development aid projects. Aidco has a funding programme for NGO's involved in environmental issues. Zoos can apply for subsidies aimed at the economic development of an impoverished region through the establishment, for example, of bio-tourism and in-situ conservation. Aidco's projects involve the protection of biodiversity for the economic benefit of communities.
- The best way to support zoos, as occurred during the previous labour government, is for DEFRA to provide project-specific capital. Under the old system, the UK had 6 RDAs (Regional Development Agencies) that played an important role. Regionalism, the devolvement of central governmental powers to regional authorities, was seen as a good method of addressing regional problems and identifying opportunities for regional development. Under this scheme, RDAs could be approached for the capital funding of major zoo projects.
- The success of funding applications depended on establishing a broad interest base. The funds were not primarily aimed at boosting recreation or tourism, but rather, the projects were intended to provide a boost to local and regional economies as a whole.
- BIAZA want to emphasize the value of zoos as instruments of environmental and species conservation. (The biz in addition to DEFRA – zoos create a variety of public goods and the institution ought to be recognized as such –



this section was unclear from our interview). Professor Drummond Bone, Master of Balliol College Oxford is the president of BIAZA and might be interested in the subject of this thesis.

- The charitable zoo model in the UK is financially robust. The main things that concern zoos in the UK are problems such as foot and mouth that would require the closure of the zoo to prevent the spread of infectious disease.
  - Coming from an Arts and Heritage background, John Regan agrees with the philosophical argument that State subsidies can lead to a culture of dependence. Zoos in the UK do not hold out a begging bowl for State subsidies and deserve credit for their financial independence and commercial acumen.
  - Were a structural subsidy offered to UK zoos, it might be the case that many zoos would refuse such a subsidy through a concern that structural subsidies might make them financially dependent. Project subsidies and tax concessions are a different matter, but structural subsidies are certainly not pursued in the UK.
  - The success of funding depends on establishing connections between the interests of institutions. John Regan gives an example of a 5 million pound funding request for a tropical house in North Wales. JRA managed to bring on board a local University specializing in optical sciences. The tropical house presented a perfect opportunity for celebrating 'light and life'. Instead of narrowly focussing on local tourism, the project was presented as a valuable means of promoting Welsh cultural heritage in general. An important success factor is the ability to think laterally to identify possible connections that can bring institutions together under a common goal.
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# APPENDIX IV

Blijdorp's Participation in EAZA EEP / ESB Breeding Programmes

# Participation Rotterdam Zoo in EAZA Breeding Programmes (EEPs) and Studbooks (ESBs)

Programme (updated till December 2010)	Year of establishment	AS OF																					
		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>EAZA Terrestrial Invertebrate TAG</b>																							
EEP	Partula spp.																						
EEP	Fregate Island beetle																						
EEP	Lesser Antilles Hercules beetle																						
<b>EAZA Fish and Aquatic Invertebrate TAG</b>																							
ESB	Zebra shark																						
ESB	Sandbar shark																						
ESB	Blue spotted stingray																						
ESB	Blue spotted maskray																						
ESB	Spotted eagle ray																						
ESB	Long-snouted seahorse																						
ESB	Short-snouted seahorse																						
<b>EAZA Amphibian TAG</b>																							
ESB	Blue poison dart frog																						
ESB	Mountain chicken frog																						
<b>EAZA Reptile TAG</b>																							
EEP	Egyptian tortoise																						
ESB	Galapagos giant tortoise																						
ESB	Radiated tortoise																						
ESB	Pancake tortoise																						
ESB	Spliny hill turtle																						
ESB	Giant Asian pond turtle																						
ESB	Malayan box turtle																						
ESB	Black marsh turtle																						
ESB	Malaysian giant turtle																						
EEP	Chinese alligator																						
ESB	False gavia																						
ESB	African dwarf crocodile																						
ESB	Cuban crocodile																						
EEP	Yellow-headed day gecko																						
EEP	Gila monster																						
EEP	Mexican beaded lizard																						
ESB	Rhinoceros iguana																						
ESB	Utilla spiny-tailed iguana																						
ESB	Fiji banded iguana																						
ESB --> EEP	Komodo dragon																						
ESB	Green tree monitor																						
EEP	Cuban boa																						
EEP	Madagascan tree boa																						
ESB	Madagascar tree boa																						
ESB	San Francisco garter snake																						
<b>EAZA Reptile TAG</b>																							
ESB	Southern cassowary																						
ESB	Lesser rhea																						
<b>EAZA Penguin TAG</b>																							
EEP	Black-footed penguin																						
EEP	Humboldt penguin																						
ESB	King penguin																						
ESB	Rockhopper penguin																						
ESB	Gentoo penguin																						
<b>EAZA Pelecaniformes TAG</b>																							
EEP	Dalmatian pelican																						
ESB	Pink-backed pelican																						
EEP	Bank cormorant																						
ESB	Little pied cormorant																						













Programme (updated till December 2010)	Year of establishment	AS OF											
		Jan	Jan	Jan	Jan	Jan	Jan	Jan	Jan	Jan	Jan	Jan	Jan
<b>EAZA Field TAG</b>													
Southern cheetah	1992												
Northern cheetah	1992												
Asian golden cat	1993												
Sand cat	2000												
Black-footed cat	1994												
Oncilla	2004												
Margay	1996												
Eurasian lynx	2002												
Geoffroy's cat	1996												
Pallas' cat	1997												
Rusty-spotted cat	1994												
Fishing cat	1998												
Clouded leopard	1990												
Asian lion	1994												
Jaguar	2000												
North Chinese leopard	2003												
Amur leopard	1993												
Persian leopard	1985												
Sumatran tiger	1985												
Amur tiger	1985												
Snow leopard	1987												
<b>EAZA Marine Mammal TAG</b>													
South American fur seal	1999												
Patagonian sealion	1999												
California sealion	1993												
Grey seal	2000												
Bottle-nosed dolphin	1994												
Caribbean manatee	2002												
<b>EAZA Elephant TAG</b>													
Asian elephant	1991												
African elephant	1993												
<b>EAZA Equid TAG</b>													
Somali wild ass	1989												
Przewalski's horse	1985												
Grey's zebra	1990												
Turkmenian kulan	1989												
Persian onager	1989												
Hartmann's mountain zebra	1992												
<b>EAZA Rhino TAG</b>													
White rhinoceros	1992												
Black rhinoceros	1990												
Indian rhinoceros	1990												
<b>EAZA Tapir and Hippo TAG</b>													
Malayan tapir	1992												
Lowland tapir	1996												
Pygmy hippopotamus	1992												
Common hippopotamus	2006												
<b>EAZA Pig and Peccary TAG</b>													
Babirusa	1985												
Visayan warty pig	2007												
Warthog	2000												
Red river hog	2001												



# APPENDIX V

European Commission Directive 1999/22/EC

**COUNCIL DIRECTIVE 1999/22/EC**  
**of 29 March 1999**  
**relating to the keeping of wild animals in zoos**

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 130s(1) thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the Economic and Social Committee <sup>(1)</sup>,

Acting in accordance with the procedure laid down in Article 189c of the Treaty <sup>(2)</sup>,

Whereas Council Regulation (EEC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein <sup>(3)</sup> requires evidence of the availability of adequate facilities for the accommodation and care of live specimens of a great many species before their importation into the Community is authorised; whereas that Regulation prohibits the display to the public for commercial purposes of specimens of species listed in Annex A thereof unless a specific exemption was granted for education, research or breeding purposes;

Whereas Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds <sup>(4)</sup>, and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora <sup>(5)</sup>, prohibit the capture and keeping of and trade in a great number of species, whilst providing for exemptions for specific reasons, such as research and education, repopulation, reintroduction and breeding;

Whereas the proper implementation of existing and future Community legislation on the conservation of wild fauna and the need to ensure that zoos adequately fulfil their important role in the conservation of species, public education, and/or scientific research make it necessary to provide a common basis for Member States' legislation with regard to the licensing and inspection of zoos, the keeping of animals in zoos, the training of staff and the education of the visiting public;

Whereas action at the Community level is required in order to have zoos throughout the Community contributing to the conservation of biodiversity in accordance with the Community's obligation to adopt measures for *ex situ* conservation under Article 9 of the Convention on Biological Diversity;

Whereas a number of organisations such as the European Association of Zoos and Aquaria have produced guidelines for the care and accommodation of animals in zoos which could, where appropriate, assist in the development and adoption of national standards,

HAS ADOPTED THIS DIRECTIVE:

*Article 1*

**Aim**

The objectives of this Directive are to protect wild fauna and to conserve biodiversity by providing for the adoption of measures by Member States for the licensing and inspection of zoos in the Community, thereby strengthening the role of zoos in the conservation of biodiversity.

*Article 2*

**Definition**

For the purpose of this Directive, 'zoos' means all permanent establishments where animals of wild species are kept for exhibition to the public for 7 or more days a year, with the exception of circuses, pet shops and establishments which Member States exempt from the requirements of this Directive on the grounds that they do not exhibit a significant number of animals or species to the public and that the exemption will not jeopardise the objectives of this Directive.

*Article 3*

**Requirements applicable to zoos**

Member States shall take measures under Articles 4, 5, 6 and 7 to ensure all zoos implement the following conservation measures:

<sup>(1)</sup> OJ C 204, 15.7.1996, p. 63.

<sup>(2)</sup> Opinion of the European Parliament of 29 January 1998. (OJ C 56, 23.2.1998, p. 34), Council Common Position of 20 July 1998 (OJ C 364, 25.11.1998, p. 9), and Decision of the European Parliament of 10 February 1999 (not yet published in the Official Journal).

<sup>(3)</sup> OJ L 61, 3.3.1997, p. 1. Regulation as last amended by Commission Regulation (EC) No 2307/97 (OJ L 325, 27.11.1997, p. 1).

<sup>(4)</sup> OJ L 103, 25.4.1979, p. 1. Directive as last amended by Directive 97/49/EC (OJ L 223, 13.8.1997, p. 9).

<sup>(5)</sup> OJ L 206, 22.7.1992, p. 7. Directive as last amended by Commission Directive 97/62/EC (OJ L 305, 8.11.1997, p. 42).

- participating in research from which conservation benefits accrue to the species, and/or training in relevant conservation skills, and/or the exchange of information relating to species conservation and/or, where appropriate, captive breeding, repopulation or reintroduction of species into the wild,
- promoting public education and awareness in relation to the conservation of biodiversity, particularly by providing information about the species exhibited and their natural habitats,
- accommodating their animals under conditions which aim to satisfy the biological and conservation requirements of the individual species, *inter alia*, by providing species specific enrichment of the enclosures; and maintaining a high standard of animal husbandry with a developed programme of preventive and curative veterinary care and nutrition,
- preventing the escape of animals in order to avoid possible ecological threats to indigenous species and preventing intrusion of outside pests and vermin,
- keeping of up-to-date records of the zoo's collection appropriate to the species recorded.

#### Article 4

#### Licensing and inspection

1. Member States shall adopt measures for licensing and inspection of existing and new zoos in order to ensure that the requirements of Article 3 are met.
2. Every zoo shall have a licence within four years after the entry into force of this Directive or, in the case of new zoos, before they are open to the public.
3. Each licence shall contain conditions to enforce the requirements of Article 3. Compliance with the conditions shall be monitored *inter alia* by means of regular inspection and appropriate steps shall be taken to ensure such compliance.
4. Before granting, refusing, extending the period of, or significantly amending a licence, an inspection by Member States' competent authorities shall be carried out in order to determine whether or not the licensing conditions or proposed licensing conditions are met.
5. If the zoo is not licensed in accordance with this Directive or the licensing conditions are not met, the zoo or part thereof:

- (a) shall be closed to the public by the competent authority; and/or
- (b) shall comply with appropriate requirements imposed by the competent authority to ensure that the licensing conditions are met.

Should these requirements not be complied with within an appropriate period to be determined by the competent authorities but not exceeding two years, the competent authority shall withdraw or modify the licence and close the zoo or part thereof.

#### Article 5

Licensing requirements set out in Article 4 shall not apply where a Member State can demonstrate to the satisfaction of the Commission that the objective of this Directive as set out in Article 1 and the requirements applicable to zoos set out in Article 3 are being met and continuously maintained by means of a system or regulation and registration. Such a system should, *inter alia*, contain provisions regarding inspection and closure of zoos equivalent to those in Article 4(4) and (5).

#### Article 6

#### Closure of zoos

In the event of a zoo or part thereof being closed, the competent authority shall ensure that the animals concerned are treated or disposed of under conditions which the Member State deems appropriate and consistent with the purposes and provisions of this Directive.

#### Article 7

#### Competent authorities

Member States shall designate competent authorities for the purposes of this Directive.

#### Article 8

#### Penalties

Member States shall determine the penalties applicable to breaches of the national provisions adopted pursuant to this Directive. The penalties shall be effective, proportionate and dissuasive.

*Article 9***Implementation**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this directive not later than 9 April 2002. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such a reference shall be laid down by the Member States.

2. Member States shall communicate to the Commission the main provisions of national law which they adopt in the field covered by this Directive.

*Article 10***Entry in force**

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

*Article 11*

This Directive is addressed to the Member States.

Done at Brussels, 29 March 1999.

*For the Council*

*The President*

F. MÜNTEFERING

# APPENDIX VI

## The Dutch Zoo Licensing Act (Dierentuinenbesluit)

*Besluit van 19 april 2002, houdende eisen aan het houden, huisvesten, verzorgen en tonen van wilde dieren in dierentuinen (Dierentuinenbesluit) —  
Wij Beatrix, bij de gratie Gods, Koningin der Nederlanden, Prinses van Oranje-Nassau, enz. enz. enz. Op de voordracht van Onze Minister van Landbouw, Natuurbeheer en Visserij van 11 december 2001, no. TRCJZ/2001/17 402, Directie Juridische Zaken; Gelet op richtlijn nr. 1999/22/EG van de Raad van de Europese Unie van 29 maart 1999 betreffende het houden van wilde dieren in dierentuinen (PbEG L 94) en gelet op de artikelen 35, 38, 45, 65 en 111 van de Gezondheids- en welzijnswet voor dieren en artikel 3, eerste lid en derde tot en met achtste lid, van de Wet op de dierenbescherming; De Raad van State gehoord (advies van 29 maart 2002, nr. W11.01 0674/V); Gezien het nader rapport van Onze Minister van Landbouw, Natuurbeheer en Visserij, van 15 april 2002, no. TRCJZ/2002/4751, Directie Juridische Zaken; Hebben goedgevonden en verstaan:*

### § 1. Algemeen

**Artikel 1** In dit besluit wordt verstaan onder:

- a.** dierentuin: een permanente inrichting waar levende dieren van wilde diersoorten worden gehouden om gedurende ten minste zeven dagen per jaar te worden tentoongesteld aan het publiek, met uitzondering van inrichtingen waar maximaal 10 diersoorten worden gehouden, niet zijnde diersoorten die op grond van de artikelen 4 en 5 van de Flora- en faunawet zijn aangewezen, circussen en dierenwinkels;
- b.** wilde diersoorten: alle van nature in het wild levende diersoorten met uitzondering van diersoorten die voorkomen in de bijlage bij het Besluit aanwijzing voor productie te houden dieren en honden en katten;
- c.** wet: Gezondheids- en welzijnswet voor dieren;
- d.** diergroep: dieren levend in een groep, die gelet op hun omvang en kenmerken afzonderlijk niet te individualiseren zijn;
- e.** dierenverblijf: ruimte waar dieren worden gehouden.

**Artikel 2** Voor de toepassing van dit besluit worden als soorten en categorieën van dieren als bedoeld in de artikelen 35, eerste lid, 38, eerste lid, en 45, eerste lid, van de wet en artikel 3, eerste en vierde lid, van de Wet op de dierenbescherming aangewezen wilde dieren uitsluitend voorzover zij in dierentuinen worden gehouden. —

## **§ 2. Vergunning**

**Artikel 3** Het is verboden een dierentuin te exploiteren op een wijze die niet overeenstemt met de artikelen 4 en 7 tot en met 13.

### **Artikel 4**

1. De exploitant van een dierentuin beschikt over een door Onze Minister verstrekte vergunning.
2. De vergunning, bedoeld in het eerste lid, wordt overeenkomstig de procedure in het derde tot en met het zesde lid verleend indien is voldaan aan de artikelen 7 tot en met 13.
3. De exploitant van een dierentuin vraagt een vergunning aan bij Onze Minister met gebruikmaking van een daartoe bestemd formulier dat op verzoek ter beschikking wordt gesteld.
4. Alvorens een vergunning wordt verleend, aanzienlijk gewijzigd of geweigerd, wordt een dierentuin door Onze Minister geïnspecteerd.
5. Aan een vergunning als bedoeld in het eerste lid kunnen voorschriften worden verbonden. De vergunning kan onder beperkingen worden verleend. Tot de voorschriften kan behoren de verplichting specifieke voorzieningen aan te brengen om de dierentuin of bepaalde gedeelten van de dierentuin in overeenstemming te brengen met de bepalingen van dit besluit.
6. Aan een vergunning worden voorschriften en beperkingen verbonden, die strekken tot nadere uitwerking van de in het besluit gestelde eisen. De aan de vergunning verbonden voorschriften en de beperkingen waaronder deze is verleend, kunnen worden gewijzigd, aangevuld of ingetrokken.
7. Onze Minister beslist binnen 13 weken na de ontvangst van een aanvraag als bedoeld in het derde lid.
8. Onze Minister houdt een register bij van de vergunningen.
9. Een voor een dierentuin verleende vergunning geldt tevens voor veranderingen van een dierentuin die niet overeenkomstig het vierde lid zijn geïnspecteerd voorafgaand aan de vergunningverlening, onder voorwaarde dat:
  - a. deze veranderingen geen wijziging van de vergunning eisen, maar voldoen aan de eisen van dit besluit en de aan de vergunning verbonden beperkingen en voorschriften;
  - b. het voornemen tot het uitvoeren van de verandering door de vergunninghouder schriftelijk aan Onze Minister is gemeld;
  - c. Onze Minister aan de vergunninghouder schriftelijk heeft verklaard dat de voorgenomen verandering voldoet aan onderdeel a.

**Artikel 5** De vergunningaanvraag bevat in ieder geval de volgende gegevens:

- a. het aantal en de soorten te houden wilde dieren;
- b. het aantal dagen per jaar dat de diersoorten worden tentoongesteld aan publiek;
- c. informatie over het aantal personeelsleden en de kwalificatie;
- d. een plattegrond met een weergave van de afmeting en inrichting van de dierenverblijven en de daarin verblijvende diersoorten;
- e. een afschrift van het beleidsprotocol als bedoeld in artikel 12, eerste lid.

## **§ 3. Eisen aan houden, huisvesten, verzorging en tonen van dieren**

### **Artikel 6**

1. Het houden van dieren in een dierentuin geschiedt overeenkomstig artikel 7.
2. Het huisvesten van dieren in een dierentuin geschiedt overeenkomstig artikel 8.
3. Het verzorgen van dieren in een dierentuin geschiedt overeenkomstig de artikelen 9, 10 en 11.
4. Het tonen van dieren aan het publiek geschiedt slechts indien wordt voldaan aan de eisen gesteld in de artikelen 12 en 13.

**Artikel 7** De dierentuin houdt de dieren op zodanige wijze dat:

- a. het soorteigen gedrag van de diersoorten wordt gerespecteerd en zoveel mogelijk in stand gehouden;
- b. de bewegingsvrijheid van de diersoorten niet op zodanige wijze wordt beperkt dat het dier daardoor onnodig lijden of letsel wordt toegebracht;
- c. de sociale levenswijze van de dieren in het wild zo veel mogelijk tot uitdrukking komt, rekening houdend met de mogelijkheden van het individuele dier;
- d. de dieren voldoende ruimte hebben en de bezetting van de verblijven de materiële capaciteit van de dierentuin niet overschrijdt;
- e. rekening wordt gehouden met de behoeften van het individuele dier.



## Artikel 8

1. Bij de inrichting van de dierenverblijven wordt rekening gehouden met:
  - a. het soorteigen bewegingsgedrag, door het verblijf te voorzien van zoveel mogelijk elementen lijkend op de natuurlijke leefomgeving;
  - b. het klimaat waarin de diersoort van nature leeft en het soorteigen bioritme, door het verblijf te voorzien van adequate beschutting en bescherming tegen voor de desbetreffende diersoort extreme weersomstandigheden en een adequate klimaatbeheersing en verlichting;
  - c. het soorteigen sociale gedrag, door het verblijf bij solitaire huisvesting te voorzien van een voor de diersoort geschikte rusten schuilplaats en bij groepshuisvesting te voorzien van een rust- en schuilplaats die een dier de mogelijkheid biedt zich af te zonderen van de andere dieren;
  - d. het soorteigen paringsgedrag, door de dieren op adequate wijze van elkaar te scheiden of in het verblijf waarin de dieren gedurende de paringstijd worden gehouden voorzieningen aan te brengen waardoor het soorteigen paringsgedrag mogelijk wordt gemaakt;
  - e. het soorteigen uitscheidingsgedrag, door het verblijf indien nodig te voorzien van een voor de diersoort geschikte mestplaats.
2. De dierenverblijven zijn voorzien van een adequate afscheiding die het uitbreken van de dieren voorkomt en een veilige barrière tussen de dieren en het publiek vormt.
3. Het materiaal dat wordt gebruikt voor de dierenverblijven is niet schadelijk voor het dier.
4. Van de voorschriften, bedoeld in het eerste lid onderdelen a, b en c en [artikel 7, onderdeel d](#), kan tijdelijk worden afgeweken indien er opvang wordt geboden aan een dier of diergroep waarvoor voldoende deskundigheid aanwezig is, maar waardoor de capaciteit van de dierentuin wordt overschreden en de opvang niet elders op betere wijze kan plaatsvinden.

## Artikel 9

1. De verzorging is afgestemd op de behoeften van het dier.
2. De conditie en de gezondheid van het dier worden dagelijks gecontroleerd.
3. Een dier wordt verzorgd door een voldoende aantal personen, dat beschikt over de nodige kennis, vaardigheden en vakbekwaamheid.
4. Een dier dat ziek of gewond is, wordt op passende wijze verzorgd. Indien de zorg geen verbetering in de toestand van het dier brengt, wordt zo spoedig mogelijk een dierenarts geraadpleegd.
5. Een ziek of gewond dier wordt zo nodig afgezonderd in een passend onderkomen.
6. De dierentuin beschikt over een quarantainevoorziening en een behandelruimte.

## Artikel 10

1. Een dier heeft toegang tot een toereikende hoeveelheid schoon water of kan op een andere wijze aan zijn behoefte aan water voldoen.
2. Een dier krijgt een toereikende hoeveelheid gezond en voor de soort en de leeftijd geschikt voeder, zodat het in goede gezondheid blijft en aan zijn voedingsbehoeften wordt voldaan.
3. Het toedienen van het voeder is afgestemd op de fysiologische behoeften van de diersoort en stimuleert de natuurlijke wijze van voedselvergaren.

## Artikel 11

1. De verblijven worden zo vaak als nodig grondig gereinigd en ontsmet.
2. Zwemwater, stro of ander bodembedekkend materiaal wordt naar behoefte van de diersoort vervangen.

## § 4. Beleidsprotocol en registratie

### Artikel 12

1. De dierentuin beschikt over een beleidsprotocol met daarin opgenomen een eenduidig beleid met betrekking tot de in het tweede tot en met het zesde lid genoemde onderwerpen en handelt dienovereenkomstig.
2. De dierentuin bevordert de instandhouding van de diersoorten door het uitvoeren van ten minste een van de volgende activiteiten:
  - a. de deelname aan onderzoek dat gunstige gevolgen heeft voor het behoud van de diersoorten, de opleiding van het personeel in voor het onderzoek relevante vaardigheden en de uitwisseling van de verkregen informatie met andere dierentuinen;
  - b. zoveel mogelijk deelnemen aan bestaande programma's met betrekking tot het fokken van dieren in gevangenschap, het herstel van de populatie of het herintroduceren van soorten in

- hun natuurlijke omgeving.
3. Bij de transactie van dieren verzekert de dierentuin zich ervan dat de ontvangende partij de dieren houdt, huisvest en verzorgt op een wijze die vergelijkbaar is met de eisen uit dit besluit.
  4. De dierentuin beschikt over een noodplan met betrekking tot de ontsnapping van dieren.
  5. De dierentuin beschikt over een protocol met betrekking tot de voedingsaspecten, bedoeld in [artikel 10](#) en de preventieve en curatieve diergeneeskundige verzorging van de dieren, dat is opgesteld onder begeleiding van een dierenarts.
  6. De dierentuin beschikt over een informatief en educatief programma met betrekking tot de tentoongestelde diersoorten. Bij het verstrekken van informatie worden de dieren zoveel mogelijk in hun biologische en ecologische context geplaatst.

#### **Artikel 13**

1. De vergunninghouder voert een inzichtelijke registratie van elk dier of diergroep, waaruit de mutaties van de diersoorten en de ziektegeschiedenis blijken.
2. De registratie bevat in ieder geval de volgende gegevens:
  - a. de wetenschappelijke soortnaam en het aantal;
  - b. het geslacht, indien mogelijk en relevant;
  - c. datum van verkrijging of geboortedatum;
  - d. bij overdracht of verkrijging: de bestemming en de herkomst van de dieren en – indien van toepassing – de nummers van de in- en uitvoerdocumenten en certificaten;
  - e. identificatie van het dier of de diergroep door het ringnummer, het tatoeagenummer, het microchipnummer of, indien een registratienummer ontbreekt, een omschrijving aan de hand van bijzondere uiterlijke kenmerken;
  - f. bij vertrek van een dier of diergroep: de datum en reden van vertrek en de naam en het adres van de eindbestemming;
  - g. bij bezoek van de dierenarts: de datum van dit bezoek, alsmede de gezondheidstoestand van het dier;
  - h. in geval van sterfte: de datum en de oorzaak.
3. Het register wordt ten minste een maal per maand bijgewerkt.
4. Bij vertrek gaat het dier of de diergroep vergezeld van een afschrift van alle op basis van het eerste lid bijgehouden relevante registers en documenten.
5. De gegevens, bedoeld in het eerste lid worden gedurende vijf jaar na de dood of het vertrek van het dier of de diergroep bewaard en worden op verzoek aan de bevoegde autoriteiten overgelegd.

### **§ 5. Overige bepalingen**

#### **Artikel 14**

1. Indien een dierentuin niet voldoet aan de in dit besluit gestelde voorschriften of aan de vergunningsvoorwaarden wordt deze op last van Onze Minister geheel of gedeeltelijk gesloten voor het publiek.
2. Onze Minister kan tevens de vergunninghouder verplichten tot het aanpassen, verwijderen of aanbrengen van specifieke voorzieningen onder vermelding van een bepaalde termijn, die ten hoogste twee jaar bedraagt, waarbinnen zulks dient te geschieden.
3. Indien een dierentuin niet binnen de gestelde termijn voldoet aan de verplichtingen, bedoeld in het tweede lid, wordt de vergunning op last van Onze Minister ingetrokken of gewijzigd en wordt de dierentuin geheel of gedeeltelijk gesloten.

**Artikel 15** [Artikel 3](#) is tot 9 april 2003 niet van toepassing op een dierentuin waarvan de exploitant kan aantonen dat deze voor de datum van inwerkingtreding van dit besluit in gebruik is genomen. \_

**Artikel 16** Dit besluit treedt in werking op een bij koninklijk besluit te bepalen tijdstip. Laatstbedoeld besluit wordt niet genomen voordat 30 dagen zijn verstreken nadat het onderhavige besluit is overgelegd aan beide kamers der Staten-Generaal, en evenmin indien binnen die termijn door of namens een der kamers of door ten minste een vijfde van het grondwettelijke aantal leden van een der kamers de wens te kennen wordt gegeven dat de inwerkingtreding van dit besluit bij wet wordt geregeld. \_

**Artikel 17** Dit besluit wordt aangehaald als: Dierentuinenbesluit \_

# APPENDIX VII

Overview of Licenses issued by Dienst Regelingen

III Overzicht vergunningen van 2003 tot en met 31 december 2010

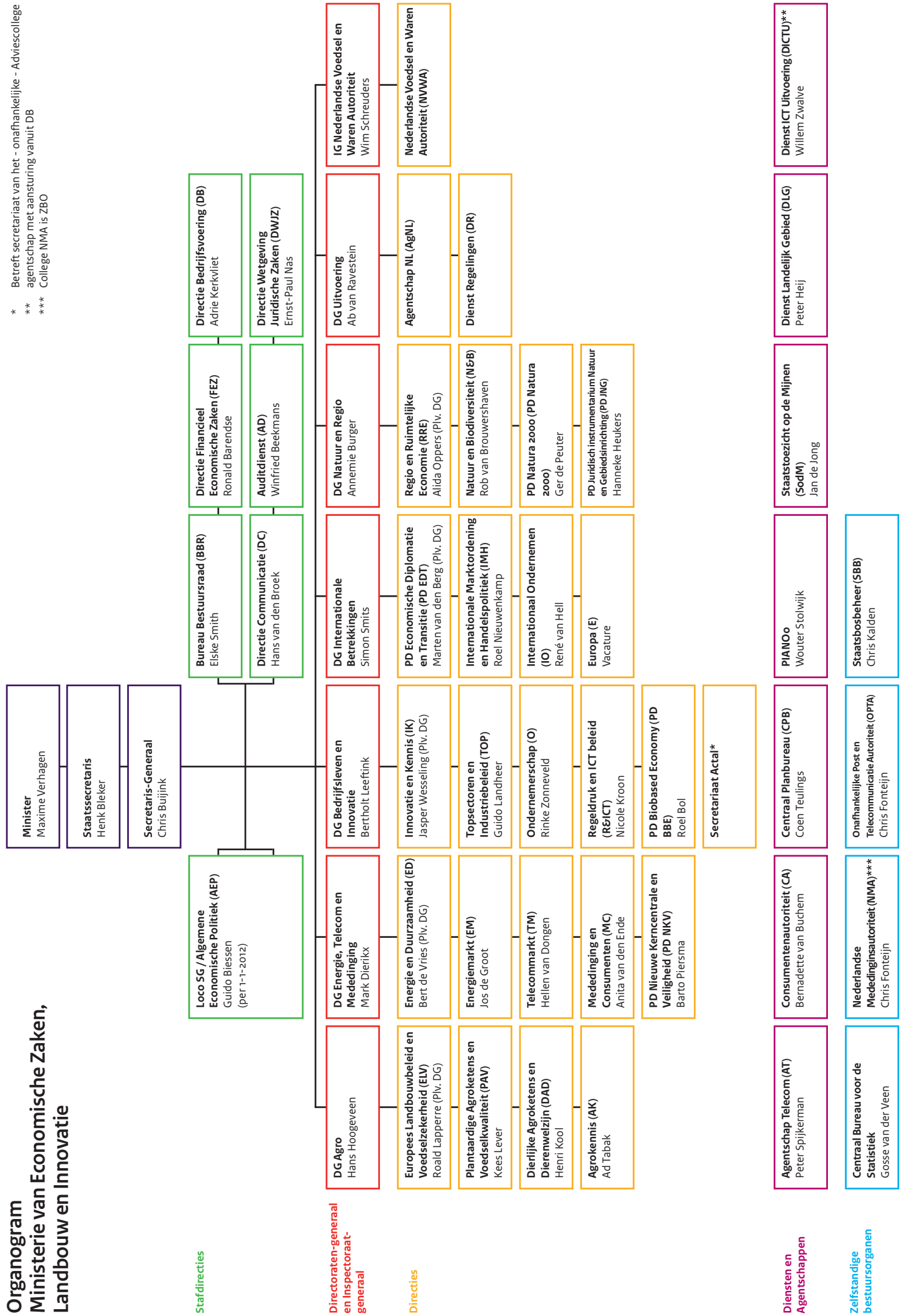
aanvraagnummer	vergunning-nummer	naam organisatie	goedkeuringsdatum
Dierentuin/2002/001	DB/2003/001	St. Nederlandse Opvang Papegaaien	29 juli 2003
Dierentuin/2002/002	DB/2003/002	Vlinderparadijs 'Papiliorama'	29 juli 2003
Dierentuin/2002/003	DB/2003/003	EcoMare	29 juli 2003
Dierentuin/2002/004	DB/2003/004	Dierenpark Wissel	29 juli 2003
Dierentuin/2002/005	DB/2003/005	Zoo Parc Overloon	29 juli 2003
Dierentuin/2002/006	DB/2003/006	Het Arsenaal	29 juli 2003
Dierentuin/2002/007	DB/2003/007	Zee Aquarium Bergen aan Zee	29 juli 2003
Dierentuin/2002/009	DB/2003/009	Ouwehands Dierenpark	29 juli 2003
Dierentuin/2002/010	DB/2003/010	Vogelpark Avifauna B.V.	29 juli 2003
Dierentuin/2002/011	DB/2003/011	Safari Beekse Bergen	29 juli 2003
Dierentuin/2002/012	DB/2003/012	Dierenpark Amersfoort	29 juli 2003
Dierentuin/2002/013	DB/2003/013	St. AAP	29 juli 2003
Dierentuin/2002/014	DB/2003/014	Natura Artis Magistra	29 juli 2003
Dierentuin/2002/015	DB/2003/015	Wonderwereld	29 juli 2003
Dierentuin/2002/017	DB/2003/017	Kabouterland	29 juli 2003
Dierentuin/2002/019	DB/2003/019	St. Kasteelpark Born	29 juli 2003
Dierentuin/2002/020	DB/2003/020	Diergaard Blijdorp	29 juli 2003
Dierentuin/2002/021	DB/2003/021	St. Apenheul	29 juli 2003
Dierentuin/2002/022	DB/2003/022	Dierenpark Emmen	29 juli 2003
Dierentuin/2002/023	DB/2003/023	Best ZOO	29 juli 2003
Dierentuin/2002/024	DB/2003/024	Reptielenzoo Iguana	29 juli 2003
Dierentuin/2002/025	DB/2003/025	Kasteeltuinen Arcen	29 juli 2003
Dierentuin/2002/026	DB/2003/026	St. Dierenpark Reptielenhuis De Oliemeule	29 juli 2003
Dierentuin/2002/027	DB/2003/027	Vogelpark Taman Indonesia	29 juli 2003
Dierentuin/2002/028	DB/2003/028	St. Plaswijckpark	29 juli 2003
Dierentuin/2002/029	DB/2003/029	Sea Life Scheveningen B.V.	29 juli 2003
Dierentuin/2002/033	DB/2003/033	Mondo Verde B.V.	29 juli 2003
Dierentuin/2002/035	DB/2003/035	Dolfinarium Harderwijk B.V.	29 juli 2003
Dierentuin/2002/036	DB/2003/036	Ecodrome Zwolle	29 juli 2003
Dierentuin/2002/038	DB/2003/038	St. Vogelrevalidatiecentrum 'Zundert'	29 juli 2003
Dierentuin/2002/039	DB/2003/039	Serpo	29 juli 2003
Dierentuin/2002/042	DB/2003/042	Burgers' Zoo	29 juli 2003
Dierentuin/2003/002	DB/2003/044	Fazanterie De Rooie Hoeve	29 juli 2003
Dierentuin/2003/005	DB/2003/047	Stichting Schildpaddencentrum Nederland	29 juli 2003
Dierentuin/2003/006	DB/2003/048	St. Artisklas Haarlem	29 juli 2003
Dierentuin/2003/007	DB/2003/049	NatuurDoeCentrum Insektenwereld	29 juli 2003
Dierentuin/2003/009	DB/2003/051	Aquariumvereniging "De Discus"	29 juli 2003
Dierentuin/2002/034	DB/2004/002	Delta Expo Beheer B.V.	2 november 2004
Dierentuin/2002/041	DB/2004/005	Natuurcentrum Ameland	10 november 2004
Dierentuin/2003/030	DB/2004/001	Dierenrijk Europa / Zoo Gulbergen	14 oktober 2004
Dierentuin/2003/031	DB/2004/006	Informatiecentrum De Noordwester	26 november 2004
Dierentuin/2004/001	DB/2004/003	Aqua Zoo Friesland	14 oktober 2004
Dierentuin/2004/002	DB/2004/004	St. Museum en Zeeaquarium Delfzijl	2 november 2004
Dierentuin/2004/003	DB/2004/007	GaiaPark Kerkrade Zoo	8 juli 2005
Dierentuin/2003/011	DB/2005/001	Betuwemeer Tiel B.V.	20 maart 2006
Dierentuin/2005/003	DB/2006/001	Vogelpark Ruinen	29 mei 2006
Dierentuin/2007/004	DB/2007/004	Stichting Animal Farm	31 oktober 2007
Dierentuin/2007/005	DB/2007/005	Stichting Landgoed Hoenderdaell	18 augustus 2008
Dierentuin/2007/006	DB/2007/006	Vlindertuin Berkenhof	26 augustus 2008
Dierentuin/2007/003	DB/2007/003	Vlinders aan de Vliet	30 oktober 2008
Dierentuin/2008/002	DB/2008/002	Stichting Dierenpark van Blanckendael	21 november 2008
Dierentuin/2008/003	DB/2008/003	CNME Schothorst	28 mei 2010

# APPENDIX VIII

Organogram of the Ministry of EL&I, Economic Affairs, Agriculture  
and Innovation

# Organogram Ministerie van Economische Zaken, Landbouw en Innovatie

\* Betreft secretariaat van het - onafhankelijke - Adviescollege  
 \*\* agentschap met aansturing vanuit DB  
 \*\*\* College NMA is ZBO



# APPENDIX IX

## Zoo License Application Form

## A AANVRAGER

### 1. Algemene gegevens organisatie

Naam organisatie/  
organisatieonderdeel

Naam directeur / hoogst  
leidinggevende

Straat/nummer

Postadres

Postcode/woonplaats

Telefoonnummer

Faxnummer

E-mail

*Deze aanvraag dient ondertekend te worden door de hoogst leidinggevende van de organisatie, bijvoorbeeld de directeur.*

### 2. Algemene gegevens contactpersoon

Naam contactpersoon

Functie aanvrager

Straat/nummer

Postadres

Postcode en plaats

Telefoonnummer

Faxnummer

E-mail

### 3. Juridische rechtsvorm van de organisatie

- Stichting
- Vereniging
- BV
- NV
- Rechtspersoon naar Nederlands publieksrecht
- Anders, namelijk:

*Indien uw organisatie een BV of NV betreft, voeg dan bij uw aanvraag een kopie van het uittreksel van de Kamer van Koophandel. Indien uw organisatie een stichting of vereniging betreft, voeg dan bij uw aanvraag de kopie van het statuut. Bent u tevens ingeschreven bij de Kamer van Koophandel, voeg dan ook het uittreksel bij.*

1

In te vullen door

Aanvraagnummer

Paraaf

Dienst Regelingen

Ontvangstdatum

Opmerkingen



## B ALGEMENE GEGEVENS OVER DE ORGANISATIE

Voeg, indien u te weinig schrijfruimte heeft, een bijlage bij.

### 1. Geef een korte omschrijving van de doelstelling van de organisatie (mission statement):

### 2. Is de organisatie gespecialiseerd in bepaalde diergroepen?

Nee

Ja, welke:

### 3. Maakt de organisatie deel uit van een grotere organisatie/verband?

Nee

Ja, welke:

*Bijvoorbeeld: de organisatie maakt deel uit van een gemeentelijke dienst.*

### 4. Geef een omschrijving van de organisatorische structuur van de organisatie:

*Ga bij deze vraag in op de opbouw en grootte van het personeelsbestand (percentage, staf, directie, ondersteuning en uitvoerend personeel, aantal vaste en losse krachten). Voeg als bijlage een organogram en kwalificaties, kennis en ervaring van dierzorgers bij.*

### 5. Wordt de organisatie (financieel) ondersteund door derden?

Nee

Ja, door wie:

### 6. Hoeveel dagen per jaar is de organisatie geopend voor het publiek?

### 7. Beschikt de organisatie over een beleidsprotocol t.a.v. dierentransacties?

Nee

Ja

*Indien de organisatie beschikt over een beleidsprotocol, voeg deze dan toe als bijlage.*

Bij beantwoording van onderstaande vragen mag u verwijzen naar de pagina's uit het beleidsprotocol.

**1. Welke schriftelijke afspraken met betrekking tot veterinaire verzorging worden door de organisatie vastgelegd?**

**2. Welke veterinaire programma's worden gebruikt?**

**3. Welke preventieve maatregelen treft uw organisatie?**

*Bijvoorbeeld: controle op parasieten en ziektes, preventieve vaccinatie.*

**4. Beschikt de organisatie over een vastgesteld controleprogramma?**

- Nee
- Ja

**5. Over welke onderstaande faciliteiten beschikt de organisatie?**

- Operatiekamer
- Tijdelijke opvang
- Laboratorium
- Quarantaine
- Geen faciliteiten
- Overige:

**6. Wordt bij sterfte van de dieren de doodsoorzaak vastgesteld (post-mortem examination/necropsy)?**

- Nee
- Ja

**7. Beschikt de organisatie over verzorgingshandleidingen?**

- Nee
- Ja, welke:

*Bijvoorbeeld over minimale eisen huisvesting, sociale vereisten, voeding, omgevingsverrijking.*

## D REGISTRATIE

Bij beantwoording van onderstaande vragen mag u verwijzen naar de pagina's uit het beleidsprotocol.

### 1. Op welke wijze vindt binnen de organisatie de registratie van het dierenbestand plaats?

*Bijvoorbeeld: per computer en/of handmatig.*

### 2. Welke gegevens registreert de organisatie over dieren?

### 3. Hoe frequent houdt de organisatie bovengenoemde registratie bij?

### 4. Wordt daarnaast ook een individueel identificatiesysteem toegepast?

Nee

Ja, welke:

*Bijvoorbeeld: chips, oormerken.*

### 5. Wordt de algemene conditie en gezondheid van dieren geregistreerd?

Nee

Ja, en hoe vaak:

### 6. De organisatie zet ook dieren uit voor:

a.  Commerciële evenementen

b.  Educatieve programma's

c.  Geen van bovenstaande keuzes

Indien u keuze a en/of b heeft aangevinkt, geef dan aan om welke dieren het gaat, en hoe dit wordt geregistreerd:

### 7. Volgen bepaalde dieren een trainingsprogramma?

Nee

Ja, geef aan voor welke doeleinden een trainingsprogramma is opgezet en hoe de registratie plaatsvindt:

**8. De organisatie beschikt over:**

- Een archief betreffende herkomst van dieren
- In- en uitvoerdocumenten in het kader van uitwisselings- en fokprogramma's
- Geen van bovenstaande keuzes

**9. Er is binnen de organisatie sprake van:**

- a.  Verkoop van dieren
- b.  Uitleen van dieren
- c.  Geen van bovenstaande keuzes

Indien u keuze a en/of b hebt aangevinkt, geef dan ook aan om welke diersoorten het gaat en hoe de registratie plaatsvindt:

**E VEILIGHEID MENS/DIER**

Bij beantwoording van onderstaande vragen mag u verwijzen naar de pagina's uit het beleidsprotocol.

**1. De organisatie beschikt over een:**

- Veiligheidsplan
- Noodplan
- Geen van bovenstaande keuzes

**2. Zijn de staf- en personeelsleden hiervan op de hoogte en getraind?**

- Nee
- Ja

**3. Beschikt de organisatie over eerste hulp faciliteiten?**

- Nee
- Ja

**4. Heeft de organisatie tijdens openingstijden voor het aspect veiligheid mens/dier een verantwoordelijke, gespecialiseerde medewerker beschikbaar?**

- Ja
- Nee, hoe wordt dan aandacht aan het aspect besteed:

**5. Heeft uw organisatie een uitvoeringsprocedure op schrift gesteld hoe te handelen bij ontsnapping, brand en aanval van een gevaarlijk dier?**

- Nee
- Ja

**6. In de afgelopen vijf jaren hebben zich de volgende gebeurtenissen voorgedaan:**

- a.  Ontsnapping
- b.  Brand
- c.  Aanval van een gevaarlijk dier tegenover publiek en/of personeel
- d.  Geen van bovenstaande keuzes

Indien u keuze a, b en/of c heeft aangevinkt, geef dan aan of hierbij het noodplan goed heeft gefunctioneerd.

7. Hoe frequent controleert uw organisatie de afscheidingen en het sluitwerk?

8. Op welke wijze controleert uw organisatie de afscheidingen en het sluitwerk?

9. Wie is verantwoordelijk voor de controle van de afscheidingen en het sluitwerk?

## F INSTANDHOUDING VAN DE DIERSOORT (CONSERVATIE)

Bij beantwoording van onderstaande vragen mag u verwijzen naar de pagina's uit het beleidsprotocol.

1. Neemt uw organisatie deel aan natuurbeschermingsprojecten?

Nee

Ja, welke:

2. Neemt uw organisatie deel aan een samenwerkingsverband met andere dierentuinen en/of organisaties?

Nee

Ja, in welke en in welk kader:

3. Participeert uw organisatie in één of meer fokprogramma's van het 'European Endangered Species Programme' (EEP)?

Nee

Ja, in welke:

4. Van welke diersoorten in uw organisatie wordt een stamboek bijgehouden (eventueel internationaal)?

**5. Is uw organisatie betrokken bij conservatieprojecten?**

Nee

Ja, in welke:

*Bijvoorbeeld: onderzoek, herintroductieprogramma's.*

**G EDUCATIE**

Bij beantwoording van onderstaande vragen mag u verwijzen naar de pagina's uit het beleidsprotocol.

**1. Wordt in het educatieve programma specifieke aandacht besteed aan conservatie van diersoorten en instandhouding van natuurlijk gedrag?**

Nee

Ja, op welke wijze:

**2. Beschikt uw organisatie over faciliteiten voor educatieve programma's?**

Nee

Ja, welke:

**3. Beschikt uw organisatie over een medewerker die voor educatieve programma's verantwoordelijk is?**

**4. Welke educatieve mogelijkheden worden gebruikt?**

**5. Heeft uw organisatie op het gebied van educatie een samenwerkingsverband met andere dierentuinen en/of organisaties?**

Nee

Ja, op welke wijze:

## 6. Op welke wijze besteedt uw organisatie in het educatieprogramma aandacht aan natuurbescherming?


## H BIJLAGEN

Kruis hieronder aan welke bijlagen u heeft bijgevoegd bij uw aanvraag.

Altijd verplichte bijlagen:

- Recente plattegrond van de organisatie met een weergave van de afmeting en inrichting van de dierverspreiding en daarin verblijvende diersoorten
- Uitdraai recente samenstelling van het dierenbestand (soorten, aantallen dieren en eventueel geslacht)
- Organogram van de organisatie
- Kwalificaties, kennis en ervaring van dierverspreiders
- Beleidsprotocol

Verplicht indien van toepassing

- Uittreksel Kamer van Koophandel
- Statuut
- Extra toelichting

## I ONDERTEKENING

De aanvrager verklaart dat hij/zij:

- ◆ alle gegevens naar waarheid heeft verstrekt;
- ◆ alle gewenste inlichtingen met betrekking tot de voor de beoordeling en controle benodigde gegevens terstond en naar waarheid zal verstrekken aan de ambtenaren en leden van de visitatiecommissie die belast zijn met de behandeling en controle van de aanvraag;
- ◆ beschikt over alle benodigde vergunningen om een dierentuin te mogen uitoefenen.

**Datum**

**Plaats**

**Naam ondergetekende**

**Handtekening**

Deze aanvraag dient ondertekend te worden door de hoogst leidinggevende van de organisatie, bijvoorbeeld een directeur

Stuurt u het aanvraagformulier naar:

**Dienst Regelingen  
Bureau CITES, uitvoering Dierentuinenbesluit  
Postbus 19530  
2500 CM Den Haag**

**Het is raadzaam een kopie van het ingevulde aanvraagformulier te bewaren.**

# APPENDIX X

Questions used by the Accreditation Commission (Overzicht Vragen  
Visitatiecommissie)





# Overzicht vragen Visitatiecommissie

De Visitatiecommissie heeft een vragenlijst die zij meeneemt bij een bezoek aan de dierentuin. De vragen staan per onderdeel opgesomd.

## Welzijn en huisvesting

- Is er voldoende bewegingsvrijheid om soorteigen gedrag te tonen?
- Wordt bij huisvesting rekening gehouden met soorteigen gedrag voor wat betreft dieren die van nature solitair leven of sociaal leven?
- Is de huisvesting voldoende aangepast op het bewegingsapparaat van het dier
- De groei en fysieke ontwikkeling van de dieren worden regelmatig gecontroleerd. Als het nodig is worden aanpassingen in het voedsel of verblijf doorgevoerd.
- De huisvesting wordt aangepast als er letsel is als gevolg van huisvesting, groepssamenstelling of gedrag.
- Worden gedragsstoornissen tijdig herkend en behandeld?
- Hoe is de bezettingsgraad van de verblijven?
- Is de lichamelijke conditie van de dieren over het algemeen goed?
- Bij welke dieren is de conditie minder goed en wat is hiervan de oorzaak?
- Als er gedragsproblemen zijn, wat is hiervan dan de oorzaak?

## Het dierenverblijf

- Is de oppervlakte en inrichting geschikt voor de betreffende diersoort?
- Levert de staat van onderhoud risico's op ten aanzien van uitbraak, verwonding en gezondheid van het dier?
- Is er voldoende rust- en schuilgelegenheid?
- Is er gelegenheid tot paringsdrang?
- Zijn er geschikte mestplaatsen ten behoeve van (natuurlijk) uitscheidingsgedrag? En zijn er maatregelen genomen tegen vuillekkage en stankoverlast?
- Zijn er elementen toegevoegd die lijken op de natuurlijke omgeving? Is de omgeving afgestemd op de ethologische en ecologische behoefte van het dier?
- Kunnen dieren van andere soorten of soortgenoten worden gescheiden?
- Is de bodemsituatie afgestemd op de diersoort?
- Zijn er genoeg mogelijkheden voor de dieren om hun huid, vacht of veren te verzorgen?
- Is het verblijf gebruiksvriendelijk voor verzorgers, technische dienst en onderzoekers?
- Is er huisvesting aanwezig voor tijdelijke opvang?
- Biedt het verblijf voldoende bescherming tegen regen/vocht, wind/tocht, temperatuur, verwondingen en zon/licht?
- Is er regelbare verwarming, ventilatie en licht aanwezig zodat er een goed klimaat voor de soort gerealiseerd kan worden?
- Is de huisvesting voorzien van goede sloten en adequate afscheidingen om in- en uitbraak te voorkomen?
- Zijn de dierenverblijven gemaakt van niet-schadelijke materialen?

## Gezondheid

- De verzorging is afgestemd op de behoeften van het dier.
- Is er dagelijks controle is op gezondheid en conditie? Hoe is dit vastgelegd?
- Wie onderneemt actie bij gezondheidsproblemen?
- Is de dierenarts altijd beschikbaar voor advies of behandeling van problemen?
- Kunnen zieke of gewonde dieren in een aparte ruimte afgezonderd worden?
- Is er een behandelruimte beschikbaar?
- Is er een ruimte waar geopereerd kan worden?
- Is er een quarantainruimte beschikbaar?

### **Voedsel en water**

- Is het water van drinkwaterkwaliteit?
- Is er voldoende schoon water?
- Is de hoeveelheid voedsel afgestemd op soort en leeftijd?
- Wat is de kwaliteit en samenstelling van het voedsel?
- Worden dieren gestimuleerd om op een natuurlijke manier voedsel te vergaren?

### **Hygiëne**

- Is er een hygiëneprotocol?
- Wordt het reinigen en ontsmetten van hokken vastgelegd?
- Wordt het reinigen en ontsmetten van de keuken vastgelegd?
- Is de keuken zodanig ingericht (b.v. gladde wanden en een RVS aanrecht) dat er goed gereinigd en ontsmet kan worden?
- Kan ieder hok met hogedrukreiniger gereinigd worden?
- Welke ontsmettingsmiddelen worden er gebruikt?
- Hoeveel ontsmettingsmiddel wordt er per jaar gebruikt?
- Wordt het voedsel en water op een hygiënische manier aangeboden?
- Zijn de voer- en drinkbakken zo geplaatst dat ze niet onnodig verontreinigd worden?
- Wordt de bodembedekking regelmatig vervangen of gereinigd?
- Voldoet een waterpartij aan de hygiëne-eisen van de diersoort?
- Het voer en water wordt hygiënisch bewaard. Zo is het gekoeld, afgesloten en vrij van afval en ongedierte
- Is er aandacht voor de hygiëne rondom vuilopslag en -afvoer?

### **Reproductie**

- Wordt er gebruik gemaakt van fokprogramma's en uitwisseling met andere tuinen?
- Worden hormonen gebruikt om de reproductie te beperken?
- Waar wordt dit hormoongebruik geregistreerd?
- Wat is de beoordeling van de gegevens en het beleid bij onvruchtbaarheid, hybridisatie, beperking van reproductie, inteelt en ouderenzorg?

### **Beleidsprotocol**

#### *Onderzoek of fokprogramma*

- Neemt de dierentuin deel aan onderzoek?
  - Worden gegevens en materiaal hiervoor beschikbaar gesteld?
- of
- Neemt de dierentuin deel aan fokprogramma's voor herintroductie of repopulatie?
  - Hoe worden gegevens zoals herkomst, stamboek en genetische gegevens uitgewisseld?
  - Hoe ziet het fokbeleid eruit?
  - Welke maatregelen worden genomen om te garanderen zodat er een verantwoordelijk niveau van reproductie is.

#### *Transacties*

- Wilt u laten zien dat de huisvesting, het houden en de verzorging van overgedragen dieren gelijkwaardig of beter is?

#### *Veiligheid*

- Is er een noodplan?
- Zijn er adequate protocollen of instructies om te voorkomen dat dieren ontsnappen?
- Zijn er adequate protocollen of instructies waarin staat hoe je moet handelen als dieren ontsnappen.
- In de protocollen staan de taken en verantwoordelijkheden beschreven.
- Zijn er veiligheidsmaatregelen beschreven die de veiligheid van personeel en bezoekers waarborgen?
- Zijn er over de veiligheid afspraken met andere instanties gemaakt en ook vastgelegd?
- Sloten en omheiningen worden dagelijks gecontroleerd en zijn voorzien van een alarmsysteem.
- Zijn er EHBO voorzieningen aanwezig?
- Is er een EHBO-verantwoordelijke in de dierentuin aanwezig?
- Is er een technische dienst of technisch verantwoordelijke aanwezig?

### *Diergeneeskundige verzorging*

- Is er een protocol voor preventieve en curatieve diergeneeskundige verzorging?
- Is het protocol onder begeleiding van een dierenarts opgesteld?
- Staat in het protocol waarvoor de verzorgers en dierenarts verantwoordelijk zijn?
- Worden dieren preventief gevaccineerd, ontwormd of wordt er bloed onderzocht?
- Staat in het protocol hoe een post mortem onderzoek wordt uitgevoerd?
- Waar staat in het protocol wanneer en hoe aangifteplichtige dierziekten worden gemeld?
- Hoe en waar worden de behandelingen door een dierenarts vastgelegd?
- Hoe is het beheer van medicijnen geregeld?

### *Educatie*

- Is er een informatief en educatief programma voor de gehouden dieren beschikbaar?
- Sluit de collectie, huisvesting en verzorging aan op het programma?  
Is er informatie over het tentoongesteld dier op het verblijf aanwezig?  
Welk kennis en ervaring wordt met externe organisaties uitgewisseld?
- Worden kennis over de bescherming van wilde dieren en het behoud van biodiversiteit uitgedragen?  
Op welke wijze worden bezoekers bewust gemaakt over wat er in de natuur en met het milieu gebeurt?

### **Registratie**

- Is er een inzichtelijke registratie van elk dier of diergroep?
- Wordt bij vertrek van een dier of diergroep een afschrift van het register, relevante documenten, reden van vertrek, naam en adres van eindbestemming, voedingsinstructie meegegeven?
- Wordt het register minimaal eens per maand bijgewerkt?
- Kunnen de gegevens tot tenminste 5 jaar na de dood of vertrek van een dier(groep) worden getoond?
- Worden gegevens minimaal vijf jaar na het vertrek van het dier of de diergroep bewaard? Voor dierentuinen die erkend zijn volgens richtlijn 92/65(EG), geldt tien jaar.

### *Gegevens*

- Wetenschappelijke soortnaam en aantal.
- Geslacht, indien mogelijk en relevant.
- Geboortedatum of datum verkrijging.
- Bij verkrijging: herkomst incl. ouderdieren.
- Bij overdracht: datum, gezondheidsstatus, reden van vertrek en eindbestemming.
- Indien van toepassing, nummers van CITES-documenten.
- Identificatie met ringnummer, microchipnummer, tatoeagenummer of omschrijving op basis van bijzondere uiterlijke kenmerken.

### *Veterinair*

- Veterinaire registratie van fysiologische en medische data:  
Uitgevoerde behandelingen.  
Consulten.  
Herkenning gedragsstoornissen, verloop, wijze van behandeling en resultaten.  
Bloedtests en andere diagnostische procedures.
- Bij sterfte: datum en oorzaak:  
Ziekteverloop, wijze van behandeling.
- Incidenten en calamiteiten waar dieren bij betrokken zijn.  
Ontsnapping, brand of andere zaken die het gedrag beïnvloeden.

# APPENDIX XI

The Dutch Federation of Zoo's Guidelines on Dead Animal Material  
(NVD Code Dood Dier Materiaal)

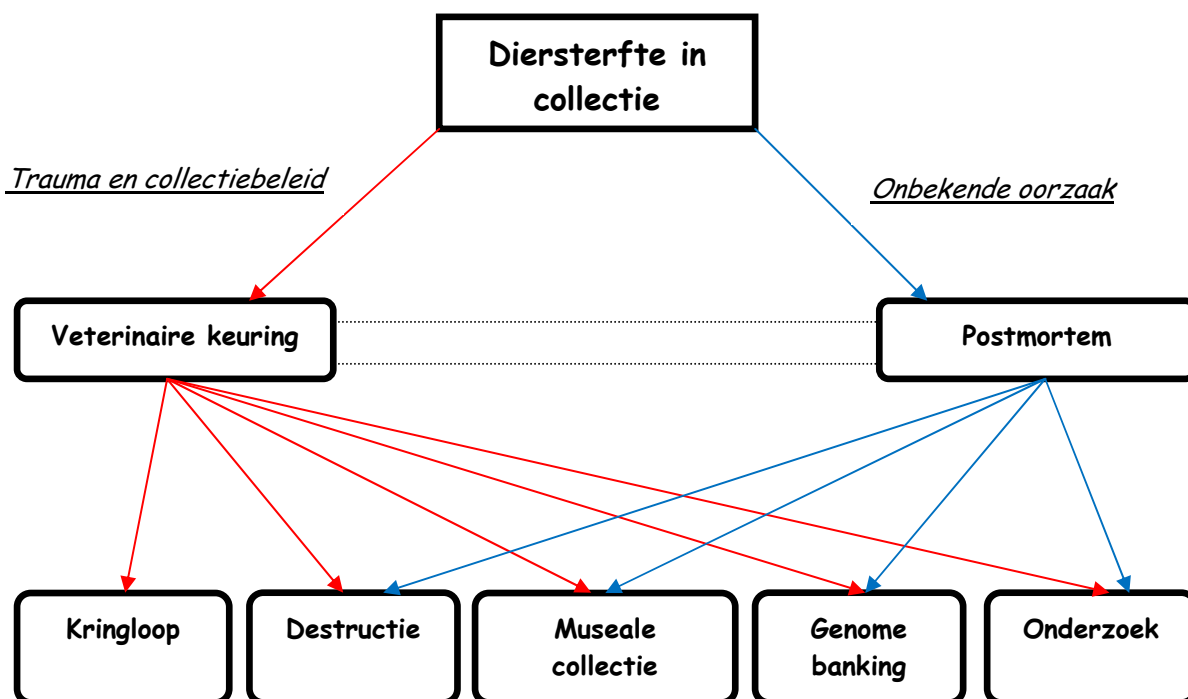
## NVD code Dood Dier Materiaal

Bedreigde diersoorten gaan als dood materiaal een steeds belangrijkere handelswaarde vertegenwoordigen. De BUDEP/Cites wetgeving, die gericht is op het stoppen of terugdringen van de handel in bedreigde diersoorten is dan ook van kracht op zowel het levende dier als (delen van) dode dieren. Ondanks het feit dat de NVD dierenhuizen de BUDEP/Cites wetgeving uiteraard in acht nemen, is het niet uitgesloten dat – zonder medeweten van deze dierenhuizen – dode dieren in een illegaal circuit kunnen belanden. Ook dieren uit dierenhuizen, die zijn gestorven en verhandeld voordat zij op een van de appendices van Cites belanden, kunnen problemen opleveren. Derden, die geen vergunning bezitten, dienen aan te tonen dat dode dieren voor een bepaalde datum zijn verkregen. Dit kan betekenen dat dierenhuizen worden betrokken in zaken waarbij derden verdacht worden van illegale activiteiten.

Deze code, ten behoeve van een algemeen beleid voor dood diermateriaal, gaat verder dan alleen het voorkomen van ongewilde illegale activiteiten met dode dieren, die afkomstig zijn uit NVD dierenhuizen. Aspecten als de educatieve en wetenschappelijke waarde van het conserveren van (bedreigde) diersoorten, het bieden van onderzoeksmogelijkheden aan dood materiaal of het gebruik van in dierenhuizen gestorven dieren als voedselbron voor carnivoren zijn eveneens in deze code opgenomen.

### Traject na de dood

Een overzicht van de 'gebeurtenissen' die kunnen plaatsvinden nadat een dier in een dierenhuis is gestorven is schematisch weergegeven in figuur 1. De Europese Balai Directive (bezem richtlijn) schrijft voor dat een postmortem onderzoek noodzakelijk is voor alle dieren die *NIE*T zijn gestorven ten gevolge van een ongeval (trauma) waarbij "ooggetuigen aanwezig waren".



Figuur 1: Schematische weergave van het beleid ten aanzien van het traject van dooddier materiaal van dieren die in NVD dierenhuizen zijn gestorven

Euthanasie die in het kader van collectiebeleid wordt uitgevoerd, is niet in de Balai Directive opgenomen maar zou onder de categorie 'trauma' kunnen vallen. De volgende categorieën van 'eindfasen' van dood diermateriaal kunnen worden onderscheiden:

- *Museale Collectie*: Dode diersoorten of delen hiervan kunnen in een interne of externe museale collectie worden ondergebracht. Een dergelijke collectie heeft zowel een educatieve als wetenschappelijke waarde. Dieren worden alleen geprepareerd door erkende preparateurs, die zijn

aangesloten bij de Nederlandse Vereniging van Preparateurs (of een vergelijkbare internationale organisatie) of door preparateurs verbonden aan erkende (internationale) instellingen. Dieren die onder de BUDEP/Cites wetgeving vallen worden alleen afgestaan, bij voorkeur onder bruikleen, aan erkende instellingen. Een vergaande samenwerking tussen NVD dierentuinen en natuurhistorische musea wordt bepleit.

- *Onderzoek*: Naast taxonomisch onderzoek aan geprepareerde dieren in musea, kunnen delen van dieren van belang zijn voor bijvoorbeeld anatomisch of fysiologisch onderzoek. Materiaal kan alleen worden afgestaan aan universiteiten en andere gerenommeerde wetenschappelijke instituten.
- *Genome resource banking*: Het opslaan van ovaria en testes van gestorven dieren kan van belang zijn voor lange termijn conservatie van een diersoort.
- *Destructie*: Van toepassing op alle dieren die:
  - Niet van belang zijn voor conservatie en/of wetenschappelijk onderzoek.
  - Niet zijn goedgekeurd om als voedselbron te dienen.
  - Overleden zijn aan ziekten waarvoor veterinaire bepalingen gelden.
  - Overleden zijn door een trauma waarbij na veterinaire keuring ziekten zijn geconstateerd waarvoor veterinaire bepalingen gelden.

Het spreekt voor zich dat instellingen die dood diermateriaal verkrijgen over de benodigde vergunningen dienen te beschikken. Voorts dienen goede schriftelijke afspraken met de onderzoeksinstituten te worden gemaakt over het traject van dood diermateriaal *nadat* sectie is verricht.

## Registratie en identificatie

Dierentuinen zijn NIET verantwoordelijk voor illegaal gebruik van dood diermateriaal, nadat dat diermateriaal op legale wijze de dierentuin heeft verlaten. Deze verantwoordelijkheid ligt bij het ontvangende instituut of persoon. Een aparte plaats neemt hier een extern postmortem onderzoek in. Hierbij hebben dierentuinen een mede- verantwoordelijkheid om er voor te zorgen dat het diermateriaal in de legaliteit blijft. Een goede identificatie en registratie van de voor sectie aangeboden dieren is hierbij van belang.

De volgende gegevens dienen van ieder dier dat onder de BUDEP/Cites wetgeving valt in het ARKS registratiesysteem te worden opgenomen:

- Plaats van postmortemonderzoek en datum van afgifte aan een extern instituut.
- Rapport nummer van postmortemonderzoek.
- Datum (eventuele) terugkomst dood dier na extern postmortemonderzoek.
- Opslagplaats van bevroren dood diermateriaal in dierentuin.
- Datum afspraak vernietiging van dode dieren.
- Naam en datum afgifte materiaal aan externe preparateur.
- Datum terugkomst geprepareerd materiaal.
- Instituten en personen die (delen van) dood diermateriaal hebben verkregen, alsmede condities zoals leen, donatie enz.
- Referenties aan vergunningen bij afstaan van dood diermateriaal aan derden.

Het verdient de voorkeur om bovenstaande gegevens eveneens voor niet-Cites dieren te registreren.

# APPENDIX XII

## ENDCAP's EU Zoo Inquiry 2011 Consolidated data collected from 15 Country Reports

Before presenting the results of ENDCAP's EU Zoo Inquiry 2011, it is important to discuss the objectivity of the figures and to explain what the reports certainly are not. Despite its name, the European Commission did not commission the EU Zoo Inquiry and had no involvement in its production. The research was conducted by a broad range of animal welfare organizations coordinated by ENDCAP - a coalition of animal welfare activists established by the Born Free Foundation in the UK. Although ENDCAP provided a detailed research protocol as a guide for researchers, much of the data between countries was not presented in a consistent format and many of the research aspects involved criteria that may involve a high degree of subjectivity. As ENDCAP's mission is to *end the institution of the zoo*, research was (often) conducted covertly and researchers did not have access to information from EAZA and National Zoo Federations. The collected data stems from the observations of ENDCAP's volunteer researchers.

So far the EU Zoo Inquiry has led to the publication of 14 country reports describing the conditions of 111 zoos spread over 14 EU member states. These country reports are divided into 5 sections providing data on the following topics: (1) *General Zoo Information*, (2) *Conservation Commitment*, (3) *Public Education*, (4) *Evaluation of Animal Enclosures*, and (5) *Animal Welfare Assessment*. In this appendix I present the findings of these reports in a consolidated format. The findings are presented as they are found in the reports and no conclusion is made concerning the reliability of the information contained within the reports.

As ENDCAP's mission is to end the institution of the zoo, one might bear in mind that the results present a negative impression of the institutions 'social output'. When reading the consolidated data one must not forget that (1) the selected zoos included both members and non-members of EAZA, and (2) zoos do not receive any compensation for the costs incurred as a result of the requirements imposed on them by European Commission Directive 1999/22/EC. Any Public Benevolence Goods that are produced above the level of bare legal requirement are goods that are produced on ideological grounds.

## Conservation Commitment

The table below shows (some of) the consolidated data on (1) *General Zoo Information*, and (2) *Conservation Commitment* that has been collated from the 14 country reports. The conservation commitment is presented in Fig. 1 as two indices, (i) *Conservation Commitment Index 1* shows the configuration of collections according to IUCN Red List ratings, and (ii) *Conservation Commitment Index 2* indicates the levels of participation in EAZA endangered species breeding programs (EEPs and ESBs).

EU Zoo Inquiry 2011 <sup>ENDCAP</sup>		AUSTRIA	BELGIUM	BULGARIA	CYPRUS	ESTONIA	FRANCE	GREECE	IRELAND	LATVIA	LITHUANIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	REGION
Reports		R01	R02	R03	R04	R05	R06	R07	R08	R09	R10	R11	R12	R13	R14	
<b>GENERAL ZOO INFORMATION - Inspections and EAZA membership</b>																
Number of zoos in member states		78	42	17	10	06	943	15	27	18	05	22	22	33	07	<b>1245</b>
Number of zoos inspected in reports		05	06	10	10	04	25	04	08	03	05	08	10	10	03	<b>111</b>
Percentage of zoos covered in inquiry		06%	14%	59%	100%	67%	03%	27%	30%	17%	100%	36%	45%	30%	43%	<b>09%</b>
Inspected zoos member of EAZA		01	03	00	00	01	13	01	02	01	01	04	03	00	01	<b>31</b>
<b>CONSERVATION COMMITMENT INDEX 1 - composition of collections by IUCN red list</b>																
Extinct in the wild (IUCN - EW)		00%	00%	00%	00%	00%	00%	00%	00%	00%	00%	00%	01%	00%	00%	<b>00%</b>
Critically endangered (IUCN - CR)		02%	03%	02%	01%	03%	03%	01%	02%	03%	02%	03%	03%	02%	00%	<b>02%</b>
Endangered (IUCN - EN)		02%	05%	04%	02%	05%	06%	04%	05%	04%	03%	04%	07%	04%	03%	<b>04%</b>
Vulnerable (IUCN - VU)		05%	07%	06%	05%	07%	08%	08%	07%	08%	06%	07%	12%	08%	03%	<b>07%</b>
Near threatened (IUCN - NT)		04%	06%	04%	07%	05%	07%	05%	05%	06%	04%	05%	09%	04%	05%	<b>05%</b>
Least concern (IUCN - LC)		38%	46%	41%	53%	29%	41%	70%	41%	41%	50%	38%	57%	40%	34%	<b>44%</b>
Data deficient		02%	01%	01%	00%	02%	01%	00%	01%	01%	00%	00%	01%	01%	00%	<b>01%</b>
Not listed		47%	32%	43%	32%	48%	34%	11%	39%	37%	35%	43%	12%	41%	54%	<b>36%</b>
Total EW, CR, EN, VU and NT		13%	21%	16%	15%	20%	24%	18%	19%	21%	15%	19%	32%	18%	11%	<b>19%</b>
Total no conservation priority		87%	79%	85%	85%	79%	76%	81%	81%	79%	85%	81%	70%	82%	88%	<b>81%</b>
<b>CONSERVATION COMMITMENT INDEX 2 - participation in EAZA EEPs &amp; ESBs</b>																
Percentage of species in ESBs & EEPs		02%	13%	07%	05%	15%	16%	13%	10%	13%	08%	12%	19%	04%	06%	<b>10%</b>
Number of species kept per country		461	816	327	417	222	1155	319	468	330	355	935	495	306	269	<b>491</b>
Number of species in ESB's & EEP's		11	110	24	20	34	183	43	49	44	29	114	100	12	17	<b>56</b>

FIG. 1

Consolidated data from ENDCAP's EU Zoo Inquiry 2011

ENDCAP estimates<sup>1</sup> that there are 1245 zoos spread over the 14 EU member states that were covered in their published reports. According to these estimations, the 111 zoos that were inspected by ENCAP represent just 9% of the total number of zoos within the region. Whereas 80 of the inspected zoos were not members of EAZA (72.1%), 31 of the 111 zoos inspected were affiliated to EAZA (27.9%). Over the whole geographical region covered in the 14 published reports, 93 of the 1245 zoos are members of EAZA, a figure that represents 7.5% of the total<sup>2</sup>. EAZA membership was therefore statistically over represented in the selection of zoos in the EU Zoo Inquiry. A proportional representation of EAZA membership would have required that 92.5% of zoos selected for the inquiry were non-members of EAZA. EAZA membership was therefore over-represented in the study by a factor of 20.4%.

On average across the region, 1% of the collections are composed of species that are *extinct in the wild (EW)*<sup>3</sup> according to the IUCN's Red List ratings, 2% of kept species are *critically endangered (CR)*, 4% of species are *endangered (EN)*, 7% of species are *vulnerable (VU)*, and 5% of species are *near threatened (NT)*. 44% of the collections contain species that have an IUCN status of *least concern (LC)*, 1% of the collections were *data deficient* whereby a Red List categorization was not possible, and 36% of the collections were *not listed* on the IUCN's Red List. If one defines species with a conservation value as those within a collection that have an IUCN Red List rating of EW,

<sup>1</sup> There is some ambiguity concerning the precise numbers of zoos present within the geographical area covered in the 14 published reports; the competent authorities across the EU vary in their levels of accuracy in defining institutions as zoos according to the definitions in their local legislation. The figures presented by ENDCAP include those zoos that are licensed as well as zoos that are not yet formally recognized by a member state's competent authority.

<sup>2</sup> EAZA membership figures are taken from EAZA's 2010 Annual Report.

<sup>3</sup> Some of the totals of the IUCN Red List classifications add up to 101%. This anomaly is explained by the fact that the percentages were presented in the 14 reports as whole numbers and some rounding has occurred.



CR, EN, VU or NT, then on average throughout the region, 19% of the collections are composed of animals with a conservation value ranging between Extinct in the Wild and Near Threatened. A total of 81% of the collections throughout the region are composed of species that have an IUCN Red List rating of Least Concern (44%), are not listed (36%), or are Data Deficient (1%). Species in these categories might be considered to lack a conservation priority.

On average, 10% of the species were part of an ESB or EEP program coordinated by EAZA; a figure that represents an average of 56 different species (and sub-species) per zoo that are part of a coordinated captive breeding program within the whole geographical region. Portugal scored the highest with 19% of their collections and 100 different species participating in captive breeding programs, whereas Austria scored the lowest with just 2% of their collections and only 11 different species participating. Although France scores higher on the *number of species* involved in captive breeding programs, 183 species in France compared to only 100 species in Portugal, Portugal has the highest average participation rate of 19% compared to a 16% participation rate in France. The statistics can be explained by the fact that a fewer number of species are kept in Portuguese zoos when compared to the total number of species kept in the French collections that were inspected. A total of 495 species are kept in the 10 Portuguese zoos compared to 1155 species kept in the 25 French collections. The average number of species kept in collections throughout the 14 member states investigated is 491<sup>4</sup> species (including sub-species).

The best performing member state with regard to its commitment to conservation based on the composition of its collection according to the IUCN's Red List categorizations of species was Portugal. As much as 32% of the Portuguese collections are composed of animals with a Red List categorization of EW, CR, EN, VU or NR. The best performing member state with regard to its commitment to conservation based on the participation rate in EEPs and ESBs was also Portugal, with a participation rate of 19%. On the commitment to conservation, ENDCAP's report on Portugal concludes that: *'Findings from this investigation have revealed that whilst some zoos are doing more than others, overall, zoos in Portugal are not making a significant contribution to the conservation of Threatened species (ENDCAP, 2011, p.43).'*

The worst performing member state with regard to its commitment to conservation based on the composition of its collection according to the IUCN's Red List categorizations of species was Slovenia. Only 11% of the Slovenian collections are composed of animals with a Red List categorization of EW, CR, EN, VU or NR. On the commitment to conservation, ENDCAP's report on Slovenia concludes that: *'Overall, the Slovenian zoos included in this assessment are only making a minimal contribution to the conservation of global and European species threatened by extinction. Only a minimal proportion of the species exhibited in each of the three zoos are threatened, which indicates a minimum commitment to the conservation of biodiversity (ENDCAP, 2011, p.38).'*

The worst performing member state with regard to its commitment to conservation based on the participation rate in EEPs and ESBs was Austria, with a participation rate of 2%. On the commitment to conservation, ENDCAP's report on Austria concludes that: *'The results of this investigation demonstrate that conservation of biodiversity, particularly threatened species, is not a significant priority in Austrian zoos. The majority of species exhibited are either of Least Concern (species of low conservation importance) or are Not Listed by the IUCN Red List of Threatened Species. Threatened species (Vulnerable, Endangered and Critically Endangered) constituted only 8% of the total number of species observed in the five zoos.'* *"Moreover, only 2% of the species kept at all the zoos are listed on the register of EEPs or ESBs and little information could be found as to whether the zoos were actually participating in national or international captive breeding programs (ENDCAP, 2011, p.29).'*

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<sup>4</sup> This number deviates slightly from the number presented in Fig.5.2, which shows the average composition of a statistically typical collection within the region according to the taxonomical groupings of the species kept in the collections. In Fig.5.2, the total number of species kept in an average zoo is 495 compared to an average of 491 species as presented in Fig.5.1.

Given the costs and complexities of participating in captive breeding programmes, I do not agree with ENDCAP's conclusions on the significance of Portugal's contribution to the conservation effort. 32% percent of Portuguese collections are composed of animals that are threatened in the wild and 19% of Portuguese collections participate in European captive breeding programmes. Although the statistics could be improved, given the non-quantified requirements of the European Directive, this result is quite significant as a national average. It would be interesting to know what percentage of resources are allocated to the 19% of the collections when compared to the remaining 81% of the collections that are not part of a captive breeding programme in Portugal.

Fig. 2, below, shows how the species kept in the 111 zoos within the 14 EU member states are comprised according to taxonomic groupings. The chart shows the regional averages based on the statistics of all EU member states in the study.

<b>REGIONAL AVERAGES</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALIAN TAXA	AVIAN TAXA	REPTILIAN TAXA	FISH TAXA	AMPHIBIAN TAXA	INVERTEBRATE TAXA	TOTAL SPECIES BY RED LIST	PROPORTION OF TOTAL
<b>IUCN RED LIST RATINGS</b>		<b>AVERAGE RED LIST RATINGS BY TAXONOMIC GROUP</b>							
Average not listed by taxa	12.4	6.4	32.7	98.9	1.0	24.8	176	36%	
Average not evaluated by taxa	0.0	0.0	0.0	0.0	0.0	0.0	0	00%	
Average data deficient by taxa	0.4	0.1	0.1	3.2	0.2	0.1	4	01%	
Average least concern (LC) by taxa	47.4	120.3	12.9	27.6	6.9	2.4	218	44%	
Average near threatened (NT) by taxa	7.2	12.1	4.9	2.1	1.0	0.4	28	06%	
Average vulnerable (VU) by taxa	10.9	11.7	7.3	4.7	0.3	0.4	35	07%	
Average endangered (EN) by taxa	11.0	6.1	1.6	2.3	0.5	0.4	22	04%	
Average critically endangered (CR) by taxa	5.2	1.9	1.5	1.4	0.9	0.2	11	02%	
Average extinct in the wild (EW) by taxa	1.0	0.1	0.0	0.4	0.0	0.0	2	00%	
<b>AVERAGES OF TOTAL SPECIES BY TAXANOMIC GROUP</b>		<b>AVERAGES OF CONSERVATION VALUE BY TAXANOMIC GROUP</b>							
Average no. of species per taxonomic group	96	159	61	141	11	29	495	100%	
Proportion average number of species	19%	32%	12%	28%	02%	06%			
Conservation priority (NT, VU, EN, CR and EW)	35	32	15	11	3	1	98	20%	
As a percentage of taxonomic group	37%	20%	25%	08%	25%	05%			
No conservation priority (all others)	60	127	46	130	8	27	398	80%	
As a percentage of taxonomic group	63%	80%	75%	92%	75%	95%			

**FIG. 2**

Consolidated from ENDCAP's EU Zoo Inquiry 2011

An average zoo within the region has a total of 498 species in the collection. 19% of these species are mammals (an average of 96 mammal species per collection), 32% are birds (an average of 159 species), 12% of the collections are composed of reptiles (an average of 61 species), 28% are fish (an average of 141 species), 2% are amphibians (an average of 11 species), and the remaining 6% of regional collections are composed of invertebrates (an average of 29 species per collection). The regional average composition of collections was collected from 14 different country reports. The following 14 charts show the average make up of collections per country report:

<b>AUSTRIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>							<b>TOTALS (RL)</b>	
Not listed	12	6	21	146	0	31	216	47%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	1	0	7	0	1	9	02%	
Least concern (LC)	33	56	10	64	12	0	175	38%	
Near threatened (NT)	6	5	3	4	1	1	20	04%	
Vulnerable (VU)	5	6	6	5	0	1	23	05%	
Endangered (EN)	4	0	0	4	1	0	9	02%	
Critically endangered (CR)	3	0	0	2	2	0	7	02%	
Extinct in the wild (EW)	0	0	0	2	0	0	2	00%	
		<b>SPECIES TOTALS</b>							
Total number of species	63	74	40	234	16	34	461	100%	
Proportion of total number of species	14%	16%	09%	51%	03%	07%	100%		

### REPORT 01

<b>BELGIUM</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>							<b>TOTALS (RL)</b>	
Not listed	13	7	66	115	2	56	259	32%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	1	0	0	3	1	0	5	01%	
Least concern (LC)	64	215	37	45	14	0	375	46%	
Near threatened (NT)	10	24	10	5	1	0	50	06%	
Vulnerable (VU)	15	24	18	3	1	0	61	07%	
Endangered (EN)	15	18	5	2	1	0	41	05%	
Critically endangered (CR)	11	3	4	1	2	1	22	03%	
Extinct in the wild (EW)	2	0	0	1	0	0	3	00%	
		<b>SPECIES TOTALS</b>							
Total number of species	131	291	140	175	22	57	816	100%	
Proportion of total number of species	16%	36%	17%	21%	03%	07%	100%		

### REPORT 02

<b>BULGARIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>							<b>TOTALS (RL)</b>	
Not listed	16	4	18	92	0	10	140	43%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	2	0	0	2	01%	
Least concern (LC)	53	66	4	10	1	0	134	41%	
Near threatened (NT)	6	4	4	0	0	0	14	04%	
Vulnerable (VU)	8	5	6	1	0	0	20	06%	
Endangered (EN)	7	2	1	2	0	0	12	04%	
Critically endangered (CR)	3	0	0	2	0	0	5	02%	
Extinct in the wild (EW)	0	0	0	0	0	0	0	00%	
		<b>SPECIES TOTALS</b>							
Total number of species	93	81	33	109	1	10	327	100%	
Proportion of total number of species	28%	25%	10%	33%	00%	03%	100%		

### REPORT 03

<b>CYPRUS</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	12	14	27	72	0	9	134	32%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	2	0	0	2	00%	
Least concern (LC)	31	171	10	8	0	0	220	53%	
Near threatened (NT)	2	21	3	1	1	0	28	07%	
Vulnerable (VU)	1	16	3	1	0	0	21	05%	
Endangered (EN)	0	6	1	1	0	0	8	02%	
Critically endangered (CR)	0	2	1	0	0	0	3	01%	
Extinct in the wild (EW)	1	0	0	0	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	47	230	45	85	1	9	417	100%	
Proportion of total number of species	11%	55%	11%	20%	00%	02%	100%		

### REPORT 04

<b>ESTONIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	4	1	36	55	0	11	107	48%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	1	0	0	3	1	0	5	02%	
Least concern (LC)	36	9	7	9	4	0	65	29%	
Near threatened (NT)	5	0	3	2	2	0	12	05%	
Vulnerable (VU)	8	2	4	2	0	0	16	07%	
Endangered (EN)	9	1	0	0	0	0	10	05%	
Critically endangered (CR)	3	1	1	0	1	0	6	03%	
Extinct in the wild (EW)	1	0	0	0	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	67	14	51	71	8	11	222	100%	
Proportion of total number of species	30%	06%	23%	32%	04%	05%	100%		

### REPORT 05

<b>FRANCE</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	13	8	37	311	1	26	396	34%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	2	0	0	12	0	0	14	01%	
Least concern (LC)	91	228	16	126	10	0	471	41%	
Near threatened (NT)	25	29	9	11	3	1	78	07%	
Vulnerable (VU)	35	27	12	17	0	0	91	08%	
Endangered (EN)	36	16	5	10	1	0	68	06%	
Critically endangered (CR)	20	7	2	4	1	0	34	03%	
Extinct in the wild (EW)	2	1	0	0	0	0	3	00%	
<b>SPECIES TOTALS</b>									
Total number of species	224	316	81	491	16	27	1155	100%	
Proportion of total number of species	19%	27%	07%	43%	01%	02%	100%		

### REPORT 06

<b>GREECE</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	9	6	18	1	1	0	35	11%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	0	0	0	0	00%	
Least concern (LC)	30	190	4	0	0	0	224	70%	
Near threatened (NT)	4	10	3	0	0	0	17	05%	
Vulnerable (VU)	5	17	4	0	0	0	26	08%	
Endangered (EN)	6	6	0	0	0	0	12	04%	
Critically endangered (CR)	1	3	0	0	0	0	4	01%	
Extinct in the wild (EW)	1	0	0	0	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	56	232	29	1	1	0	319	100%	
Proportion of total number of species	18%	73%	09%	00%	00%	00%	100%		

### REPORT 07

<b>IRELAND</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	9	7	40	108	0	18	182	39%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	4	0	0	4	01%	
Least concern (LC)	20	144	9	17	2	0	192	41%	
Near threatened (NT)	4	11	0	6	1	0	22	05%	
Vulnerable (VU)	9	15	5	3	0	0	32	07%	
Endangered (EN)	14	10	1	0	0	0	25	05%	
Critically endangered (CR)	7	2	0	0	1	0	10	02%	
Extinct in the wild (EW)	1	0	0	0	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	64	189	55	138	4	18	468	100%	
Proportion of total number of species	14%	40%	12%	29%	01%	04%	100%		

### REPORT 08

<b>LATVIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	13	3	30	47	2	26	121	37%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	1	0	0	1	1	0	3	01%	
Least concern (LC)	44	56	5	5	25	0	135	41%	
Near threatened (NT)	5	6	7	0	2	0	20	06%	
Vulnerable (VU)	10	6	8	3	0	0	27	08%	
Endangered (EN)	6	4	2	0	2	0	14	04%	
Critically endangered (CR)	2	1	2	0	3	1	9	03%	
Extinct in the wild (EW)	1	0	0	0	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	82	76	54	56	35	27	330	100%	
Proportion of total number of species	25%	23%	16%	17%	11%	08%	100%		

### REPORT 09

<b>LITHUANIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	16	8	18	76	1	7	126	35%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	0	0	0	0	00%	
Least concern (LC)	57	86	2	31	1	0	177	50%	
Near threatened (NT)	3	7	3	0	0	0	13	04%	
Vulnerable (VU)	6	7	1	7	0	0	21	06%	
Endangered (EN)	9	0	0	2	0	0	11	03%	
Critically endangered (CR)	2	0	0	3	1	0	6	02%	
Extinct in the wild (EW)	0	0	0	1	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	93	108	24	120	3	7	355	100%	
Proportion of total number of species	26%	30%	07%	34%	01%	02%	100%		

### REPORT 10

<b>POLAND</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	23	12	91	151	2	119	398	43%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	1	3	0	0	4	00%	
Least concern (LC)	71	199	39	29	20	1	359	38%	
Near threatened (NT)	12	18	10	0	2	1	43	05%	
Vulnerable (VU)	23	12	18	7	2	0	62	07%	
Endangered (EN)	21	8	4	5	2	0	40	04%	
Critically endangered (CR)	13	1	9	2	1	1	27	03%	
Extinct in the wild (EW)	2	0	0	1	0	0	3	00%	
<b>SPECIES TOTALS</b>									
Total number of species	165	250	172	198	29	122	936	100%	
Proportion of total number of species	18%	27%	18%	21%	03%	13%	100%		

### REPORT 11

<b>PORTUGAL</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	4	1	10	42	0	0	57	12%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	1	0	0	3	0	0	4	01%	
Least concern (LC)	76	174	12	16	5	0	283	57%	
Near threatened (NT)	14	24	4	0	1	0	43	09%	
Vulnerable (VU)	20	17	12	8	0	0	57	12%	
Endangered (EN)	16	11	3	3	0	0	33	07%	
Critically endangered (CR)	8	4	2	1	0	0	15	03%	
Extinct in the wild (EW)	3	0	0	0	0	0	3	01%	
<b>SPECIES TOTALS</b>									
Total number of species	142	231	43	73	6	0	495	100%	
Proportion of total number of species	29%	47%	09%	15%	01%	00%	100%		

### REPORT 12

<b>ROMANIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	17	8	15	89	4	17	150	41%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	5	0	0	5	01%	
Least concern (LC)	33	64	3	11	0	33	144	40%	
Near threatened (NT)	2	6	3	0	0	2	13	04%	
Vulnerable (VU)	5	7	4	7	1	5	29	08%	
Endangered (EN)	5	3	0	2	0	5	15	04%	
Critically endangered (CR)	0	2	0	4	0	0	6	02%	
Extinct in the wild (EW)	0	0	0	1	0	0	1	00%	
<b>SPECIES TOTALS</b>									
Total number of species	62	90	25	119	5	62	363	100%	
Proportion of total number of species	17%	25%	07%	33%	01%	17%	100%		

### REPORT 13

<b>SLOVENIA</b> EU Zoo Inquiry 2011 ENDCAP		MAMMALS	BIRDS	REPTILES	FISH	AMPHIBIANS	INVERTEBRATES	TOTAL SPECIES	PROPORTION
<b>IUCN RED LIST CATEGORY</b>	<b>TAXANOMIC GROUP</b>	<b>TOTALS (RL)</b>							
Not listed	12	4	31	80	1	17	145	54%	
Not evaluated	0	0	0	0	0	0	0	00%	
Data deficient	0	0	0	0	0	0	0	00%	
Least concern (LC)	24	26	22	16	3	0	91	34%	
Near threatened (NT)	3	4	6	1	0	0	14	05%	
Vulnerable (VU)	3	3	1	2	0	0	9	03%	
Endangered (EN)	6	1	1	1	0	0	9	03%	
Critically endangered (CR)	0	0	0	1	0	0	1	00%	
Extinct in the wild (EW)	0	0	0	0	0	0	0	00%	
<b>SPECIES TOTALS</b>									
Total number of species	48	38	61	101	4	17	269	100%	
Proportion of total number of species	18%	14%	23%	38%	01%	06%	100%		

### REPORT 14

## Public Education

Fig. 3 shows the national averages for the levels of zoo commitment to *Public Education*. The figures have been collected<sup>5</sup> from the 14 country reports and have been rearranged to produce 3 Public Education Indices; (1) *Index 1 - Signs on Enclosures*, (2) *Index 2 - Classes, Seminars and Presentations*, and (3) *Index 3 - Encounters, Tours and Animal Shows*.

EU Zoo Inquiry 2011 <sup>ENDCAP</sup>		AUSTRIA	BELGIUM	BULGARIA	CYPRUS	ESTONIA	FRANCE	GREECE	IRELAND	LATVIA	LITHUANIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	REGION
Reports		R01	R02	R03	R04	R05	R06	R07	R08	R09	R10	R11	R12	R13	R14	
<b>GENERAL ZOO INFORMATION - Inspections and EAZA membership</b>																
Number of zoos in member states	78	42	17	10	06	943	15	27	18	05	22	22	33	07	<b>1245</b>	
Number of zoos inspected in reports	05	06	10	10	04	25	04	08	03	05	08	10	10	03	<b>111</b>	
Percentage of zoos covered in inquiry	06%	14%	59%	100%	67%	03%	27%	30%	17%	100%	36%	45%	30%	43%	<b>09%</b>	
Inspected zoos member of EAZA	01	03	00	00	01	13	01	02	01	01	04	03	00	01	<b>31</b>	
<b>PUBLIC EDUCATION INDEX 1 - signs on enclosures</b>																
Species information signs absent	43%	21%	56%	79%	41%	17%	61%	25%	46%	50%	29%	28%	49%	34%	<b>41%</b>	
Species information signs present	57%	79%	44%	21%	59%	83%	39%	75%	54%	50%	71%	72%	51%	66%	<b>59%</b>	
<b>PUBLIC EDUCATION INDEX 2 - classes, seminars and presentations</b>																
Established Education Centre	0%	33%	10%	0%	25%	24%	25%	50%	67%	40%	63%	90%	40%	0%	<b>33%</b>	
Classes for pre-arranged groups	80%	33%	10%	0%	0%	24%	25%	50%	67%	40%	63%	90%	30%	33%	<b>39%</b>	
Seminars	0%	50%	10%	0%	25%	0%	0%	0%	33%	40%	63%	0%	0%	33%	<b>18%</b>	
Species talks and presentations	0%	67%	0%	0%	50%	52%	0%	38%	0%	0%	13%	20%	0%	0%	<b>17%</b>	
Averages of education index 2	20%	46%	8%	0%	25%	25%	13%	34%	42%	30%	50%	18%	17%	<b>27%</b>		
<b>PUBLIC EDUCATION INDEX 3 - encounters, tours and animal shows</b>																
Up close encounters	40%	50%	0%	0%	0%	0%	0%	25%	0%	0%	50%	10%	0%	33%	<b>15%</b>	
Guided tours	80%	67%	0%	0%	100%	52%	25%	0%	33%	40%	63%	0%	40%	33%	<b>38%</b>	
Educational animal shows	0%	67%	10%	10%	0%	36%	25%	13%	33%	0%	13%	40%	0%	33%	<b>20%</b>	
Averages of education index 3	40%	61%	3%	3%	33%	29%	17%	13%	22%	13%	42%	17%	13%	33%	<b>24%</b>	
Combined averages of all 3 indices	32%	56%	11%	4%	32%	34%	17%	31%	36%	26%	50%	40%	20%	29%	<b>30%</b>	

Fig. 3

Consolidated data from ENDCAP's EU Zoo Inquiry 2011

Although ENDCAP's 2011 EU Zoo Inquiry did not include a survey of Dutch zoological parks, their inquiry gives an indication of educational activities conducted within European zoos as a whole. Fig. 2.1 below shows the national averages for the levels of commitment to public education in Europe. The figures have been collected<sup>6</sup> from the 14 country reports of ENDCAP's EU Zoo Inquiry 2011 and have been rearranged to produce 3 Public Education Indices; Index 1 - Signs on Enclosures, Index 2 - Classes, Seminars and Presentations, and Index 3 - Encounters, Tours and Animal Shows.

From ENDCAP's 2011 European survey, of the 111 eleven zoos inspected (9% of the total 1245 in the countries covered), 31 of the inspected zoos were members of EAZA. Of these zoos, 59% of inspected enclosures showed information about animals, the minimum educational requirement according to the European directive and Dutch legislation. France scored the highest with 83% of their inspected enclosures displaying signs whereas Cyprus scored the lowest with only 21% of inspected enclosures displaying signs.

<sup>5</sup> The data for 'Public Education Indices 2 and 3' was extracted from textual descriptions of the educational activities conducted by the zoos covered within the 14 country reports of ENDCAP's EU Zoo Inquiry 2011. In some cases, the written descriptions may have allowed for multiple categorisations of the same activity. The texts were sometimes insufficiently detailed to determine the precise nature of educational activities. Despite such questions of objectivity, the data may be sufficient to provide a rough approximation of the commitment to public education. Index 1, signs on enclosures, seems quantitatively more objective.

<sup>6</sup> The data for 'Public Education Indices 2 and 3' was extracted from textual descriptions of the educational activities conducted by the zoos covered within the 14 country reports of ENDCAP's EU Zoo Inquiry 2011. In some cases, the written descriptions may have allowed for multiple categorisations of the same activity. The texts were sometimes insufficiently detailed to determine the precise nature of educational activities. Despite such questions of objectivity, the data is sufficient to provide a reasonable approximation of the commitment to public education. Index 1, signs on enclosures, would seem quantitatively more objective.



The second Public Education Index shows the extent to which classes, seminars and public presentations are provided within zoos. Amongst the 14 countries covered, on average, 33% have an established education centre, 39% organize pre-arranged classes for groups, 18% conduct seminars, 17% give talks and presentations on species. When these percentages are averaged, the average index rating is 27% across the region. Poland and Portugal both score the highest with an index rating of 50%. Cyprus scores the lowest with an index rating of 0%.

The third Public Education Index shows the extent to which zoos organize animal encounters, tours and animal shows. 15% of zoos across the region offer animal encounters, 38% provide guided tours and 20% put on educational animal shows. When these percentages themselves are averaged, the average index rating is 24% across the region. Poland scores the highest with an index rating of 42% whereas Bulgaria and Cyprus score the lowest with just 3%.

By averaging all three indices we can get a picture of the overall score on educational activities as a whole across the region. The regional average rating is 30%. Belgium scores the highest with a rating of 56% and Cyprus scores the lowest with a rating of just 4%.

Although ENDCAP's 2011 EU Zoo Inquiry did not include a survey of Dutch zoological parks, their inquiry gives a reasonable indication of the conservation activities conducted within European zoos as a whole. The table below shows consolidated data on General Zoo Information, and Conservation Commitment. The data has been collated from the 14 country reports of ENDCAP's EU Zoo Inquiry 2011. The conservation commitment is presented in Fig. 2.2 as two indices: Conservation Commitment Index 1 shows the configuration of collections according to IUCN Red List ratings, and Conservation Commitment Index 2 indicates the levels of participation in EAZA endangered species breeding programs (EEPs and ESBs).

## Evaluation of Animal Enclosures

Fig. 4 shows ENDCAP's Evaluation of Enclosures<sup>7</sup>:

EU Zoo Inquiry 2011 ENDCAP		AUSTRIA	BELGIUM	BULGARIA	CYPRUS	ESTONIA	FRANCE	GREECE	IRELAND	LATVIA	LITHUANIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	REGION
Reports		R01	R02	R03	R04	R05	R06	R07	R08	R09	R10	R11	R12	R13	R14	
<b>GENERAL ZOO INFORMATION - Inspections and EAZA membership</b>																
Number of zoos in member states		78	42	17	10	06	943	15	27	18	05	22	22	33	07	<b>1245</b>
Number of zoos inspected in reports		05	06	10	10	04	25	04	08	03	05	08	10	10	03	<b>111</b>
Percentage of zoos covered in inquiry		06%	14%	59%	100%	67%	03%	27%	30%	17%	100%	36%	45%	30%	43%	<b>09%</b>
Inspected zoos member of EAZA		01	03	00	00	01	13	01	02	01	01	04	03	00	01	<b>31</b>
<b>EVALUATION OF ANIMAL ENCLOSURES - (based on 150 randomly selected enclosures)</b>																
Clean drinking water		09.1	08.3	04.9	05.4	06.3	09.1	08.4	08.7	06.0	07.0	07.3	09.0	08.4	08.8	<b>07.6</b>
Sufficient temperature		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	09.9	09.1	09.6	10.0	10.0	<b>09.9</b>
Sufficient humidity		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	09.3	10.0	10.0	09.8	<b>09.9</b>
Sufficient light		09.9	09.8	09.6	10.0	10.0	10.0	10.0	09.7	09.2	09.9	09.5	09.9	10.0	09.6	<b>09.8</b>
Sufficient ventilation		10.0	09.5	10.0	10.0	10.0	09.3	10.0	10.0	09.7	09.9	08.2	10.0	09.8	10.0	<b>09.7</b>
Sufficient opportunity to exercise		07.3	07.2	06.7	06.0	07.5	07.5	06.7	07.6	07.2	06.7	06.3	07.5	05.9	07.0	<b>06.9</b>
Appropriate environment to rest		08.1	08.3	07.2	07.4	09.2	09.4	08.6	09.3	09.4	06.5	05.3	08.5	05.7	03.6	<b>07.6</b>
Grouping satisfies social needs		08.7	09.3	08.4	09.4	09.0	08.7	09.5	09.7	08.3	08.8	07.4	08.5	08.2	07.9	<b>08.7</b>
Stress from adjacent enclosures		08.9	09.1	08.9	10.0	10.0	08.3	09.8	09.7	08.8	08.3	07.7	09.7	08.0	07.6	<b>08.9</b>
Stress from interaction with public		09.7	09.7	08.8	09.6	09.4	08.8	09.4	09.7	09.6	08.8	09.6	08.5	09.6	09.5	<b>09.3</b>
Conditions risk well-being		09.2	09.3	04.5	05.2	08.6	-	06.2	08.8	07.9	06.4	08.9	08.0	08.5	09.2	<b>07.2</b>
Sufficient level of hygiene		09.3	08.9	04.6	03.8	08.7	09.5	06.4	08.8	07.7	05.1	07.9	08.3	06.7	07.4	<b>07.4</b>
Average scores for 150 enclosures		09.2	09.1	07.8	08.1	09.1	09.1	08.8	09.3	08.7	08.1	08.0	09.0	08.4	08.4	<b>08.6</b>

Fig. 4

Consolidated data from ENDCAP's EU Zoo Inquiry 2011

<sup>7</sup> The data was presented within the 14 published country reports in the form of bar charts with a 10-point scale along one axis. In order to transpose the information, the bars had to be carefully measured against the scale to determine each numerical value. Although this process involved an inevitable margin of error, by using a right-angled guide, this margin of error does not exceed 1% (a visual reading of 5.5 is estimated to be no greater than 5.6 and no smaller than 5.4).

## Animal Welfare Assessment

Fig. 5 shows ENDCAP's assessment of Animal Welfare<sup>8</sup>:

EU Zoo Inquiry 2011 <sup>ENDCAP</sup>		AUSTRIA	BELGIUM	BULGARIA	CYPRUS	ESTONIA	FRANCE	GREECE	IRELAND	LATVIA	LITHUANIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	REGION
Reports		R01	R02	R03	R04	R05	R06	R07	R08	R09	R10	R11	R12	R13	R14	
<b>GENERAL ZOO INFORMATION - Inspections and EAZA membership</b>																
Number of zoos in member states		78	42	17	10	06	943	15	27	18	05	22	22	33	07	<b>1245</b>
Number of zoos inspected in reports		05	06	10	10	04	25	04	08	03	05	08	10	10	03	<b>111</b>
Percentage of zoos covered in inquiry		06%	14%	59%	100%	67%	03%	27%	30%	17%	100%	36%	45%	30%	43%	<b>09%</b>
Inspected zoos member of EAZA		01	03	00	00	01	13	01	02	01	01	04	03	00	01	<b>31</b>
<b>ANIMAL WELFARE INDEX - (based on 150 randomly selected enclosures)</b>																
Enrichment items present		00.5	00.2	01.2	00.2	00.4	-	00.8	00.8	00.0	00.4	00.6	01.7	01.4	00.5	<b>00.7</b>
Appropriate bedding in shelters		02.8	-	-	-	-	-	-	-	-	-	-	-	02.8	-	<b>02.8</b>
Possibility to be separated		03.4	04.0	-	-	-	-	-	02.9	02.8	-	02.4	-	-	01.7	<b>02.9</b>
Bathing pond present		04.2	-	02.3	03.7	02.1	-	03.7	04.4	-	03.1	-	-	-	-	<b>03.4</b>
Substrate topography varied		04.5	-	01.3	00.6	00.8	09.4	03.2	02.0	-	01.3	04.3	-	00.5	-	<b>02.8</b>
Enclosure environmentally varied		04.7	-	00.9	00.9	01.3	07.6	02.2	03.3	02.5	00.7	-	-	02.5	-	<b>02.7</b>
Access to privacy		-	05.0	01.6	03.2	04.3	09.8	02.7	03.7	04.3	02.7	02.2	03.7	01.8	01.3	<b>03.6</b>
Average scores for 150 enclosures		03.4	03.1	01.5	01.7	01.8	08.9	02.5	02.9	02.4	01.6	02.4	02.7	01.8	01.2	<b>02.7</b>

Fig. 5

Consolidated data from ENDCAP's EU Zoo Inquiry 2011

## General Zoo Information

Fig. 6 shows the EU Zoo Inquiry 2011 and EAZA membership<sup>9</sup>:

EU Zoo Inquiry 2011 <sup>ENDCAP</sup>		AUSTRIA	BELGIUM	BULGARIA	CYPRUS	ESTONIA	FRANCE	GREECE	IRELAND	LATVIA	LITHUANIA	POLAND	PORTUGAL	ROMANIA	SLOVENIA	REGION
Reports		R01	R02	R03	R04	R05	R06	R07	R08	R09	R10	R11	R12	R13	R14	
<b>GENERAL ZOO INFORMATION - Inspections and EAZA membership</b>																
Number of zoos in member states		78	42	17	10	06	943	15	27	18	05	22	22	33	07	<b>1245</b>
Number of zoos inspected in reports		05	06	10	10	04	25	04	08	03	05	08	10	10	03	<b>111</b>
Percentage of zoos covered in inquiry		06%	14%	59%	100%	67%	03%	27%	30%	17%	100%	36%	45%	30%	43%	<b>09%</b>
Inspected zoos member of EAZA		01	03	00	00	01	13	01	02	01	01	04	03	00	01	<b>31</b>
<b>EAZA AFFILIATED ZOOS WITHIN REGION - Numbers and types of membership</b>																
Percent EAZA zoos per country		08%	21%	00%	00%	17%	05%	07%	07%	06%	20%	55%	32%	03%	43%	<b>16%</b>
Percent EAZA zoos of zoos inspected		20%	50%	00%	00%	25%	52%	25%	25%	33%	20%	50%	30%	00%	33%	<b>26%</b>
<b>TYPES OF MEMBERSHIP - Full, Associate and Temporary</b>																
Total EAZA members per country		06	09	00	00	01	49	01	02	01	01	12	07	01	03	<b>93</b>
EAZA Full Membership		06	08	00	00	01	42	01	02	01	01	11	06	00	03	<b>82</b>
EAZA Associate Membership		00	01	00	00	00	04	00	00	00	00	01	01	00	00	<b>07</b>
EAZA Temporary Membership		00	00	00	00	00	03	00	00	00	00	00	00	00	00	<b>03</b>
EAZA Temporary Associates		00	00	00	00	00	00	00	00	00	00	00	00	01	00	<b>01</b>

Fig. 6

Consolidated data from ENDCAP's EU Zoo Inquiry 2011 and EAZA's 2010 AR

<sup>8</sup> Idem

<sup>9</sup> EAZA membership figures are taken from EAZA's 2010 Annual Report. All member institutions are named, listed by country, and then distinguished by the type of EAZA membership that the institution has. There are four types of membership: (1) Full Membership, (2) Associate Membership, (3) Temporary Membership, and (4) Temporary Associate Membership. The data under the headings 'General Zoo Information' and 'Inspected zoos member of EAZA' is taken directly from ENDCAP's 14 published country reports.



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