

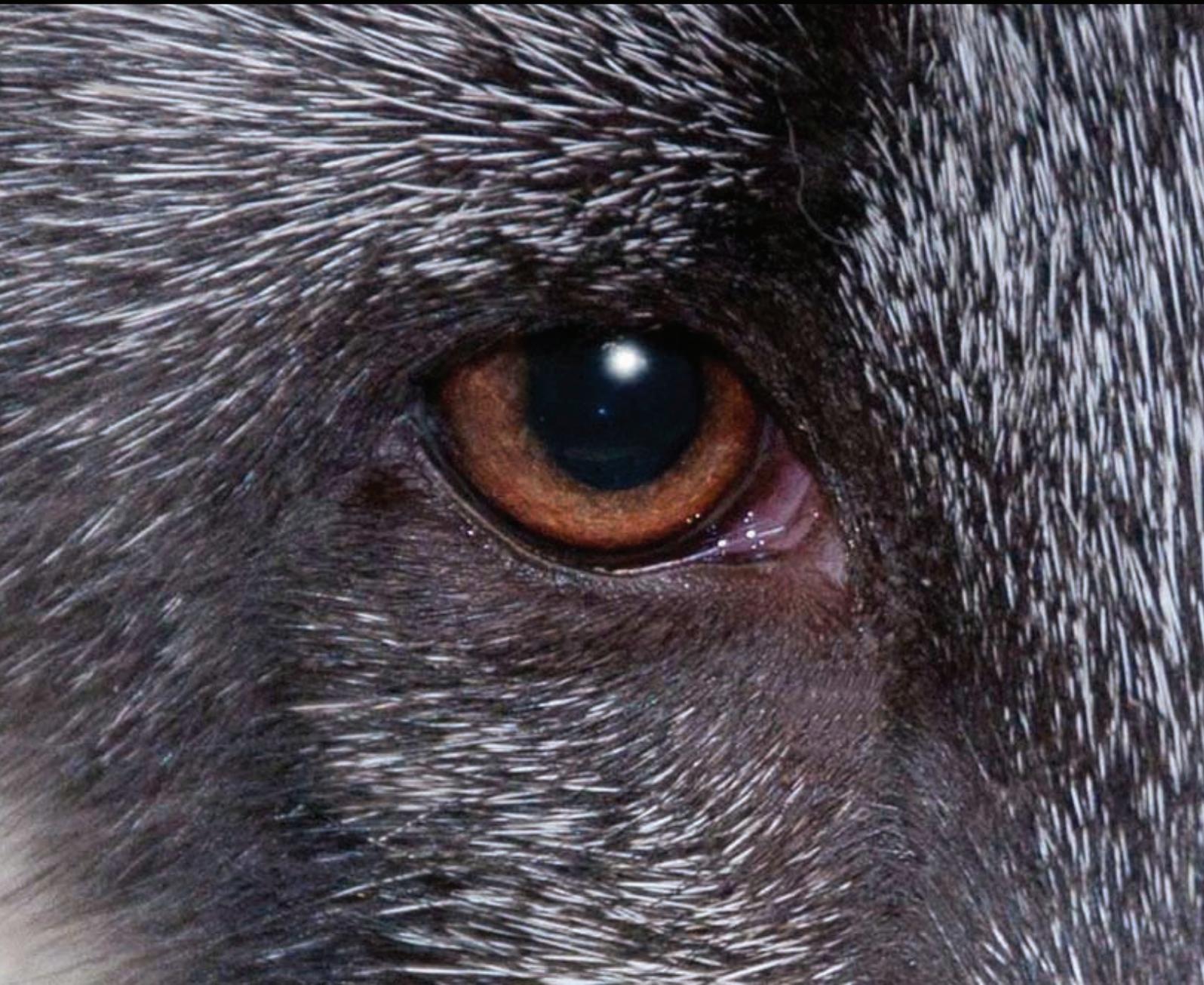
THE EU ZOO INQUIRY 2011

An evaluation of the implementation and enforcement of the EC Directive 1999/22, relating to the keeping of wild animals in zoos

LITHUANIA



Written for the European coalition ENDCAP by the Born Free Foundation



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Country Report **LITHUANIA**



CONTENTS

ABBREVIATIONS USED	3
TERMS USED	3
SUMMARY	4
RECOMMENDATIONS	5
THE EU ZOO INQUIRY 2011	
INTRODUCTION	6
METHODOLOGY	7
COUNTRY REPORT: LITHUANIA	
INTRODUCTION	9
RESULTS AND INTERPRETATION	13
GENERAL INFORMATION	13
CONSERVATION	15
EDUCATION	18
EVALUATION OF ANIMAL ENCLOSURES	21
EVALUATION OF ANIMAL WELFARE	24
CONCLUSION	26
REFERENCES	35

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Title page images taken at: Lithuanian Zoo, Lithuania's
Young Naturalists' Centre and Naturalist Centre Mini Zoo

ABBREVIATIONS USED

APOS.....	Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008
CBD.....	Convention on Biodiversity (1992)
CITES.....	Convention on International Trade in Endangered Species
EAZA.....	European Association of Zoos and Aquaria
EEP.....	European Endangered Species Breeding Programme
ESB.....	European Studbook
EU.....	European Union
IAS.....	Invasive Alien Species
IUCN.....	International Union for Conservation of Nature
NGO.....	Non-Governmental Organisation
O250/224.....	Order No.250/224, 'rules of detention for wild animals'
O298/2002.....	Order No.298 for the licensing and inspection of zoos (04/06/2002)
O346/2002.....	Order No. 346 for the 'standards for wild animals in zoos' (27/06/2002)
OIE.....	World Organisation for Animal Health
SMZP.....	Standards of Modern Zoo Practice, DEFRA, 2004
WAZA.....	World Association of Zoos and Aquariums
WPA.....	Wildlife Protection Act (06/11/97) (amended 22/06/2010)
ZIC.....	Zoo Inspection Commission

TERMS USED

Animal: A multicellular organism of the Kingdom Animalia including all mammals, birds, reptiles, amphibians, fish, and invertebrates.

Animal Sanctuary: A facility that rescues and provides shelter and care for animals that have been abused, injured, abandoned or are otherwise in need, where the welfare of each individual animal is the primary consideration in all sanctuary actions. In addition the facility should enforce a non-breeding policy and should replace animals only by way of rescue, confiscation or donation.

Circus: An establishment, whether permanent, seasonal or temporary, where animals are kept or presented that are, or will be, used for the purposes of performing tricks or manoeuvres. Dolphinarium, zoos and aquaria are excepted.

Collection Plan: A detailed written justification for the presence of every species and individual animal in the zoo related to the institutional mission, incorporating plans for re-homing and ensuring animal welfare in the event of zoo closure.

Domesticated Animal: An animal of a species or breed that has been kept and selectively modified over a significant number of generations in captivity to enhance or eliminate genetic, morphological, physiological or behavioural characteristics, to the extent that such species or breed has become adapted to a life intimately associated with humans.

Environmental Quality: A measure of the condition of an enclosure environment relative to the requirements of the species being exhibited.

Free-roaming Animals: Animals that have been deliberately introduced to the zoo grounds and that are free to move throughout the zoo.

Not Listed: Species of animal that are not listed on the IUCN Red List of Threatened SpeciesTM, including species that have yet to be evaluated by the IUCN and domesticated animals.

Pest: An animal which has characteristics that are considered by humans as injurious or unwanted.

Species Holding: The presence of a species in a single enclosure. For example, two separate enclosures both exhibiting tigers would be classed as two *species holdings*; while a single enclosure exhibiting five species of birds would be classed as five *species holdings*.

Threatened Species: A species that is categorised by the IUCN Red List of Threatened SpeciesTM as Vulnerable, Endangered or Critically Endangered (IUCN Red List website).

Wild Animal: An animal that is not normally or historically domesticated in Lithuania.

Zoonoses: Those diseases and infections which are naturally transmitted between vertebrate animals and man.

Zoo: All permanent establishments where animals of wild species are kept for exhibition to the public for seven or more days in a year, with the exception of circuses, pet shops and establishments which Member States exempt from the requirements of the Directive on the grounds that they do not exhibit a significant number of animals or species. (Directive 1999/22/EC).

SUMMARY

Five zoos in Lithuania were assessed: two, officially recognised by the government and a further three operational but unlicensed zoos, as part of a pan-European project to evaluate the effectiveness and level of implementation and enforcement of European Council Directive 1999/22/EC (relating to the keeping of wild animals in zoos) in European Union (EU) Member States. A total of 355 species (including subspecies where appropriate) were observed in a total of 412 enclosures. Information was collected about a number of key aspects of each zoo's operation including: participation in conservation activities; public education; enclosure quality; public safety; and the welfare of the animals. These parameters were evaluated against the legal requirements of Directive 1999/22/EC, the Lithuanian Wildlife Protection Act ('WPA') and Government Orders specific to zoos, No.298 ('0298/2002') and No.346 ('0346/2002'). Key findings were:

- **Zoo regulation in Lithuania is incorporated into legislation that promotes wildlife and habitat protection.** This is compatible with the Directive's requirements to conserve biodiversity.
- Zoos are licensed and regulated through the Environmental Protection Agency. **The results high light inconsistencies in the interpretation and application of the WPA and Government Orders.**
- **Only two of the five assessed zoos are licensed. The remaining three are operational but unlicensed.**
- **Enforcement of the WPA and the requirements of the Directive appear minimal.**
- Despite legal requirements to prevent the escape of wild animals into the natural environment, **three of the five zoos assessed failed to sufficiently secure the animal enclosures thereby potentially permitting animals to escape, placing both the natural environment and the public at risk.**
- **Poor enclosure design, a lack of stand-off barriers, a shortage of available zoo staff and the fact that some zoos encouraged direct contact with wild animals, often placed the public at risk of injury and exposure to disease.** In the majority of instances, the public were not informed of the potential risks.
- **Many of the enclosures were unhygienic and could pose a risk to the health and well-being of the animals.** An unacceptable build-up of faeces was observed in a quarter of all enclosures.
- **Despite the legal requirement for Lithuanian zoos to prioritise the breeding of rare species, few species are involved in captive breeding programmes.** The majority of species exhibited in the zoos are of *Least Concern* (species of low conservation priority) by the IUCN Red List of Threatened Species™.
- **The commitment to and standard of public education in the majority of zoos was poor.** On average, 50% of *species holdings* completely lacked any form of species information signage and 100% of signs did not include all best practice criteria (SMZP).
- **Standards of animal welfare and husbandry in many enclosures in all of the selected zoos were poor.**
- **On average, 95% of enclosures did not provide the animals with any behavioural or occupational enrichment opportunities by way of items, specifically toys or feeding devices.**
- **On average, more than 94% of enclosures were not environmentally complex.** The zoos appear to have given little consideration to the essential biological, spatial and behavioural needs of the animals.
- **The majority of the randomly-selected enclosures failed to comply with the Lithuanian minimum 'requirements for the keeping of wild animals in zoos' (0346/2002).** Moreover, findings suggested that these minimum standards themselves fail to adequately provide all animals with their spatial, physical, physiological and behavioural needs. Lithuanian zoos are not meeting their legal obligation to provide adequate conditions for their animals.

RECOMMENDATIONS

The Ministry of Environment should take the necessary measures to:

- 1) Review the findings of this report in relation to the identified inconsistencies in the interpretation of requirements, ambiguity, and application of the Wildlife Protection Act ('WPA') and Government Orders 0298/2002 and 0346//2002. Ensure consistency in the correct identification of a 'zoo' (as defined) and the consistent interpretation of exemption criteria to ensure compliance with Article 2 of the Directive.
- 2) Revise the WPA (amended 22/06/2010) and amend Government Order No.346 to ensure that Lithuanian zoo law adopts detailed provisions that require all zoos (as defined) to undertake conservation, education and scientifically-valid research activities with the overall aim of benefitting the conservation of biodiversity.
- 3) Amend the Lithuanian minimum '*requirements for the keeping of animals in zoos*' (Order No.346) to ensure that they recognise the spatial, physical, physiological and behavioural needs of all species kept in Lithuanian zoos. This should be undertaken by an independent, scientific body using reliable and scientifically-validated information.
- 4) Ensure members of the Zoo Inspection Commission ('ZIC') have the necessary skills, experience and competency to implement and enforce Lithuanian zoo law. Also that the ZIC is independent from the zoo industry; is familiar with the minimum '*requirements for the keeping of wild animals in zoos*' (Annex to 0346/2002); and is provided with the relevant training and skills pertaining to the care and welfare of wild animals in captivity.
- 5) Ensure that new zoos are inspected, through an on-site visit by the ZIC, to ensure they comply with all licensing requirements before the granting of an operating licence and ensure all existing zoos are annually inspected to ensure their compliance.
- 6) Establish criteria to evaluate and improve educational and conservation measures in zoos. This should not be developed and implemented by the zoos themselves but through an independent enforcement agency.
- 7) Introduce measures to ensure that sufficient funds are spent on improving the living conditions of the animals, including through increasing the entrance fee to their zoos.
- 8) Ensure that all veterinarians working in zoos, or who provide veterinary support for zoos, are equipped with the relevant training and skills to be able to address the health and welfare of wild animals in captivity.
- 9) Ensure that all zoo keepers, being those people who have responsibility for the care of animals in zoos, are provided with relevant training and skills in animal care and welfare.
- 10) Ensure zoos keep and conserve predominantly indigenous and European Threatened species rather than non-European species.
- 11) Ensure all public contact with Category 1 'Greater Risk' Hazardous Animals and those species known to harbour zoonoses is prohibited. All other public contact must be supervised, controlled and limited.
- 12) Publish guidance, as necessary, to assist zoos, enforcement personnel, veterinarians, NGOs and other stakeholders to effectively interpret the requirements of the WPA and 0346/2002, specifically with regard to their participation in, and their application of, recognised peer-reviewed conservation and education programmes.

The Environmental Protection Agency and the Zoo Inspection Commission should take the necessary measures to:

- 1) Ensure all permanent establishments open for seven days or more in a year and that display any number of wild animal species to the public, are licensed, receive regular inspections and meet the specified requirements of the WPA and 0346/2002.
- 2) Investigate the status of those unlicensed zoos identified during this investigation and ensure they comply with the WPA and 0346/2002, as appropriate.
- 3) Ensure zoo operators securely lock animal enclosures at all times and sufficiently inform the public of hazardous animals.
- 4) Ensure zoo operators are aware of the minimum '*requirements for the keeping of wild animals in zoos*' (Annex to 0346/2002) and take the necessary steps to ensure all animals are kept in conditions that meet their species-specific needs.
- 5) Ensure, through effective enforcement, that all zoos (*as defined by the Directive*) abide by the requirements of national zoo law and apply existing available penalties (Articles 22.2.1 – 22.2.5, 0298/2002; Administrative Code No.X-1766) to zoos that fail to meet the requirements (Articles 22 and 23, 0298/2002).
- 6) Close any zoo unable, within a specified period of time, to meet the requirements of the WPA, 0298/2002 and 0346/2002.

THE EU ZOO INQUIRY 2011

Introduction and methodology



THE EU ZOO INQUIRY 2011

Introduction and methodology

INTRODUCTION

Council Directive 1999/22/EC ('the Directive'), relating to the keeping of wild animals in zoos, was adopted in 1999. The Directive came into force in April 2002, when the EU comprised 15 EU Member States. Since then, all countries that are Members of the EU have been obliged to transpose the requirements of the Directive into national legislation and, from April 2005 (2007 in the case of Bulgaria and Romania), fully implement and enforce its requirements. The European Commission has responsibility for overseeing and ensuring the effective implementation of the Directive by Member States and for taking legal action in the event of non-compliance.

The Directive provides a framework for Member State legislation, through the licensing and inspection of zoos, to strengthen the role of zoos in the conservation of biodiversity and the exchange of information to promote the protection and conservation of wild animal species. This is in accordance with the Community's obligation to adopt measures for ex situ conservation under Article 9 of the Convention on Biological Diversity (1992) (CBD website). Member States are also required to adopt further measures that include: the provision of adequate accommodation for zoo animals that aims to satisfy their biological needs; species-specific enrichment of enclosures; a high standard of animal husbandry; a programme of preventative and curative veterinary care and nutrition; and to prevent the escape of animals and the intrusion of outside pests and vermin.

Although the Directive has been transposed in all Member States, national laws often lack detailed provisions relating to educational and scientific activities, guidance on adequate animal care, licensing and inspection procedures, as well as clear strategies for dealing with animals in the event of zoo closure. The Directive's requirements themselves are relatively ambiguous and allow for inconsistencies in interpretation. Competent Authorities in Member States have not been provided with comprehensive guidance or training to facilitate the adoption of the provisions of the Directive and, as a consequence, many are failing to ensure these provisions are fully applied by zoos (Eurogroup for Animals, 2008; ENDCAP, 2009).

Estimates place the total number of licensed zoos in the EU to be at least 3,500. However, there are thought to be hundreds of unlicensed and unregulated zoological collections that have yet to be identified and licensed by the Competent Authorities. No more than 8% of the total number of zoos in Europe are members of the European Association of Zoos and Aquaria (EAZA) which therefore should not be regarded as a representative of zoos in the European Community.

Preliminary investigations revealed that many zoos in the EU are substandard and are failing to comply with the Directive. Furthermore, EU Member States are inconsistent in their application of the Directive, but little effort has been made to identify and address the reasons behind this. The project aims to assess the current situation in the majority of Member States, identify any issues requiring attention and provide recommendations with regard to how implementation can be improved.

METHODOLOGY

Between March and December 2009, an assessment of 200 zoological collections in 20 EU Member States was made as part of an evaluation of the level of implementation and enforcement of European Council Directive 1999/22/EC. The project included an evaluation of national laws pertaining to zoos in each EU Member State compared to the requirements of the Directive, an analysis of the implementation and enforcement of those laws and an assessment of the status and performance of randomly-selected zoos in each Member State.

A Zoo Assessment Protocol was developed and tested to ensure consistency in data collection. For certain Member States (England, France, Germany, Ireland, Italy, Malta and Portugal) individual, locally-fluent investigators were contracted to undertake the work. In other Member States (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Romania and Slovenia) a single investigator from the UK, collected and analysed the data.

Implementation and enforcement of Member State legislation

Data were collected and evaluated through:

- Completion of a questionnaire by the Competent Authorities in each Member State
- Informal interviews with the Competent Authority
- Reviewing national zoo legislation

Status and performance of zoos

Using the definition of a zoo in the Directive*, a variety of zoological collections was assessed including: traditional zoos, safari parks, aquaria, dolphinariums, aviaries and terraria. In some cases, national legislation does not use this definition, which can lead to inconsistencies in application. Where this is the case, any variance was noted but zoos, as defined by the Directive, were nevertheless included in the project to maintain consistency.

Zoos were selected for evaluation using two methods: A. For those Member States with large numbers of zoos, 25 zoos were randomly-selected (France, Germany, Italy and England). B. For those Member States (n = 16) with a small number of zoos, between three and ten collections were selected, dependant upon the total number of zoos in the country and their accessibility. Zoos were identified by referring to Government records (if these exist), using online resources, published media and information from local NGOs.

Data were collected using a video camera which recorded a complete overview of the structure and content of each zoo, including: all enclosures; all visible animals; signage; public education facilities; any talks, shows or interactive animal handling sessions; public/animal contact and security issues. Additional information was collected from the zoo website and literature that was, occasionally, provided by the zoos themselves. Data collection was undertaken without the prior knowledge of the zoo management and therefore only areas accessible to the general public were recorded. Thus, for example, off-show areas, food preparation and storage rooms, quarantine and veterinary facilities were not included.

Data were analysed using a Zoo Assessment Protocol that had been developed and refined during an assessment of zoos in Spain (InfoZoos 2006 - 2008) and which took into consideration the requirements of the Directive, national zoo law and the EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria (available on the EAZA website and referred to in the preamble of the Directive). Information and guidance was also drawn from the DEFRA Standards of Modern Zoo Practice 2004 (SMZP) and Zoos Forum Handbook. The Zoo Assessment Protocol was adapted for each Member State dependent upon the specific requirements of national law.

The analysis was separated into the following sections:

- A. General Zoo Information.
- B. Conservation Commitment.
- C. Public Education.
- D. Evaluation of Animal Enclosures.
- E. Animal Welfare Assessment.

*... all permanent establishments where animals of wild species are kept for exhibition to the public for seven or more days a year. . . (Article 2 European Council Directive 1999/22/EC)

Further details of the assessment methodology are available at www.euzooinquiry.eu

All zoos included in the evaluation were asked to complete a Standard Zoo Questionnaire that asked for details of their participation in: European coordinated captive breeding programmes; in situ conservation projects; public education; and current research activities.

The Questionnaire also sought information relating to levels of staff training; veterinary care; and programmes to provide environmental enrichment and appropriate nutrition.

Resources dictated that the EU Zoo Inquiry 2011 included an assessment of the following EU Member States: **Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovenia and United Kingdom (England only).**

The remaining seven Member States were not included in this zoo assessment (March – December 2009). However a further report focussing on zoo regulation in **Spain** will be published in 2011.

LITHUANIA
Country Report



LITHUANIA

Country Report

INTRODUCTION

Lithuania joined the European Union (EU) in May 2004. By April 2005 Lithuania, along with 24 other EU Member States, was required to have transposed and implemented the requirements of the European Council Directive 1999/22/EC into its national law. The Directive has been transposed into national legislation by means of the Wildlife Protection Act, Chapter 2, Article 8 (06/11/1997) (amended 22/06/2010) (Official Gazette 1997 no. 108-2726) ('WPA') and, specifically, Order No.298 for the licensing and inspection of zoos (04/06/2002) ('0298/2002') and Order No. 346 for the '*standards for the keeping of wild animals in zoos*' (27/06/2002) ('0346/2002'). The Ministry of Environment has overall responsibility for the implementation of the Directive in the Republic of Lithuania, with zoo licensing and regulation administered through the Environmental Protection Agency (Standard Member State Questionnaire).

As part of this investigation, the Competent Authorities were asked to complete a Standard Member State Questionnaire. The response received from the Ministry of Environment (Member State Questionnaires, pers. comm., 1st September 2010), has been included throughout this report. Information has also been collected and reviewed by our Lithuanian partner organisations, PIFAS and LiSPA.

In Lithuania, zoo licensing and operation is regulated through the WPA, which aims to protect wild animals and their natural habitats in the territory of Lithuania through a framework of Government Orders, including Orders 0298/2002 (Articles 4(3)5 and 8(8), WPA) and 0346/2002 (Article 8(2)3, WPA and Article 22.2.1, 0298/2002), which are both specific to zoo regulation. Zoos are licensed and regulated through 0298/2002 (referred to in Articles 8(1), 8(2)8, 8(4), WPA), which have accurately adopted Articles 4 and 6 of the Directive, namely: zoo licensing and inspection, as well as procedures concerning zoo closure. Once licensed, zoos must comply with the requirements of 0346/2002, which includes the health and safety of the public and the animals, specifications for captive breeding programmes and minimal requirements for the keeping of wild animals in zoos. Other requirements for zoos, as specified by Article 3 of the Directive, have been adopted under Article 8(2) of the WPA.

A zoo licence is issued by the Environmental Protection Agency through the Regional Environmental Protection Departments following assessment and approval by territorial State Food and Veterinary Service and the Ministerially-appointed Zoo Inspection Commission ('ZIC'): a group of individuals, established by the Ministry of Environment, that represent the Ministry of Environment, State Food and Veterinary Service, the regional Environmental Protection Department, a veterinarian, and possibly also invited experts (Articles 8(3), WPA; 6, 7 and 9, 0298/2002) (Standard Member State Questionnaire). The ZIC is required to verify that the applicant can fulfil the requirements as set out by the WPA, in particular the requirements under Article 8(2), and in addition, the requirements of 0346/2002 (Articles 12 and 13, 0298/2002). This includes a review of all documentation required by the application and an on-site inspection of the premises (Articles 14, 15 and 17 of 0298/2002). The ZIC's decision, whether to grant or refuse the licence, or to specify recommended conditions for licensing, is presented as a report to the Environmental Protection Agency within 10 working days following the zoo inspection (Articles 18, 19 and 20, 0298/2002). The licence application is then either issued or refused by the Environmental Protection Agency, not more than 30 calendar days after the application (Articles 8(1) and 10, 0298/2002). Zoo licences are issued for a four-year term (Standard Member State Questionnaire).

The inspection of zoos is mandatory in Lithuania, both before the zoo licence is granted and then at least every four years, with unannounced inspections of zoos that are believed to be violating legal requirements (Schedule III, Article 14, 0298/2002). The inspections, undertaken by the ZIC, assess compliance with the requirements applicable to zoos (Article 8 of the WPA and 0346/2002) and further identify whether any conditions for licensing specified by the previous inspection have been met (Article 19, 0298/2002). Should a zoo violate any of the legal requirements, the Environmental Protection Agency may decide to revoke the licence and close the zoo (or part thereof) (Articles 8(4), WPA; 22 and 23, 0298/2002).

Under the requirements for keeping animals in zoos (0346/2002), a database of zoological collections is maintained by the Ministry of Environment, which is updated on an annual basis, and which lists all vertebrate animal species kept by the licensed zoos (Section V, 0346/2002). At the time of the investigation, the Ministry of Environment recognised two zoos in Lithuania, both of which are licensed. However, during the investigation a further three 'zoos' (as defined by the WPA and the Directive) were identified which were operational at the time of the assessment, but unlicensed. These unlicensed zoos have been included in this assessment.

Zoo licensing requirements

In Lithuania, a zoo is defined as a *'place with permanent and special facilities where live wild animals are kept and exhibited to the general public for no less than seven days per year representing a zoological collection'* (Article 2(16), WPA and Article 2, 0346/2002). This appears to include all kinds of zoological collections from the traditional zoo and small menageries, to specialised collections such as aquaria, aviaries and terraria, as well as dolphinarium (Standard Member State Questionnaire) (referred to as 'zoos' in this report).

Article 2(16) of the WPA and Article 2 and Schedule V of 0298/2002, refers to those establishments exempt from the zoo regulation in Lithuania. This includes circuses, pet shops and zoological collections that keep *'no more than 10 species of wild animal and not more than 50 animals and pose no threat to wildlife and the conservation of biodiversity'*. Exemptions are authorised by the Environment Protection Agency, on the recommendation of the ZIC, and not only take into account the numbers of species and individual animals, but also the conservation status of the species. Specifically this refers to species listed on the Protected animal, plants and fungi species list of the Republic of Lithuania (Order No.504, 13/10/03) and 'Endangered species' as listed by CITES (Official Gazette, 2001, no.50-1739) (Article 27, 0298/2002).

Authorised zoos in Lithuania are required to meet the specifications of the WPA, 0346/2002 and the *'rules of detention for wild animals'*, Order No.250/224 (2002 no.100-4456, 2008, no.6-227) as required by Article 13, 0298/2002. Particular emphasis is given to the requirements of zoos under Article 8(2), WPA (Article 12, 0298/2002). Zoos are required to comply with the following:

Conservation

Lithuanian zoo law has been transposed into Wildlife Protection law, which aims to conserve biodiversity, particularly in the territory of Lithuania. Specifically, Article 8(2)1 requires all zoos to participate in at least one of the following activities:

- *'Contribute to research for the conservation of any wild animal species.*
- *Participate in information exchange programmes on conservation of any wild animal species.*
- *Engage in the reproduction of wild animals in captivity, the repopulation of wild animals, and/or the reintroduction of wild animals in nature, where appropriate.'*

These above requirements are as stipulated in Article 3 of the Directive.

The Competent Authority has not provided any guidance to help interpret these requirements and thereby assist zoo operators understand their obligations concerning the conservation of biodiversity (Standard Member State Questionnaire).

In addition to the reference to captive breeding above, Article 35 of 0346/2002 states that the breeding of 'rare species' in zoos should be a priority.

Education

- *'Promote public education and education about the conservation of biodiversity by providing information about the species of wild animal exhibited and their natural habitats'*
(Article 8(2)2, WPA)

Article 42.6, 0346/2002 also refers to the requirement for zoos to provide information about the species exhibited and their origins, as well as any potential hazard to the public. However, the Competent Authority has not provided any further guidance to help interpret these requirements and thereby assist zoo operators understand their obligations concerning the education of the public (Standard Member State Questionnaire).

Animal welfare provisions

As specified by the Directive, zoos in Lithuania are required to:

- *'accommodate the wild animals in conditions that meet their biological and conservation needs'* but then further specifies *'in accordance with the rules of detention'*

(Article 8(2)3, WPA)

The *'rules of detention for wild animals'*, Order No.250/224 (2002, no.100-4456, 2008, no.6-227), specifies the legal requirements for the keeping of wild animals in captivity (which includes, but is not limited to, zoos). This regulation specifically concerns the approval of buildings that house the animals and their security: namely measures taken to prevent their escape and contact with indigenous wild animals. Permits are issued, for a period of five years (Article 11, 0250/224), and enforced by the Ministry of Environment, through the regional Environment Protection Department. The authorisation assessment is expected to consider whether the conditions meet the biological requirements of the species of wild animal and consider the number of individuals contained, in accordance with 0346/2002 (Article 9, 0250/224).

0346/2002 also provides requirements for zoos to maintain their animals in appropriate living conditions, respectful of the species' needs. Specifically, *'Requirements for the keeping of zoo animals'*, included in the Annex to the Order, provides species-specific standards, for mammals, birds and reptiles and amphibians, stipulating minimum surface area for outdoor and indoor enclosures and a brief description of the requirements of appropriate furniture and features, dependent upon the species needs, e.g. the need for heat lamps for reptiles, pools, climbing apparatus, etc. According to the Ministry of Environment these standards were developed by the Lithuanian Institute of Ecology and 'zoo staff' (Standard Member State Questionnaire).

All animals in zoos are required to undergo regular health checks by the territorial Food and Veterinary Service, with all zoos expected to:

- *'carry out preventative and curative veterinary care and nutrition programmes'*

(Article 8(2)4, WPA)

According to the Standard Member State Questionnaire, all zoos have a full-time veterinarian who is trained in the care of wild animals.

Further, the *'rules of detention for wild animals'* specify:

- *'An animal health expert is required to examine the health of wild animals at least once a year.'*

(Article 21, 0250/224)

The WPA and 0346/2002 also stipulate other requirements including measures to prevent the escape of animals (Article 8(2)5, WPA; Article 9, 0346/2002); maintenance of good hygiene (Article 12, 0346/2002); measures to protect keepers and zoo visitors (Articles 8, 10 and 42, 0346/2002); measures to warn the public about potentially dangerous animals (Articles 42.3 and 42.6, 0346/2002) and; sets standards concerning the knowledge and expertise of zoo personnel (Schedule VII, 0346/2002).

As specified by Article 3 of the Directive, there is a requirement for zoos to maintain and provide the Competent Authority with an annual animal stocklist (Schedule V and specifically, Article 21, 0346/2002; Article 12, 0298/2002; Article 8(2)7, WPA).

The Zoo Investigation

A total of five zoos were selected. This included: three unlicensed, privately-owned zoos and two licensed, municipally-owned zoos.

Data was collected at the following zoos in November 2009 (Fig. 1):

- Grūto Park (1)
- Lithuanian Sea Museum (2)
- Naturalist Centre Mini Zoo (3)
- Lithuanian Zoo (4)
- Lithuania's Young Naturalists' Centre (5)

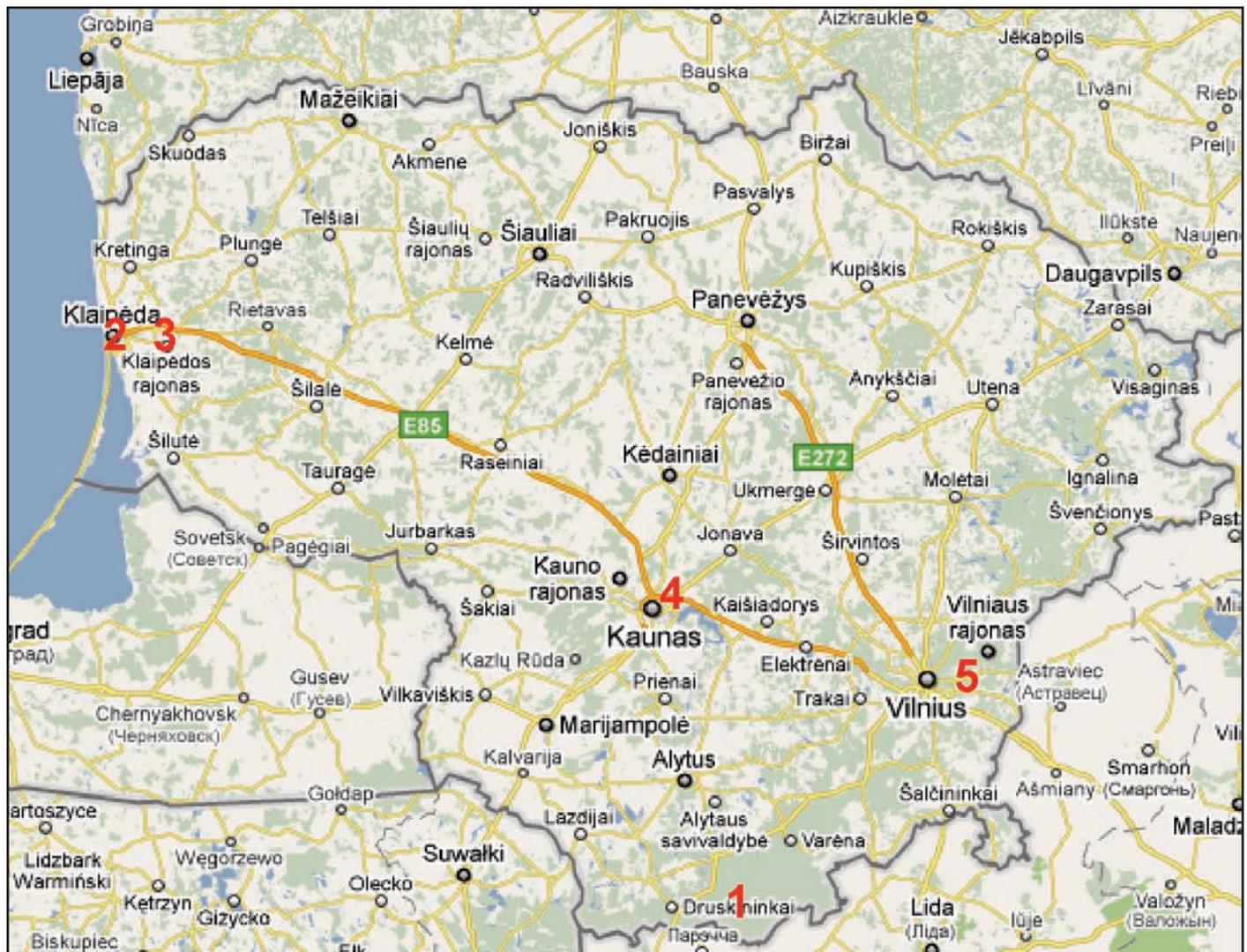


Figure 1 Geographical locations of the five zoos visited in Lithuania.

RESULTS AND INTERPRETATION

GENERAL ZOO INFORMATION

Overview

The investigation evaluated five zoos in Lithuania, two Municipally-owned, Lietuvos Zoologijos Sodas ('Lithuanian Zoo') and the Lithuanian Sea Museum, and three; Grūto Park, the Naturalist Centre Mini Zoo ('Mini Zoo') and Lithuania's Young Naturalists' Centre, are privately owned. Zoo entrance fees ranged from 12Lt (€3.50) to 20 Lt (€5.80).

Of the five zoos evaluated, only one zoo appeared to be a member of a zoo association. Lithuanian Zoo is a member of the *European Association of Zoos and Aquaria* (EAZA) and the *International Zoo Educators Association* (IZE). EAZA has a membership of 277 zoos in the EU (EAZA website) (8% of an estimated total of 3,500 zoos in the EU): representing a minority of the total number of regional zoos. IZE is an association dedicated to expanding the educational impact of zoos and aquariums worldwide. Its mission is to improve the education programmes in the facilities of its members, to provide access to the latest thinking, techniques, and information in conservation education and to support excellence in animal care and welfare (IZE website). European Board members of IZE are also members of the EAZA committee (EAZA website).

According to the Lithuanian Ministry of Environment, at the time of correspondence (September 2010), only two of the five assessed zoos were licensed and regularly inspected. It appears that the Competent Authority does not recognise Grūto Park, the Naturalist Centre Mini Zoo or Lithuania's Young Naturalists' Centre as 'zoos'. However, according to the authors of this Report, all three meet the definition of a 'zoo' (Article 2 of the Directive; Article 2(16) of WPA) and have therefore been included in the assessment.

A total of 355 species (including subspecies where appropriate) were identified in 412 enclosures in the five zoos. A total of 39 *species holdings* could not be identified (see online Methodology).

Despite all five zoos being sent the Standard Zoo Questionnaire, which provides an opportunity for the zoo to describe, amongst other things, its conservation and education activities, none of the zoos completed and returned the Questionnaire. Therefore, information concerning the performance of, and activities undertaken by the assessed zoos refers to printed materials produced by the zoos and information contained on zoo websites.

Prevention of animal escapes

'Take necessary measures to prevent the escape of wild animals and their contact with free-living wild animals'
(Article 8(2)5, WPA)

'Take necessary measures to ensure the safety of zoo visitors'
(Article 8(2)6, WPA)

'The exterior fence of the zoo should encompass the entire zoo territory's perimeter and be constructed using long-lasting materials. Fence height - no less than 2.5m and (if used) the mesh size should be no smaller than 10cm. The bottom of the fence must reach ground level and gates should be impermeable and locked. If a section of the territory during the valid license period is not used to hold wild animals, then the adjacent exterior fencing requirements still apply.'

(Article 9, 0346/2002)

'Fencing to keep animals must be installed, taking into account the biological characteristics of each species, and to ensure zoo visitors and staff safety. Fencing must be made of long-lasting materials..'

(Article 10, 0346/2002)

The Directive and Lithuanian law appear to ascribe importance to preventing the escape of non-indigenous animals from zoos. Order No.250/224 requires the Competent Authorities to record the species held in captive wild animal facilities and undertake a risk assessment to evaluate the threat to the public and the potential spread of disease should an animal escape from the facility with the aim of ensuring measures are in place to prevent their escape and contact with indigenous animals.

All five zoos evaluated had a perimeter fence that could realistically contain escaped animals. Only one zoo, Mini Zoo, had free-roaming wild animals, which included fallow deer (*Dama dama*) and guanaco (*Lama guanicoe*).

Overall, 82 of the total 412 enclosures in the five zoos were unlocked at the time of the assessment, which included 57% of the total number of enclosures at Mini Zoo potentially allowing the public unsupervised access and permitting possible animal escape. This included enclosures containing potentially dangerous species: European eagle owl (*Bubo bubo*) and wild cat (*Felis silvestris*), and two enclosures containing raccoon dogs (*Nyctereutes procyonides*), a species listed on the Lithuanian Invasive Species Database. Some of the enclosures at Grūto Park were also unlocked (40% of all enclosures). This included four enclosures exhibiting common pheasants (*Phasianus colchicus*), which is again listed on the Lithuanian Invasive Species Database.



Figure 2

Naturalist Centre Mini Zoo. Numerous unlocked enclosures were observed in three of the five assessed zoos. This not only contravenes the 'rules of detention for wild animals' (Order No. 250/224) due to a heightened risk of an escape, but further provides an opportunity for the public to have unauthorised access to the enclosure. This unlocked enclosure exhibits a wild cat (*Felis silvestris*).

Public placed at risk of injury and disease transmission

'..maintain safe distance between the animals and the zoo visitors'

(Article 42.3, 0346/2002)

Although the majority of the zoos did not actively encourage members of the public to have direct contact with the animals, the frequently poor design of enclosures, lack of stand-off barriers and lack of available zoo staff, allowed for direct contact and in some cases, placed the public at significant risk. The public could easily come into direct contact with animals in 65 out of the 150 randomly selected enclosures (Section D and E) of which 11 contained Category 1 'Greater Risk' hazardous animals (SMZP). This included species such as Amur tiger (*Panthera tigris altaica*), striped hyaena (*Hyaena hyaena*) and grey wolf (*Canis lupus*). A total of 23 enclosures contained Category 2 'Less Risk' Hazardous Animals (SMZP) such as black-capped capuchins (*Cebus apella*) and raccoon dogs (*Nyctereutes procyonoides*). Of the five zoos, 55% of the randomly selected enclosures that contained Category 1 Hazardous Animals did not have any signage informing the public about the potential dangers of the animal.

At the Mini Zoo, the visitors were encouraged to feed the animals. Members of the public were observed feeding bread to wolves (*Canis lupus*) and guanaco (*Lama guanicoe*). At the Lithuanian Sea Museum, signage advertised the opportunity for the public to swim with the dolphins or to have their photograph taken with a dolphin.



Figure 3

Naturalist Centre Mini Zoo. A lack of stand-off barriers and available zoo staff, as well as the occurrence of unlocked enclosures, allowed members of the public to come into unsupervised direct contact with potentially dangerous species, including this Eurasian eagle owl (*Bubo bubo*).

CONSERVATION

The conservation of biodiversity is the main objective of the Directive and it requires zoos in the EU to participate in at least one of four possible conservation measures (Article 3 of the Directive). Zoo law in Lithuania is included in the Wildlife Protection Act which accurately adopts these same requirements, including the need for zoos to ‘promote awareness in relation to the conservation of biodiversity’ (Article 3 of the Directive; Article 8(2)2, WPA). In addition to the requirements of the Directive, Lithuanian zoo law specifies that zoos should prioritise the captive breeding of ‘rare species’ (Schedule IX of O346/2002).

The results of this investigation have confirmed that the overall commitment to the conservation of biodiversity by Lithuania’s zoos, particularly in the protection of ‘rare’ or Threatened species, is not a priority.

Percentage of Threatened Species

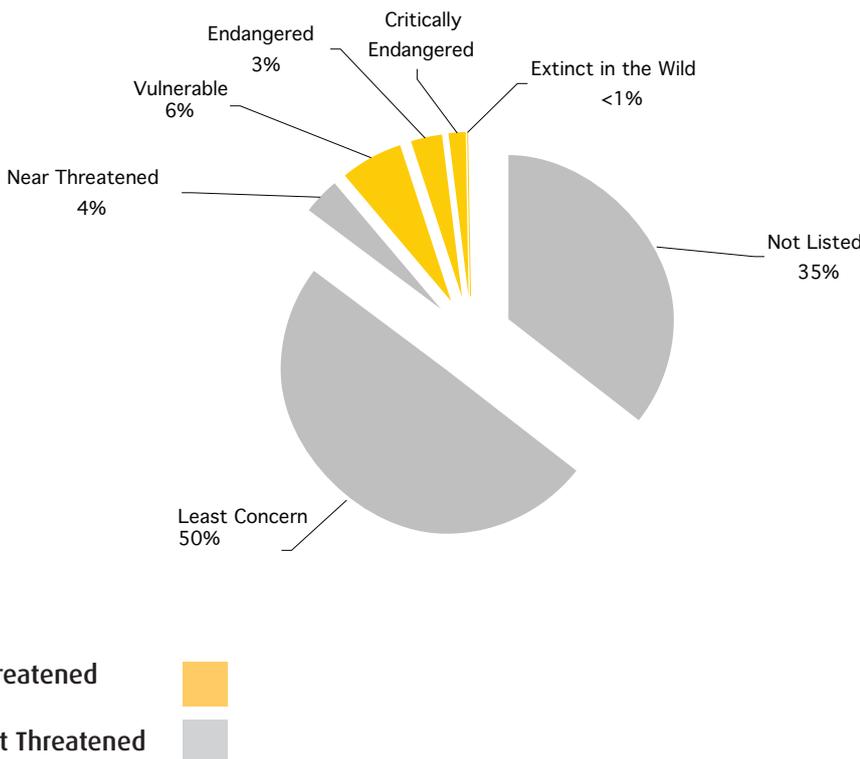


Figure 4 Proportion of the 355 species identified (including subspecies where appropriate) in the five Lithuanian zoos that are categorised by the IUCN Red List of Threatened Species™ as Threatened and Not Threatened.

Percentage of Threatened Species and Taxa

IUCN Red List of Threatened Species™ Categorisation	Taxonomic Group						Total No. Species	Proportion of total no. Species (%)
	Mammals	Birds	Reptiles	Fish	Amphibians	Invertebrates		
Not Listed	16	8	18	76	1	7	126	35%
Not Evaluated	0	0	0	0	0	0	0	0%
Data Deficient	0	0	0	0	0	0	0	0%
Least Concern	57	86	2	31	1	0	177	50%
Near Threatened	3	7	3	0	0	0	13	4%
Vulnerable	6	7	1	7	0	0	21	6%
Endangered	9	0	0	2	0	0	11	3%
Critically Endangered	2	0	0	3	1	0	6	2%
Extinct in Wild	0	0	0	1	0	0	1	<1%
Total No. Species	93	108	24	120	3	7	355	100%
Proportion of total no. Species (%)	26%	30%	7%	34%	1%	2%		

Table 1. Proportion of the 355 species (including subspecies where appropriate) identified in five Lithuanian zoos, categorised as Threatened and Not Threatened by the IUCN Red List of Threatened Species™ by taxa.

The results indicate that 11% ($n = 38$) of the total number of species from the five zoos can be described as Threatened (*Vulnerable* (6%), *Endangered* (3%) and *Critically Endangered* (2%)) (Table 1). Of the 38 Threatened species, 45% were mammals, 32% were fish, 18% were birds, 3% were reptiles and 3% were amphibians. The remaining 89% of the Not Threatened species were either classified as *Least Concern* (50%) or *Near Threatened* (4%) by the IUCN Red List of Threatened Species™ categorisation, or *Not Listed* (35%) (Fig. 4).

Of the 355 species kept by the five zoos, 14 (4%) are listed on the Lithuanian Protected Animals, Plants and Fungi Species List No. 504 (Last amended 11th February 2010) and two species, polar bear (*Ursus maritimus*) and European bison (*Bison bonasus*), are listed as a Threatened mammal on the European Red List (European Red List website). No officially-recognised European Threatened species of amphibian or reptile were kept by any of the Lithuanian Zoos.

Despite the low overall number of Threatened species kept by the five assessed zoos, individually, the Lithuanian Zoo exhibited the highest number of Threatened species (including subspecies where appropriate). Of the 23 species, the highest proportion was mammals, which included Amur tiger (*Panthera tigris altaica*), pygmy hippopotamus (*Choeropsis liberiensis*) and snow leopard (*Panthera uncia*).

Participation in European coordinated captive breeding programmes

A further indicator of a zoo's commitment to the conservation of biodiversity is its participation in *ex situ* conservation and the management of species through coordinated captive-breeding programmes. This is stipulated as an option under the 'requirements applicable to zoos' (Article 3 of the Directive and Article 8 of WPA), but is a required activity, particularly for Threatened species in Article 35 of O346/2002.

The results indicate that only a minimal number of species kept by the selected zoos are listed on the register of European captive breeding programmes.

Percentage of species in Lithuanian Zoos involved in coordinated captive breeding programmes (EEPs or ESBs)

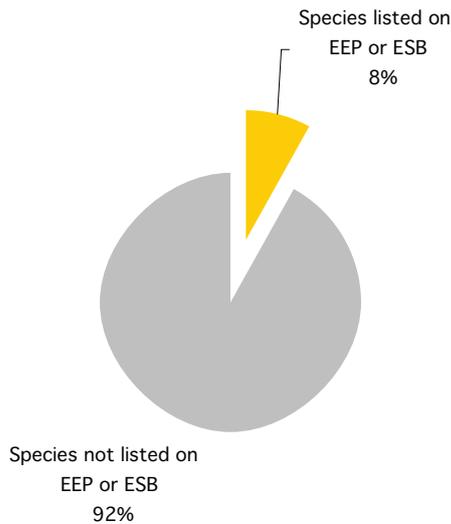


Figure 5 The percentage of the 355 species (including subspecies where appropriate) identified in the five Lithuanian zoos that are part of an ESB or EEP.

Only 8% (n = 29) of the 355 species in the zoos are listed as having either a European Endangered Species Breeding Programme (EEPs) or European Stud Book (ESBs) (Fig. 5). All five zoos kept at least one species listed on either EEP or ESB. However, it was not possible to confirm if any were actively participating in either one of these recognised international species management programmes. No information was provided on the zoo's websites, on signage at the zoos or in zoo guidebooks/leaflets about their participation in EEPs or ESBs.

Two of the five zoos do appear to participate in regional *in situ* species conservation programmes. The Lithuanian Zoo, for example, appears to participate in a project to protect the white-tailed sea eagle (*Haliaeetus albicilla*). Despite being listed as *Least Concern* on the IUCN Red List of Threatened Species, this species is included on the Lithuanian Protected Animals, Plants and Fungi Species List No. 504. Information included on a sign in the zoo grounds stated that the project was working to provide, "*Protection of the white-tailed sea eagle in Lithuania*", is supported by the Ministry of Environment and undertakes research, field conservation and aims to generate public awareness of the project and conservation of biodiversity. No further information could be found on the sign, in the zoo grounds, on the website or in zoo literature to identify the Zoo's involvement in the Project and it is not known if the two white-tailed sea eagles kept at the Zoo are involved in the Project. The Lithuanian Zoo also claims to have contributed to EAZA Conservation Campaigns, particularly, '21st Century Tiger' in 2003, however, no further evidence at the zoo, on the website or in the guidebook could be found to substantiate this, or denote their level of contribution (Lithuanian Zoo website).

The Lithuanian Sea Museum also appears to partake in regional conservation activities. On its website, the zoo claims to actively breed four species of penguin and numerous species of seal. However, only grey seals (*Halichoerus grypus*) are mentioned in the context of benefitting conservation (Lithuanian Sea Museum website). According to the website, the zoo partakes in the Baltic Marine Protection Commission, specifically the HELCOM project (HELCOM website), and through the captive-breeding of seals, 'intends' to assist in the "*restoration of the southern population of grey seals in the Baltic sea*" (Lithuanian Sea Museum website). Although there is reference to a programme to increase the numbers of grey seals in the southern Baltic on the HELCOM website, no further information could be found to confirm that seals captive-bred at the Lithuanian Sea Museum had been introduced into the wild.

Further information on the website of the Lithuanian Sea Museum refers to a number of research and knowledge-sharing initiatives, which the zoo claims to have participated in. This includes the "World Ocean Network" (between 2003 and 2005), "W.A.V.E.S." (Web of Aquariums: a Vortal about Education on Sea) (between 2004 and 2006) and "Aquaring" (between 2006 and 2009) (Lithuanian Sea Museum website). However, it is not clear how the Lithuanian Sea Museum was involved.

The remaining three zoos of the five selected did not appear to participate in or contribute to (financially or otherwise) any research, *in situ* conservation activities or projects in the wild.

EDUCATION

The Directive states that zoos should ‘*promote public education and seek to raise awareness in relation to the conservation of biodiversity, particularly by providing information about the species exhibited and their natural habitats*’ (Article 3). A similar requirement is included in Lithuania’s WPA and O346/2002, although it predominantly focuses on the provision of species information and, in particular, the species’ origin and if the species pose a threat to public safety.

Unlike other EU Member States, there is no specific legal requirement for zoos in Lithuania to establish an education programme. According to the Ministry of Environment, no guidance is issued to the zoos to encourage educational practices (Standard Member State Questionnaire).

Of the five zoos, only two appeared to engage in, and actively offer educational activities. The Lithuanian Sea Museum provides numerous courses and tours for schools and the members of the public to learn about a range of topics such as, “Who lives in the Baltic”. Informative posters were also observed during the on-site assessment, which covered issues such as dolphin conservation and biodiversity.

The Lithuanian Young Naturalists’ Centre is predominantly focused on providing national curriculum-based and vocational educational activities for (reportedly) over 50,000 school children per annum and support training for teachers of the life sciences. The Centre runs a variety of courses, ‘clubs’ and events to facilitate knowledge in a range of subjects including biology, zoology and ecology and apparently hosts 40 clubs, which cover topics such as Nature photography, Botany, Ecology and Agriculture (Education Development Centre, 2004). The investigator was shown the animal enclosures by an enthusiastic member of staff, who relayed some information about the animals observed. It is not known if such tours are common practice.

Both the Lithuanian Sea Museum and the Lithuanian Young Naturalists’ Centre had classroom facilities and promote themselves as an educational facility. The remaining three zoos did not appear to facilitate, or participate in any educational activities for either visiting school children or the general public.

At the time of investigation, the Lithuanian Sea Museum was the only assessed zoo to host ‘animal shows’ for the visiting public. This included a dolphin show and sea lion show and two separate ‘feeding presentations’ of Humboldt penguins (*Spheniscus humboldtii*) and grey seals (*Halichoerus grypus*). The ‘feeding presentations’ consisted of a keeper feeding the animals and no species information was provided. In the dolphin and sea lion show, eleven bottlenose dolphins (*Tursiops truncatus*) and two Californian sea lions (*Zalophus californianus*) were presented to the public. In the summer months of July and August there are four separate performances per day and for the rest of the year, there are two or three performances a day. On the day of the assessment, both species were observed occupying the main entertainment pool, at the same time, during the performance. The performance lasted approximately 30 minutes, where the dolphins and sea lions performed a diverse repertoire of tricks and stunts to music. For the dolphins, this included spinning hoops on their beaks and balancing balls: unnatural behaviour designed to entertain, rather than to educate the public about the species.

Minimal species information

A basic requirement of a zoo is to inform its visitors about the animals exhibited. Both the WPA and O346/2002 state that this information should include: ‘*information about the species of wild animal exhibited and their natural habitats*’ with O346/2002 providing further clarity of requirements: ‘*identifying the species, origin and potential hazards*’ (Article 42.6, O346/2002). It is not clear what ‘*potential hazards*’ means, but the authors of this Report have interpreted this to refer to notification to the public of potentially dangerous animals. Although the requirement for conservation status is not specifically required on species information signage in Lithuania, Article 8(2)2 of the WPA does advocate the ‘*education of the conservation of biodiversity*’, and it therefore may be seen as appropriate to include this information in the signage.

Despite these requirements, species information was lacking in all the zoos.

Proportion of Species Information Signage Present



Figure 6 The average percentage of species information signage present or absent (for all 674 *species holdings*) in the five Lithuanian zoos.

On average, 50% of *species holdings* completely lacked any form of species information signage (Figs. 6 & 7). Species information signage was absent for 71% of *species holdings* in Grūto Park, 69% in Naturalist Centre Mini Zoo, 60% in the Lithuanian Sea Museum, 30% in Lithuania's Young Naturalists' Centre and 19% in Lithuanian Zoo. Signage for 13 *species holdings* was incorrect (inaccurate species' scientific or common names), whilst others displayed only minimal information about the species. Figure 8 provides an overview of the content of the signage in the zoos.



Figure 7

Grūto Park.

Species information signage was absent for many of the animals observed. This included these long-eared owls (*Asio otus*).

Quality of Species Information Signs

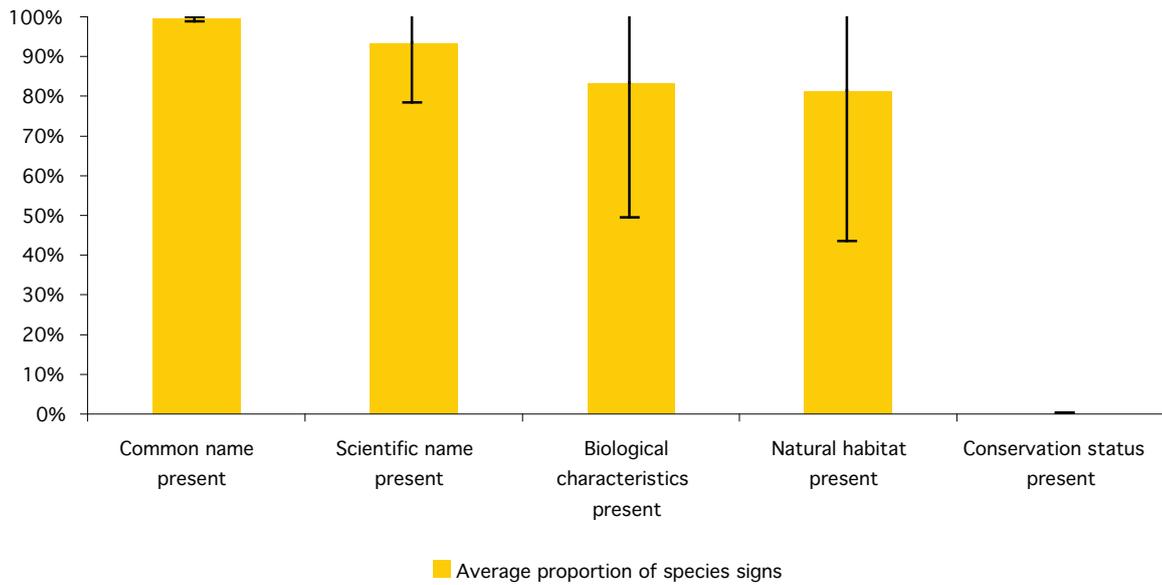


Figure 8 Content of species information signage within the five Lithuanian zoos. Each column represents specific information, as indicated by best practice criteria (SMZP). Each value (e.g. natural habitat present, 81%) represents the average of the 137 species information signs observed in 30 randomly selected enclosures. Error bars are a visual representation of the standard deviation from the mean value, demonstrating the variation in performance amongst selected zoos (e.g. the presence of the natural habitat of the species varied considerably between zoos in comparison to the presence of species common name).

The results (Fig. 8) demonstrate that on average, 19% of species' information signage did not contain all the required information as specified by Lithuanian legislation (Articles 8(2)2, APA and 42.6 of 0346/2002) (excluding potential hazard information). None of the species information signage in any of the zoos contained all the 'best practice criteria', as required by SMZP. On average, 19% of species information signage did not include information on the species natural habitat, or origin, and 100% did not specifically include information on the conservation status of the species.

Of the five zoos, 55% of the randomly selected enclosures that contained Category 1 Hazardous Animals, did not have any signage informing the public about the potential dangers of the animal, as apparently required by Article 42.6, 0346/2002.



Figure 9

Lithuanian Sea Museum.

Many species' information signage displayed minimal information about the animal.

EVALUATION OF ANIMAL ENCLOSURES

To evaluate the suitability and quality of each of the 150 randomly selected enclosures, data relating to 12 criteria regarded as vital to the health and welfare of wild animals in captivity were analysed using the evaluation method as described in Sections D and E of the Methodology, the requirements as specified in Chapter 2 and Article 8 of WPA, 0346/2002 and the Lithuanian *'minimum standards for wild animals in zoo'* (Annex to 0346/2002).

The 'Five Freedoms' (OIE Terrestrial Animal Health Code, 2010) were referenced as the basis for minimum standards for the keeping of animals, but species-specific needs were also taken into account, particularly in relation to the suitability of the captive environment. In reference to the Five Freedoms and the 12 criteria used to assess enclosure quality, the following observations were made:

In reference to the Five Freedoms and the 12 criteria used to assess enclosure quality, the following observations were made:

Freedom from Hunger and Thirst: Provision of Food and Water

'Animals are to be fed according to each species and the diet needs to take in account the animal's condition..'
(Article 28, 0346/2002)

Many animals did not appear to have access to clean drinking water. Where water was present, it was often stagnant and unhygienic. Members of the public were observed feeding grey wolves (*Canis lupus*) with inappropriate food.

Freedom from Discomfort: Provision of a Suitable Environment

'Facilities for wild animals in zoos should be considered to meet the needs of all the animals and not restrict their movements nor other vital functions and activities.'

(Article 13, 0346/2002)

'Outdoor spaces should be sufficiently large and high, not restricting their movement nor other vital functions and needs.'

(Article 16, 0346/2002)

Species requiring features to climb, bathe, height to fly, or a suitable substrate to dig or burrow in were often housed in conditions where natural behaviour was compromised. Enclosures generally lacked the appropriate furnishings or substrate to enable the animals to express natural behaviours. For example, striped hyaena (*Hyaena hyaena*), polar bear (*Ursus maritimus*), crested porcupine (*Hystrix cristata*) and grey wolf (*Canis lupus*) were kept in enclosures with flooring that prevented natural digging behaviour. Furthermore, American black bear (*Ursus americanus*) and polar bear (*Ursus maritimus*) were housed in enclosures without any access to bathing water, and a single grey seal (*Halichoerus grypus*) and several waterfowl species were kept in an enclosure with an insufficiently sized pool. Numerous bird species were kept in enclosures that failed to allow sufficient height and area to fly. In some cases, enclosures exhibiting ungulates were completely waterlogged and offered little dry land for the animals. Such conditions would compromise the animal's ability to exercise properly and express natural behaviour.

In many cases, enclosures were generally sterile environments, lacking appropriate bedding and comfort from extreme temperatures. At the time of assessment (November 2009) the majority of the enclosures appeared to provide the animals appropriate temperature and ventilation, but this may not be the case during winter months, when temperatures in Lithuania can reach -30°C (BBC website). This would need further evaluation. If there was an indoor enclosure, access was usually permissible, but furnishings to provide shelter or refuge within the outdoor enclosure were frequently absent.



Figure 10

Lithuanian Zoo.

Enclosures often lacked suitable features and furnishings to provide the animals comfort, stimulation and an opportunity to exercise and express natural behaviour. This enclosure exhibiting American black bears (*Ursus americanus*) did not provide the animals with sufficient opportunities for digging, climbing and swimming, and to express other natural behaviour (APOS).

Freedom from Pain, Injury and Distress: By Prevention and Provision of Suitable Health Care

'Proper standards of hygiene . . . be maintained'

(Article 25, EAZA Minimum Standards, 2006 and Article 8, 0346/2002)

Many animals were housed in unhygienic conditions. Problems included the build-up of faeces; urine; stagnant water; and uneaten, rotting food.

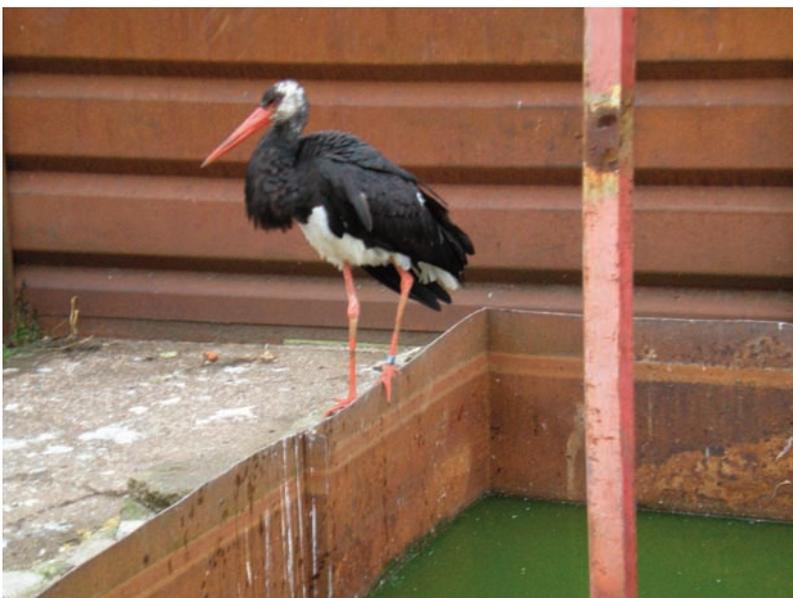


Figure 11

Naturalist Centre Mini Zoo.

Unhygienic conditions were observed in many of the enclosures throughout the five assessed zoos. Stagnant water, rotting food and a build-up of animal waste can harbour harmful pathogens, placing the animals at risk of disease. This black stork (*Ciconia nigra*) was housed together with a grey heron (*Ardea cinerea*) in unhygienic conditions.

'Carry out preventative and curative veterinary care'

(Article 8(2)4, WPA)

A number of animals were observed to be suffering from illness or debilitating conditions. This included cases such as nasal discharge from a polar bear (*Ursus arctos*), poor feather condition in a number of pheasants and an axolotl (*Ambystoma mexicanum*) observed moving extremely lethargically. Occurrences like these call into question whether there is sufficient husbandry expertise, health care and veterinary attention.

Freedom to Express Normal Behaviour: Provision of Suitable Space and Proper Facilities

'Animals to be provided with an environment, space and furniture sufficient to allow such exercise as is needed for the welfare of the particular species.'

(Article 3, EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria, 2006)

Many enclosures lacked the appropriate furnishings and materials to allow the species to express normal behaviours. Enclosures for wide ranging species such as polar bears (*Ursus maritimus*), mandrills (*Mandrillus sphinx*) and Californian sea lions (*Zalophus californianus*) were of an inadequate size and so did not permit their full range of natural locomotive behaviour. Typically social species, such as striped hyaena (*Hyaena hyaena*), Richardson's ground squirrel (*Spermophilus richardsonii*), mountain goat (*Oreamnos americanus*) and kulan (*Equus hemionus*) were observed housed alone. Of the selected enclosures, on average 58%, failed to meet the requirements of the minimum 'standards for the keeping of wild animals in zoos', in the Annex to O346/2002.

Freedom from Fear or Distress: Ensuring that conditions do not cause mental suffering

'Any direct physical contact between animals and the visiting public only to be under the control of zoo staff and for periods of time and under conditions consistent with the animals welfare and not leading to their discomfort' (Article 19, EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria, 2006)

'..maintain safe distance between the animals and the zoo visitors'

(Article 42.3, O346/2002)

In some cases, predators were housed in close proximity to each other, for example, at the Mini Zoo, Amur tigers (*Panthera tigris altaica*), striped hyaena (*Hyaena hyaena*) and domesticated dogs were all kept in close proximity, which may cause them undue distress. The Lithuanian Sea Museum provided the opportunity for people to have direct contact with the dolphins through their swim-with, Dolphin Assisted Therapy (DAT) and souvenir photograph sessions.

Environmental Quality of Enclosures

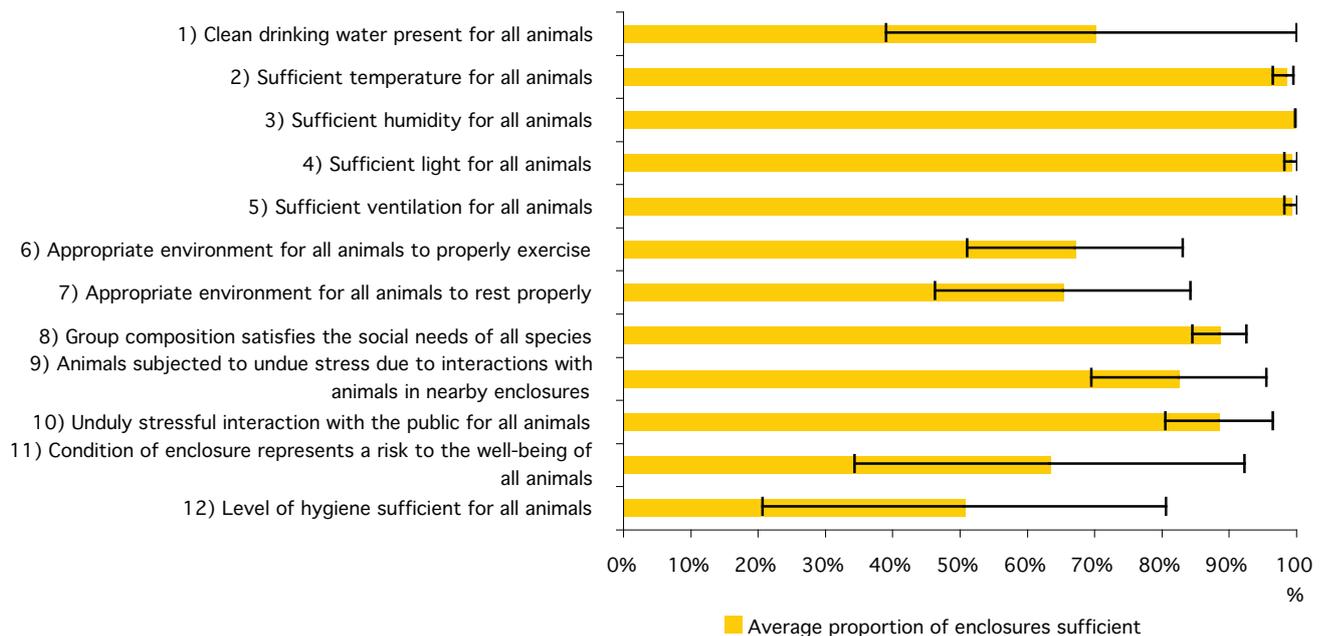


Figure 12 Environmental quality of the 150 randomly selected enclosures from five Lithuanian zoos. Each column represents a criterion used to assess the suitability of the enclosures to meet the needs of the animals contained. Error bars are a visual representation of the standard deviation from the mean value, demonstrating the variation in performance amongst selected zoos (e.g. the presence of clean drinking water in enclosures varied considerably between zoos compared to the temperature which was consistently adequate). Where the presence of a condition or factor could not be determined, data were not included.

The results (Fig. 12) demonstrate that while most enclosures appeared to provide the animals with sufficient light, temperature, humidity and ventilation at the time of assessment, lower values were recorded for enclosure cleanliness (on average, 49% of enclosures were unhygienic); preventative measures taken to prevent the build-up of harmful pathogens (on average, 37% of enclosures may pose a risk to the health of the animals); opportunities for the animal(s) to rest (on average, 35% of enclosures did not provide an appropriate environment to allow the animal to rest sufficiently); opportunities for the animal(s) to exercise and express their natural locomotive behaviour (on average, 33% of the selected enclosures were of an inadequate size and complexity); and clean drinking water (on average, 30% of enclosures did not provided clean drinking water).

Many of the enclosures observed were devoid of species-specific furniture, apparatus and refuges to allow animals to exercise, rest, hide and express natural behaviours. In many cases, particularly in the Lithuanian Zoo and Mini Zoo, enclosures consisted of bare concrete and did not satisfy the biological needs of the animals, as required by the Directive, the WPA and 0346/2002.

EVALUATION OF ANIMAL WELFARE

Keeping an animal in a restrictive, predictable and barren captive environment is known to compromise welfare (Mallapur *et al.*, 2002; Lewis *et al.*, 2006) and may result in the development of abnormal behaviours, which can become increasingly more difficult to reverse, even with the application of environmental enrichment techniques (Swaisgood & Sheperdson, 2006). The following represents the results of an assessment into the suitability of those enclosures assessed to permit the expression of most natural behaviours. The results have been ranked, with the most severe issues indicated in the graph below.

Issues requiring immediate attention (where the percentage of enclosures complying is below 50%)

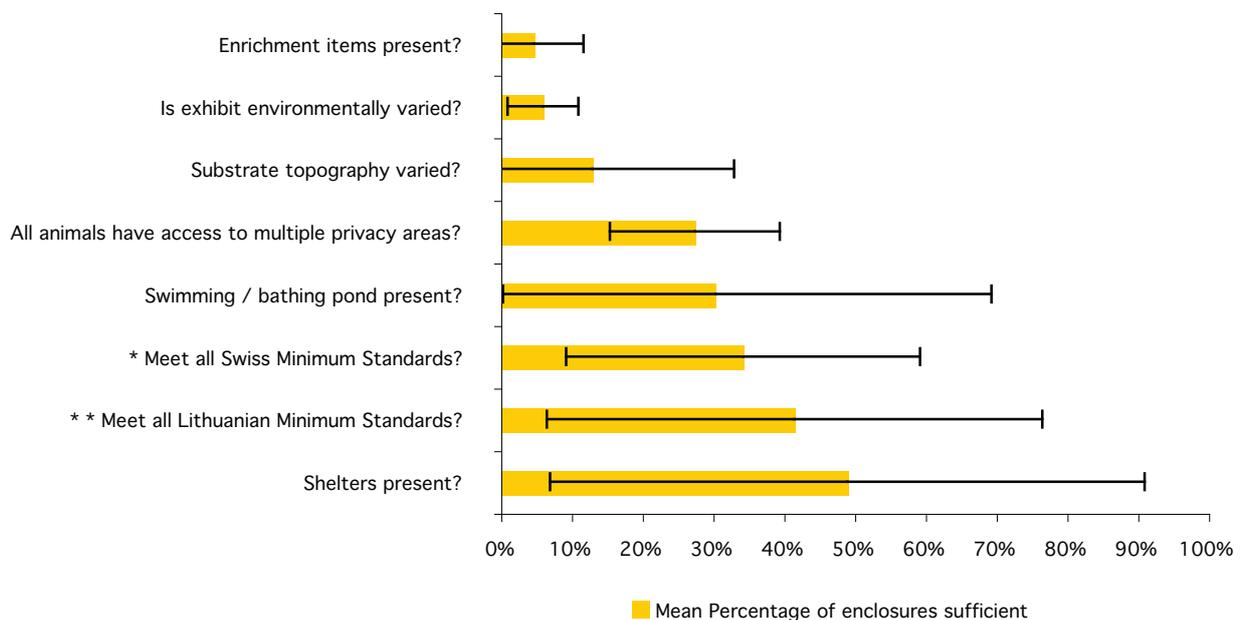


Figure 13 Issues requiring immediate attention following assessment of 150 randomly selected enclosures from the five Lithuanian zoos. Error bars are a visual representation of the standard deviation from the mean value, demonstrating the variation in performance (e.g. the presence of shelters in exhibits varied considerably between zoos). Where the presence of a condition or factor could not be determined, data were not included. * Refers to Animal Protection Ordinance of Switzerland *Tierschutzverordnung 2008* and ** Refers to Lithuanian *Minimum Standards for the keeping of wild animals in zoos*.

The level of animal welfare was assessed in 150 randomly selected enclosures in the five zoos (Fig. 13). Issues requiring immediate attention include: the lack of any behavioural or occupational enrichment items or techniques such as toys or feeding devices (95%); the lack of environmental complexity (94%); the inability for animals to access multiple privacy areas (73%); and a lack of shelter (51%).



Figure 14

Grūto Park.

The Bactrian camel (*Camelus bactrianus*) was observed stereotypically 'bar biting'. This is an abnormal behaviour often arising as a consequence of an impoverished environment.

Widely Represented Issues of Concern (where the percentages of enclosures complying score between 51% and 70%)

- On average, 41% of enclosures were not large enough to allow animals to sufficiently distance themselves from potentially aggressive or dominant cage companions.
- On average, 34% of enclosures did not have a suitable substrate that would allow species-typical movements and behaviours (i.e. burrowing, foraging, hoof wear etc.).
- On average, 32% of enclosures were not large enough to allow animals to sufficiently distance themselves from the viewing public.

Less Widely Represented Issues of Concern (where the percentages of enclosures complying score above 71%)

- On average, a build-up of excrement was observed in 24% of enclosures.
- On average, 19% of enclosures did not appear to be able to mitigate climatic extremes properly.
- On average, 10% of enclosures appeared to be overcrowded.
- Stereotypic behaviour was observed in, on average, 5% of enclosures.

Two national sets of minimum standards for the keeping of animals in zoos, which provide species-specific guidance, were used in the investigation to ascertain whether enclosures were suitable for the species contained. These were: the Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008 (APOS), chosen as an independent set of standards from a non-EU Member State, and the Lithuanian minimum 'standards for the keeping of wild animals in zoos' (Annex to Order O346/2002). All selected enclosures (Sections D and E analysis) were assessed against these standards. The results determined that, on average, **58% of the enclosures failed to meet the specified requirements described in the Lithuanian minimum standards in O346/2002** and 66% of enclosures that exhibited species listed on APOS did not meet those specified minimum requirements.



Figure 15

Lithuanian Sea Museum.

This male Californian sea lion (*Zalophus californianus*) swam repetitively from one end of the pool to the other, which was quite possibly stereotypic behaviour, known to arise as a consequence of an impoverished environment. The pool was of an inadequate size and offered limited resting area and no form of environmental enrichment.

CONCLUSION



CONCLUSION

This investigation has assessed five zoos in Lithuania. Despite a largely accurate transposition of the Directive into the Wildlife Protection Act, overall findings have revealed inconsistency in its application, failure to identify facilities that require a zoo licence, ineffective enforcement of the legislation and substandard conditions in all zoos included in the investigation.

These Conclusions are divided into eight sections for ease of reading:

1. Implementation of the Directive

The Directive was transposed into the Lithuanian Wildlife Protection Act in 2002 ('WPA') which established the means through Orders O298/2002, to license zoos, and O346/2002, to ensure that they meet specified requirements for the keeping of animals in zoos. The implementation of zoo legislation is undertaken by the Environmental Protection Agency, on behalf of the Ministry of Environment, and licences are granted, following an inspection by, and advice from the Ministerially-appointed Zoo Inspection Commission ('ZIC').

The implementation of the Directive by Member States is an issue for subsidiarity and although transposition is overseen by the European Commission, it is the responsibility of the Member State to accurately transpose all the requirements of the Directive into the respective national law and apply it. The Lithuanian Ministry of Environment has published a document that describes how transposition has been achieved (Ministry of Environment, 2010). This shows that the transposed requirements of the Directive have largely remained the same within the WPA (Article 8), and despite the additional Government Orders O298/2002 and O346/2002 (referred to in the WPA), no explanatory notes or guidance has been established and included to help the ZIC, or the zoo, to accurately interpret the requirements and meet their obligations.

The findings of this investigation have revealed significant inconsistencies in the application of the Lithuanian zoo law, particularly in relation to the definition and identification of a 'zoo'. As shown in the breadth of this EU zoo project, this is apparent in many EU Member States where, possibly due to a lack of explanation and guidance, varying interpretations of important definitions and requirements, have resulted in the inconsistent application of the national zoo law and the Directive. Amongst other failings, this has resulted in large numbers of zoological collections being exempt from the Directive, when in fact they should be licensed and comply with stipulated requirements. Lithuania is no exception. In Lithuania, the Ministry of Environment only recognises two zoos in the country, yet a further three zoological collections have been identified through this investigation. All of which appear to comply with the definition of a 'zoo' (Article 2(16) of the WPA).

It remains unclear why these additional zoological collections have been seemingly exempt from regulation. At the time of the assessment, Grūto Park, the Naturalist Centre Mini Zoo ('Mini Zoo') and Lithuania's Young Naturalists' Centre (the unlicensed facilities) each kept more than 10 species of wild animal and 50 individual animals, including conservation-sensitive species, and therefore all warrant a zoo licence. Private ownership appears to be the only other commonality between the unlicensed zoos, whilst the Lithuanian Zoo and the Lithuanian Sea Museum (the licensed facilities) are municipality-owned. However, the zoo definition (Article 2(16) of the WPA) makes no distinction between private and public-owned zoos. It is therefore reasonable to assume that this breach of the WPA and O298/2002 has either resulted from a failure of the ZIC to accurately identify the three zoological collections as requiring a zoo licence, or that these collections have not applied for a licence as is required by Article 6 of O298/2002. Either way, these zoos have been permitted to operate, unregulated, whilst open to the public, potentially placing both the public and the animals at risk. A matter of concern, it is not unreasonable to suggest that there are **more zoological collections in Lithuania that may have also fallen through the legislative net and be fully operational, but unlicensed.**

These examples demonstrate that whilst accurate transposition of the Directive into Lithuanian zoo law has been achieved, without accurate interpretation and understanding of the requirements and effective enforcement of the law, the objectives of the Directive will never be fulfilled and requirements such as the conservation of biodiversity and education of the public will be left in the hands of the zoos themselves to implement. This investigation has revealed that **zoos in Lithuania are not meeting all their legal obligations** and without the development of, **additional explanation, guidance and training opportunities, performance and compliance is likely to improve.**

2. Ineffective enforcement

By April 2005, all zoos in Lithuania were required to be licensed and meet the specifications of the Directive, through the WPA, 0298/2002 and 0346/2002. However, at the time of the investigation (November 2009), the Environmental Protection Agency had failed to identify and license 'zoos' (as defined) in Druskininkai, Daupary and Vilnius. Recognising that more unlicensed collections in the country may exist, and that failures in law enforcement could partially be to blame, this investigation has included a review of the ability of the Competent Authorities to effectively apply the law.

In Lithuania, zoo inspection is undertaken by the Zoo Inspection Commission ('ZIC'): consisting of representatives from national and local Government Departments and experts in veterinary science and biology (Article 3 of the WPA), who reportedly inspect zoos 'at least every four years' (Article 14, 0298/2002). Reliant upon the knowledge and expertise of the ZIC, the zoo inspection does not appear to follow a specific protocol or structured auditing process other than a brief list of requirements (Article 19, 0298/2002). The process is therefore largely open to the interpretation and expertise of the individuals within the ZIC and their assurances to the Environmental Protection Agency that the information collected is both accurate and complete, and that consistency in application between the zoos has been assured. Based on the zoo inspection report, and the advice from the ZIC, a zoo licence is granted, refused or revoked. To date, no zoo in Lithuania has been instructed to close for matters of non-compliance (Standard Member State Questionnaire).

The assessment of the two licensed zoos: the Lithuanian Zoo and the Lithuanian Sea Museum, revealed that neither fully comply with the requirements specified by Lithuanian law, yet both zoos were granted a zoo licence. Identified problems included failure to: contribute to the conservation of 'rare' or Threatened species; promote public education and awareness in relation to the conservation of biodiversity; provide sufficient information about all the species exhibited; and keep animals in an appropriate manner. Furthermore, and as expected, substandard conditions for animals were also identified in the unlicensed zoos.

Despite an established system of zoo licensing and inspection, the regularity, quality and the process of inspection must be further investigated. **The zoo inspectorate does not appear to have the necessary knowledge and expertise to ensure zoos are meeting their obligations under Article 8(2) of the WPA, and 0346/2002.** These findings call into question the ability and competence of the Zoo Inspection Commission, the contracted veterinarian and biologist and the Environmental Protection Agency to identify non-compliance and effectively enforce the law.

The Ministry of Environment has recognised the need for further training in the effective inspection of zoos, identification of poor welfare and the care of wild animals (Standard Member State Questionnaire). **This should be in addition to the development of national guidance for zoos which will encourage consistency in application of, and compliance with, the law.**

3. Prevention of animal escapes

There are two recognised barriers that prevent the escape of an animal in a zoo into the natural environment. The enclosure fencing, which prevents an animal from escaping from its enclosure, and the perimeter fence, which prevents an escaped animal from leaving the zoo grounds. Both barriers should be secure and of an adequate height and strength to contain the animals.

Lithuanian law acknowledges the importance of maintaining both barriers as a measure to prevent the escape of wild animals from zoos into the local environment and the risk this may represent to local wildlife, the natural habitat and to the local human population (Order No.250/224). Lithuanian law goes beyond many other EU Member States by including in the law the physical specifications of the perimeter fence, such that its height must be no less than 2.5m. However, it is within Article 9 of 0346/2002, that a mistake has been identified. It states, '*Fence height - no less than 2.5m and (if used) the mesh size should be no smaller than 10cm*'. The latter requirement is clearly a mistake if the objective is to prevent the escape of animals, and it should therefore state, '*..the mesh size should be no larger than 10cm*'.

That aside, the issue of greatest concern was the prevalence of unlocked enclosures. Of the 412 enclosures observed across the five selected zoos, 20% were unlocked, which would not only allow the public unsupervised access, but further present a greater risk of animal escape. In an incident at Tallinn Zoological Gardens in 2007, for example, a polar bear escaped from its enclosure after the keeper forgot to lock the enclosure door (Alas, 2007). In the Lithuanian investigation, species observed in unlocked enclosures included both potentially dangerous animal species (e.g. wild cat (*Felis silvestris*)), as well as species listed on the Lithuanian Invasive Species Database (e.g. raccoon dog (*Nyctereutes procyonides*)), and although the unlicensed zoos were largely at fault, the requirements of Order No.250/224 'rules of detention for wild animals', still apply. Biological invasions by alien species are one of the greatest threats to the ecological and economic well-being of the planet (DAISIE website).

In 2001 the European Commission recognised the need to address IAS as an integral part of halting biodiversity decline and initiated the development of an EU strategy to substantially reduce their impacts (Shine *et al.*, 2009). **It has long been recognised that zoos pose a significant risk of presenting pathways for the introduction of alien species:** from the invasion of the ruddy duck (*Oxyura jamaicensis*) into Europe, which now threatens the indigenous white-headed duck (DAISIE website) to, more recently, an investigation of 63 zoos in Spain (2010), which found that 75% had enclosures that were 'non-secure'. In the Spanish investigation, 80% of these enclosures housed non-indigenous species, including 21 species listed by the European Inventory of IAS (Fábregas *et al.*, 2010).

Despite taking additional legislative measures to prevent animal escapes, the failure of zoo management in particular, to take simple measures to avert potential disaster is evident and raises additional concerns about the quality of inspection. **Lithuanian zoos are failing to take preventative measures to stop the escape of IAS into the natural habitat.** Inspections should ensure that all enclosures containing wild animals are locked securely.

4. Public placed at risk of injury and illness

The often poor design, the lack of sufficient stand-off barriers, 'non-secure' enclosures and the lack of zoo staff allowed for possible direct and unsupervised animal contact and in some cases placed the public at significant risk. **The public could potentially come into direct contact with potentially dangerous wild animals and few zoos appeared to recognise the risks and inform the public accordingly** despite the legal requirement to maintain a safe distance between the animals and zoo visitors (Article 42.3, 0346/2002).

Where contact was openly encouraged, for example at the Lithuania's Young Naturalists' Centre and the Lithuanian National Sea Museum, as well as the public feeding of the animals at the Mini Zoo, the public were unknowingly being placed at risk of harm, and preventative measures, such as warning signage and hand-washing, were seemingly overlooked. In addition to the possible risk of physical injury, many animals are carriers of zoonoses that are transmissible and may be harmful to humans. Animals, particularly wild animals, are thought to be the source of >70% of all emerging infections (Kuiken *et al.*, 2005).

Of particular mention were the opportunities advertised at the Lithuanian Sea Museum which encouraged members of the public, in particular children with disabilities, to pay extra to swim-with, or have their photographs taken with dolphins. Numerous bacterial and fungal diseases are associated with marine mammals, for example, streptococci, staphylococci, pseudomonas, mycobacteria and lobomycosis, which are known to pose health threats to people who have contact with, or enter pools with, infected animals (Buck & Schroeder, 1990). The risk of infection for people who swim-with, stroke or kiss the dolphins is therefore highly probable (WDCS, 2011).

The transmission of zoonotic disease is often overlooked by zoos, but where the public can have direct or indirect contact with wild animals (a practice generally to be discouraged), precautionary measures (such as hand-washing prior to and after supervised contact with approved species) must be taken. **All public contact with 'Hazardous Animals', and those known to harbour zoonoses, should be prohibited.**

Lithuanian zoos are failing to take preventative measures to protect the public. Zoos should take a far greater responsibility for the health and welfare of their animals and the safety of the visiting public. The need for positioning of effective and comprehensive warning signs, deployment of effective stand-off barriers and the employment of trained zoo staff, is critical and urgent.

5. Poor record for conservation

The Directive requires all zoos in the European Community to contribute 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 of Biological Diversity* (1992) (CBD website). The Lithuanian Ministry of Environment has acknowledged this responsibility by amending the Wildlife Protection Act to include the same requirements as those in Article 3(1) of the Directive. The WPA requires zoos to adopt at least one of four options that contribute to this common goal, however, the document detailing legal transposition (Ministry of Environment, 2010) appears to require zoos to undertake all conservation requirements. **This apparent discrepancy between the two documents needs to be brought to the attention of the Ministry of Environment.**

In addition, and beyond the parameters set by the Directive, Lithuanian law O346/2002 requires zoos to prioritise the captive breeding of 'rare species', in an attempt to conserve those species threatened by local, regional or global extinction. Reference is made to the Protected animal, plants and fungi species list of the Republic of Lithuania (Order No.504, 13/10/03) and animals considered to be '*Endangered species*' by CITES (Official Gazette, 2001, no.50-1739) (Article 27, O298/2002).

As with the majority of EU Member States, no further guidance is available to zoo inspectors or operators that would advise zoos how to effectively conserve biodiversity and protect threatened (or 'rare') species (Standard Member State Questionnaire). The options listed in Article 8(2)1 of the WPA are vague and interpretation broad, and other than further '*Animal Breeding*' specifications given in Schedule IX of O346/2002, conservation activities in zoos in Lithuania appear to be left to the decision of the zoo.

The findings indicated that **zoos in Lithuania are not making a significant contribution to the conservation of biodiversity, in particular Threatened species.** Despite the stipulation of Article 35 of O346/2002, the great majority of species exhibited in the five zoos are either categorised as *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 11% of the total number of species observed in the five zoos. Furthermore, of the total of 355 species exhibited in the five zoos, just 14 are listed on the Protected animal, plants and fungi species list of the Republic of Lithuania (Order No.504, 13/10/03). Mammals made up the highest proportion of overall 'Threatened' taxa and amphibians and reptiles were the lowest, despite there being a greater number of Threatened amphibians to Threatened mammals. Of the 93 mammal species kept by all the zoos, two are listed as Threatened on the European Red List (European Red List website).

Few of the animals at the zoos appeared to participate in captive-breeding programmes. Of the total species exhibited in the zoos, only 8% are listed on the register of the European species management programmes, EEPs or ESBs, but no information could be identified that those species individuals were actively participating in the programmes.

Only the Lithuanian Zoo and the Lithuanian Sea Museum demonstrate some level of involvement in conservation activities. This included their involvement in *in situ* conservation of two locally threatened species: the white-tailed sea eagle and the grey seal (respectively). Both programmes appear to involve external partners but in neither project could this investigation identify whether these individual animals kept by the zoos were participating in a breeding programme for eventual release. Of the 190 species in the Lithuanian Zoo, 23 are listed as Threatened by IUCN and nine are listed on the Protected animal, plants and fungi species list of the Republic of Lithuania (Order No.504, 13/10/03). At the Lithuanian Sea Museum, eight of a total of 81 species were listed as Threatened by IUCN and only one was listed on the Protected animal, plants and fungi species list of the Republic of Lithuania (Order No.504, 13/10/03). Neither zoo appears to partake in European species management programmes, despite Lithuanian Zoo's affiliation to EAZA.

Although findings have identified some commitment to local species conservation programmes, specifically by the licensed zoos, overall, Lithuanian zoos are making an insignificant contribution to the conservation of European and global biodiversity. Information on public display about the conservation of biodiversity is lacking in all assessed zoos.

6. Limited educational value

In addition to a commitment to the conservation of biodiversity, zoos in the EU are required to promote public education and awareness in relation to the conservation of biodiversity, by particularly providing information about the species exhibited and their natural habitats (Article 3(2) of the Directive). The Lithuanian Wildlife Protection Act and 0346/2002 both refer to the requirement for zoos to provide information about exhibited species, but as discussed above, fail to include information about species conservation. In fact, there was little mention of the significance of conservation of biodiversity at any of the assessed zoos. This appears to contravene a requirement in the WPA, imposed on the Municipal Administration, which requires all facilities displaying animals to inform the public about the need to protect wildlife and their habitats (Article 4(5)2 of the WPA).

The findings of this investigation demonstrate that whilst two of the five zoos offer educational activities, particularly for pre-organised school groups, the educational value for the general public was minimal across all five zoos. Overall, half the signage for *species holdings* was absent and when it was present the majority did not contain all the best practice criteria (SMZP), with **19% failing to include information about the species' natural habitat and 100% failing to include the conservation status of the species**. None of the zoos chose to return the Standard Zoo Questionnaire, which would have provided an opportunity for the zoos to set out details of their participation in educational activities. Although two of the five zoos provide educational talks and classes, it was not possible to confirm if these made reference to the importance of the conservation of biodiversity.

Notably, the Lithuanian Zoo, a Member of EAZA and the *International Zoo Educators Association (IZE)*, does not appear to have an established an education strategy, a necessity according to WAZA (WAZA website), nor does it appear to provide educational activities to zoo visitors. Of the 238 *species holdings* in the zoo, 19% did not have species information signage and where there were opportunities to provide more information about a species, specific taxonomic family or taxon, their natural attributes, adaptations to natural habitats, species conservation, etc., such opportunities were wasted. As a member of IZE, the Lithuanian Zoo appears to be failing to provide 'access to the latest thinking, techniques, and information in conservation education', as aspired by IZE (IZE website). Interestingly, on the zoo's website, Senior Zoologist, John Simkus has posted an article that claims the zoos' main goals are education, research and nature protection - principals that evidently have yet to be completely adopted by the zoo. The article appears to be proposing improvements to the zoos' current educational activities, concluding that '*visitors to the zoo are not only wanting to see animals, but also to understand the threats to endangered species and environmental fragility*' (Lithuanian Zoo website).

The Lithuanian Zoo, along with all zoos in Lithuania, should take on board the recommendations of Mr. Simkus and WAZA by establishing an education strategy that not only ensures all species exhibited have appropriate and accurate information signage on all enclosures, but further that opportunities are taken to provide scientifically-valid information to the visiting public that includes information on species biology, ecology and conservation.

Further consideration needs to be given to the enclosures at the zoos, many of which consisted of an empty shell that lacked form, furnishings, apparatus and vegetation and failed to take into account species-specific needs. If the enclosure design and the species composition in each enclosure reflects the species' natural habitat and animals arranged in distinct habitat types, then this may increase educational potential.



Figure 16

Naturalist Centre Mini Zoo.
A tiger (*Panther tigris*) and a domesticated dog (*Canis lupus familiaris*): unnatural cage companions and although both animals appeared content with the arrangement, the public education value is questionable.

At the time of the assessment, the Lithuanian Sea Museum had 11 bottlenose dolphins and two sea lions, which were presented in a 'performance' context. **These acts do not appear to be based on observed wild behaviours and do not, in the view of the investigator, provide meaningful educational value to the viewing public** (November 2009). Although the facility does not currently exhibit the dolphins, which have been loaned to Attica Zoological Gardens in Greece whilst the pool filtration system is replaced, it is known that the dolphins will return to the Lithuanian Sea Museum in 2011. Further analysis has been undertaken on the dolphin show, which will be included in The EU Zoo Inquiry 2011, Dolphinaria report (WDCS, 2011).

The majority of Lithuanian zoos did not appear to deliver activities or information that could be described as being of educational value to the general public. Although the Lithuanian Sea Museum and the Lithuanian Young Naturalists' Centre appear to be achieving more than the other zoos, significant improvements are necessary to address absent species information signage, the circus-style animal 'performances' and the minimal public awareness and education on the conservation of biodiversity.

7. Unsuitable living conditions for animals

Incorporated into the Lithuanian Animal Protection, Use and Keeping Law (No.VIII-500, 1997), the Lithuanian Wildlife Protection Act (WPA), Government Order No.250/224 and Government Order No.346 (0346/2002) (including the Annex of '*minimum standards*'), are a number of provisions that require zoos to provide their animals with suitable conditions and accommodation that meet their biological and protection needs. This includes: ensuring the animals are securely held, taking into account the biological characteristics of the species, and to maintain a safe distance from the public (Articles 8, 10 and 42.3, 0346/2002); ensure animals are kept in appropriate sanitary conditions (Article 8, 0346/2002); ensure reptiles and amphibians are housed indoors, in appropriate conditions (Article 14, 0346/2002); ensure conditions do not restrict movement and exercise (Article 13 and 16, 0346/2002); and criteria defining the space (indoor and outdoor) and necessary equipment to satisfy the minimal, essential needs for wild animals (Articles 13, 16 and 17 and Annex to 0346/2002). These are all compatible with the minimum requirements of the Directive, but go into greater depth regarding the importance of providing species-specific needs through the mandatory '*minimum standards for the keeping of wild animals in zoos*'. It is therefore reasonable to expect zoos in Lithuania to have higher standards of animal care than perhaps other EU countries that do not uphold minimum standards in animal welfare.

However, the findings provide a different impression and **standards in animal welfare and husbandry in many enclosures in all of the selected zoos were poor.** The analysis identified the following:

- Many enclosures lacked clean, fresh drinking and bathing water;
- many animals were housed in unhygienic conditions caused by an unacceptable build-up of animal waste, rotting food or severe water-logging;
- many species were kept in small enclosures that did not attempt to meet their spatial needs;
- little consideration appeared to have been given to the essential biological and behavioural needs of the animals;
- many of the enclosures were devoid of appropriate furniture, apparatus and materials to allow the species to exercise, rest and express natural behaviour;
- enclosure design that encouraged public contact with animals, caused close proximity between animals and lead to a lack of privacy areas, could cause the animals distress and;
- some animals were housed in extreme temperatures, not representative of their geographical origin.



Figure 17

Grūto Park.

Ostriches (*Struthio camelus*) are native to the savannas of sub-Saharan Africa. Concern is therefore justified about the suitability of keeping this species in such extreme temperatures and conditions.

It is widely recognised that the keeping of animals for prolonged periods in 'impoverished', cramped, captive conditions can compromise both their physical and mental health and their general welfare. Conditions that fail to provide an animal with its basic needs can cause abnormal behaviour, disease and early mortality. Zoos must therefore seek to provide all their animals with more suitable environments that encourage exercise and natural behaviour or cease to keep animals for which such conditions cannot be provided.

The Zoo Inspection Commission ('ZIC') and the State Food and Veterinary Service is required to regularly assess zoos as to their ability to adequately provide their animals with suitable conditions as specified by the WPA and O346/2002. This includes the use of the species-specific '*minimum standards for the keeping of wild animals in zoos*', Annexed to O346/2002. According to the Ministry of Environment, these standards were drafted by Lithuanian Institute of Ecology and '*zoo staff*' (Standard Member State Questionnaire) and although they stipulate lesser requirements as compared to other minimum standards applied in other EU Member States, the standards must be met by the zoos in order to comply with the WPA and apply for a zoo licence (O298/2002).

Findings from this investigation identified that the majority of the 150 randomly-selected enclosures assessed failed to meet the specified requirements described in the Lithuanian minimum standards in O346/2002. Furthermore, using the Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008 (APOS), which places greater emphasis on the provision of species-specific environmental enrichment, a far greater number of enclosures failed to adequately provide the species concerned with their spatial, biological and behavioural needs. **These results not only raise questions about the knowledge and expertise of the zoo operators to adequately provide suitable conditions for their animals, but also the knowledge of the ZIC to recognise when animals are housed in inappropriate conditions. Furthermore, it indicates that the Lithuanian standards of the keeping of animals in zoos do not sufficiently consider the needs of wild animal species when in captivity.** This particularly concerns species-specific environmental enrichment.



Figure 18

Naturalist Centre Mini Zoo. This enclosure exhibits a species of pelican. In the wild these birds live predominantly in water. This enclosure fails to allow these captive pelicans an opportunity to express their natural behaviour.

Despite wide variations in the quality of enclosures at the zoos assessed, in many instances animals were housed in conditions that compromised their welfare. Far-ranging species (felines, canids, ungulates, cetaceans, pinpeds and bears) for example, were often kept in restrictive enclosures that compromised their full repertoire of locomotive behaviour, whilst some bird species lacked sufficient horizontal and vertical space to allow for flight. Many of the enclosures at Grūto Park, Lithuanian Zoo, Mini Zoo and the Lithuanian Sea Museum, in particular, were completely inappropriate for the species contained. Of particular note were the American black bears, polar bear, grey seal, giraffes and many of the primates at the Lithuanian Zoo and the Californian sea lion, bottlenose dolphins, Humboldt penguins and the seals at the Lithuanian Sea Museum.

Lithuanian zoos are generally failing to provide their animals with suitable living environments that provide the opportunity to express normal behaviour. The Ministry of Environment appears to be of the opinion that the Zoo Inspection Commission is familiar with the health and welfare of wild animals in captivity (Standard Member State Questionnaire), however, results from this investigation indicate that **zoos are generally not meeting their obligations to provide appropriate animal housing and care.** Furthermore, there is an apparent need for the Lithuanian minimum '*standards for the keeping of wild animals in zoos*' to be revised by an independent, scientific body using reliable and scientific-validated information, to ensure they adopt **additional requirements that recognise the spatial, physical, physiological and behavioural needs of all species kept in the zoos in Lithuania.**

8. Poor level of animal welfare

In addition to the housing of animals in unsuitable conditions, this investigation has also revealed a low standard of animal husbandry and general animal care. This was often intrinsically linked with the poor environmental quality of the enclosures and possibly the lack of knowledge by the zoo operators and inspection authorities. The majority of the enclosures did not provide the animals with a suitably varied and complex captive environment and, due to the lack of stimulation and the opportunity to exercise and express natural behaviours, example of abnormal behaviours were observed, particularly in some far-ranging species.

It is widely recognised that the inclusion of varied environmental enrichment is integral to reducing the negative impacts of confinement on animals in captivity (maintaining healthy animals in a captive environment) (Pruetz & Bloomsmith, 1992; Crockett *et al.*, 1989; Jordan, 2005) and without it animals are likely to develop abnormal repetitive behaviours, recognised as indicators of poor animal welfare (Mason and Rushen, 2006). Equally, a cramped and 'predictable' captive environment can lead to obesity and muscular atrophy, which may in turn lead to welfare impacts with secondary health consequences (Fowler & Mikota, 2006; Harris *et al.*, 2008).

Poor hygiene was also identified in many enclosures in all five zoos. Notably this included unclean or stagnant drinking water, an unacceptable build-up of faeces and urine, and in some cases, rotting food. This suggests that enclosures are rarely cleaned and bedding rarely changed. The potential for the build-up of harmful pathogens is therefore significant. Even within the two licensed zoos, on average 35% of enclosures were identified as unhygienic, despite the specific requirement in Article 8, 0346/2002 and the *EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria*, of which the Lithuanian zoo is a Member, concerning appropriate standards of hygiene.



Figure 19

Lithuania's Young Naturalists' Centre. Throughout all five zoos assessed in Lithuania, animals, like this common buzzard (*Buteo buteo*), were observed in unhygienic conditions that potentially placed them at risk from disease.

Direct contact between the public and wild animals, either as a result of unsupervised access to enclosures or when actively encouraged (i.e. contact with dolphins) can have severe consequences to the animal's wellbeing, resulting in heightened stress and often causing illness or early mortality (WDCS, 2011). In order to protect the animals' wellbeing, **direct contact between the public and wild animals must be prohibited.**

The health and welfare of animals is being compromised and more must be done by the Environmental Protection Agency, the Zoo Inspection Commission and the territorial State Food and Veterinary Service to make the necessary improvements. The requirements in Articles 8(2)3 and 8(2)4 of the WPA concerning the provision for an animal's biological needs and preventative health care are not being met and without the effective enforcement of the law, any attempt to keep animals in a suitable environment is severely compromised.

In summary

Lithuanian zoos are:

- **failing to participate in or make a significant contribution to the conservation of biodiversity**
- **failing to make a significant contribution to ex situ conservation**
- **failing to promote public education and awareness in relation to conservation of biodiversity**
- **failing to take preventative measures to sufficiently protect the public and the animals from potential injury and the transmission of disease**
- **failing to take all necessary measures to prevent the escape of non-indigenous species into the natural environment**
- **failing to provide their animals with a suitable environment and to recognise species-specific requirements**
- **failing to provide effective, preventative and curative veterinary care**
- **compromising the health and welfare of the animals**
- **failing to meet the minimum requirements of the Directive and the Lithuanian Wildlife Protection Act**

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Born Free Foundation

Born Free Foundation is an international wildlife charity, founded by Virginia McKenna and Bill Travers following their starring roles in the classic film Born Free. Today, led by their son Will Travers, Born Free is working worldwide for wild animal welfare and compassionate conservation.

Born Free supports and manages a diverse range of projects and campaigns. We embrace both compassion and science in setting an agenda that seeks to influence, inspire and encourage a change in public opinion away from keeping wild animals in captivity, while in the short term working with governments, the travel industry and like minded organisations to seek compliance with existing legislation and improve the welfare conditions for wild animals currently held in zoos. Via our Compassionate Conservation agenda, we provide protection for threatened species and their habitats across the globe. Working with local communities, Born Free develops humane solutions to ensure that people and wildlife can live together without conflict. www.bornfree.org.uk

ENDCAP

ENDCAP is a European coalition of 27 NGOs and wildlife professionals from 20 European countries that specialise in the welfare and protection of wild animals in captivity. Working with the European Institutions, national governments and experts, ENDCAP aims to improve knowledge and understanding of the needs of wild animals in captivity, uphold current legislation and seek higher standards, whilst challenging the concept of keeping wild animals in captivity. www.endcap.eu

PIFAS

Animal Welfare Charity "Pifas" is a non-profit organization, uniting people with similar goals, directed to assuring and improving the welfare of animals in Lithuania. Our mission is to promote safe and harmonious relations between humans and animals. Our main activities are public education and promotion of human responsibility towards animals; work towards establishment of legal foundation for animal and human welfare; providing emergency help to animal in need. www.pifas.org

EU Zoo Inquiry 2011

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Report Methodology: For full details of methodology and to view the other Reports published as part of this project www.euzooenquiry.eu

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Produced for the ENDCAP coalition www.endcap.eu by international wildlife charity the Born Free Foundation, Charity No: 1070906 www.bornfree.org.uk

The Born Free Foundation wishes to thank the following for their help and support in delivering the EU Zoo Inquiry 2011: ENDCAP Member Organisations; Bill Procter; Blas Cernuda; Marcos Garcia-Gasco Romeo, Mirjana Plavac; and Tamara Miczki. Special thanks go to Thomas Brzostowski for his attention to detail, patience and determination to help complete this project.