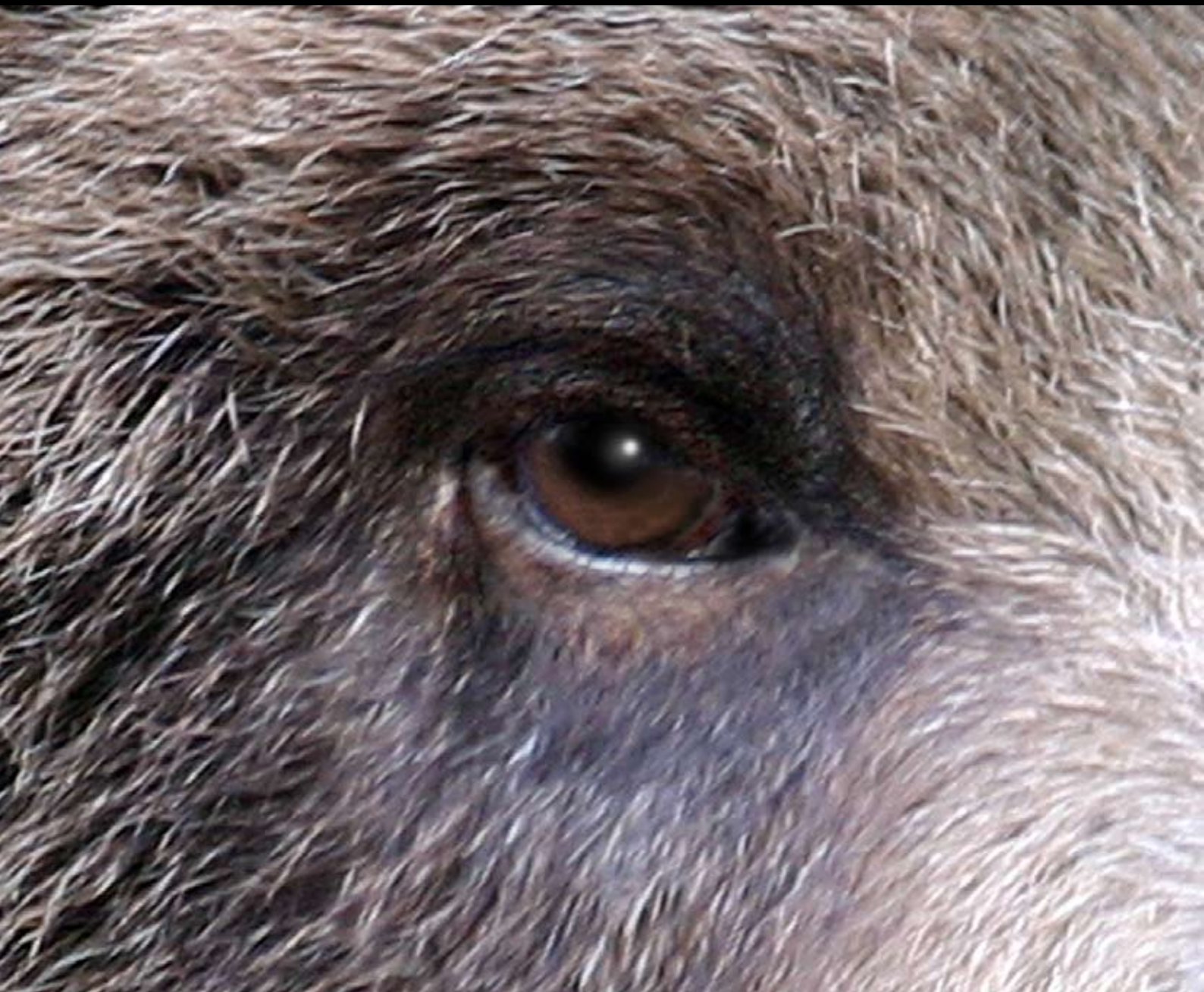
THE EU ZOO INQUIRY 2011

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

POLAND

Written for the European coalition ENDCAP by the Born Free Foundation



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Country Report **POLAND**

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ABBREVIATIONS USED

APA ..... Polish Animal Protection Act 21/8/1997 (Journal of Laws 2003 No. 106, item 1002)
APOS ..... Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008
CBD ..... Convention on Biodiversity (1992)
DEFRA ..... UK Department for Environment, Food and Rural Affairs
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
NPA ..... Nature Protection Act, 16/04/2004 (since amended 10/06/2011)
OIE ..... World Organisation for Animal Health
RZ12/2004 ..... Polish Regulation on the conditions for husbandry and keeping of animal species in zoos
RS12/2003 ..... Polish Regulation on Occupational Health and Safety in Zoos
SMZP ..... Standards of Modern Zoo Practice, DEFRA, UK, 2004
WAZA ..... World Association of Zoos and Aquariums

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. Dolphinaria, zoos and aquaria are excluded.

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.

Ex situ: The conservation of components of biological diversity outside their natural habitats. (Glowka et al., 1994)

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

In situ: The conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings. (Dudley, 2008)

Not Listed: Species of animal that are not listed on the IUCN Red List of Threatened Species™, 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 Species™ as *Vulnerable, Endangered* or *Critically Endangered* (IUCN Red List website).

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

Eight zoos in Poland were assessed 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 935 species (including subspecies where appropriate) and 1,525 *species holdings* were observed in 905 enclosures in the eight zoos. 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 Nature Protection Act (amended on 10/06/2011), Regulation on the conditions for the husbandry and keeping respective groups of species in zoological gardens (20/12/2004) ('RZ12/2004') and Regulation on health and safety in zoos (10/12/2003) ('RS12/2003'), and taking into consideration the Animal Protection Act (21/08/1997). Key findings were:

- **Zoo regulation in Poland is incorporated into the Nature Protection Act** ('NPA'), which provides a legislative framework for the protection of nature, as part of the country's commitment to the conservation of biodiversity, the protection of the natural environment and the education of the public through the promotion of conservation at the national and regional level. Zoos are regulated through RZ12/2004.
- **At the time of the investigation, NPA (16/04/2004) was the prevailing legislation. However, this has since been replaced by NPA 2011, which unlike its predecessor, separates relevant facilities into licensed 'zoos' and unlicensed 'mini-zoos', irrespective of the species held, but dependent upon the *number* of species and individual animals kept.** All facilities selected for this investigation meet the criteria for a 'zoo'.
- The Directorate General of Environmental Protection is the Competent Authority in Poland for the implementation of the Directive and the NPA. It recognises there to be 'around 20' licensed zoos in Poland and a further 11 zoos that are operational but unlicensed. The Competent Authority does not appear to know the exact number of zoos in Poland and no justification is given as to why these zoos remain open.
- **Overall, the findings from this investigation indicate that licensed zoos in Poland are not fully compliant with either the Directive or NPA.** Individually, there is a lack of consistency between the zoos, with some meeting the majority of requirements whilst others appearing to be substandard in all parameters assessed.
- **The results highlight inconsistencies in the interpretation and application of NPA. Findings identified significant variability in zoo activities and compliance, with some zoos not meeting any of the requirements of NPA, RZ12/2004 and RS12/2003.**
- **The findings call into question the quality, regularity and procedure of the zoo inspection.** Animals remain in substandard conditions, zoo operations fail to meet the legal requirements and unlicensed and substandard zoos remain operational. Penalties for non-compliance (under the NPA) do not appear to be applied.
- **Despite the specific requirement for zoos in Poland to contribute to the conservation of 'rare' species, through *ex situ* conservation and species reintroduction (Articles 47 and 69(3), NPA), overall, zoos in Poland do not appear to be making a significant contribution to species conservation.** The majority of species exhibited (86%) are of low conservation priority. However, EAZA Member zoos contributed more to ex situ conservation than non-affiliated zoos.

- **Despite an ambiguous requirement for zoos to educate the public about the protection of nature, only those zoos that are Members of EAZA appear to be undertaking educational activities for both adults and children. Non-EAZA zoos do not appear to be promoting educational activities.**
- **Polish zoo law does not require zoos to provide species information for all *species holdings* exhibited despite the specific requirement in Article 3(2) of the Directive to do so.** Over a quarter of signage for *species holdings* was absent and the signage present often lacked sufficient information.
- Some of the zoos encouraged the public to have direct contact with the animals, whilst the poor design of some enclosures allowed the public to have unsupervised contact. **Human/animal contact, supervised or unsupervised, can pose a serious risk to the health and welfare of the public and the animals involved.**
- **Poor levels of hygiene were observed in the majority of zoos.** This not only poses a risk to the health of the animals due to the potential build-up of harmful pathogens, it also poses a risk to public health.
- **On average, 69% of the evaluated enclosures failed to meet all the minimum requirements in the Annex to RZ12/2004. This is despite a significant reduction in the minimum space requirements, resulting from a revision of the Regulation in 2004.** The zoos appear to have given little consideration to the essential biological, spatial and behavioural needs of the animals.

RECOMMENDATIONS

The Ministry of Environment and the General Directorate for Environmental Protection should take the necessary measures to:

1) Revise the NPA to ensure that definitions and requirements specified by the Directive are accurately transposed and implemented. This should include: Article 3(2) (provision of species information); Article 3(3) (guidance on species-specific enrichment); Article 3(4) (ecological threats posed by an escaped animal); and Article 4 (effective licensing and inspection of zoos).
2) Review and improve the zoo licensing procedure to ensure that 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 all the specified requirements of NPA and accompanying legislation.
3) Ensure, through effective enforcement that all zoos (*as defined by the Directive*) abide by the requirements of national zoo law, the minimum standards in the Annex to RZ12/2004, and apply existing available penalties (Article 68 and Chapter 11 of NPA) to zoos that fail to meet their legal obligations.
4) Ensure that all national and regional enforcement personnel and veterinarians involved in the inspection and regulation of zoos are equipped with relevant, regular training and skills pertaining to the care and welfare of wild animals in captivity.
5) Ensure that the necessary preventative measures are taken to minimise the risks posed by an escaped animal to public health and safety (RS12/2003), to the natural environment and indigenous species, particularly if the animal is listed as Invasive Alien Species (IAS).
6) Review the species-specific minimum standards for the keeping of animals in zoos to ensure that they are in keeping with reliable and scientifically-validated standards of animal husbandry, including guidance on environmental enrichment, and to ensure that the animals' spatial, physical, physiological and behavioural needs are met. The revision of the standards should be undertaken by an independent, scientific body.
7) Ensure that all zoo employees with responsibility for animals have the necessary training and experience in animal care and husbandry.
8) Prohibit all public contact with 'Hazardous Animals' (RS12/2003) and those known to harbour zoonoses. All other public contact is to be discouraged but, where it does take place, must be supervised, controlled, limited, provide the animals with a significant rest period and must not be detrimental in any way to the welfare of the individual animals involved.
9) Ensure zoos keep and conserve predominantly nationally protected and European Threatened species rather than non-European species. All Threatened species, particularly European species kept by zoos, should be included in co-operative Species Management Programmes.
10) Publish guidance, as necessary, to assist zoos, enforcement personnel, veterinarians, NGOs and other stakeholders to effectively and consistently interpret the requirements of NPA and RZ12/2004, specifically with regard to their participation in, and their application of, recognised peer-reviewed conservation and education programmes.
11) Encourage all zoos in Poland to join EAZA. Through effective enforcement and guidance, assist all zoos in Poland not only to meet their legal obligations but to attain the standards necessary to become an accredited member of this international zoo association.

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, dolphinaria, 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 UK 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.

'... 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)

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.

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.

POLAND

Country Report

INTRODUCTION

Poland became a Member of the European Union (EU) in May 2004. By April 2005, Poland, 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 Nature Protection Act (16/04/2004) (Journal of Laws No.92, item 880, 30/04/2004) ('NPA') (since amended on 10/06/2011), specifically Chapter 3, as well as the specific Regulation instigated by the Minister of Environment: *on the conditions for the husbandry and keeping respective groups of species in zoological gardens* (20/12/2004) (Journal of Laws No. 5, item 32, 11/01/2005) ('RZ12/2004') (General Directorate for Environmental Protection, pers. comm., 9th September 2011). According to the European Commission, Poland achieved transposition of the Directive by the required deadline in 2004.

The implementation of zoo legislation in Poland, and their regulation, falls to the responsibility of the General Directorate for Environmental Protection, which is governed by the Ministry of Environment. Zoos are licensed through the General Directorate for Environmental Protection, in consultation with the Regional Directorate for Environmental Protection, the relevant municipality and representatives of an association of zoos (possibly known as the Zoos Council) (Article 67(2) NPA). Zoo inspections are administered by the Regional Directorate for Environmental Protection (Standard Member State Questionnaire).

As part of this investigation, the Competent Authority was asked to complete a Standard Member State Questionnaire. Information received from the General Directorate for Environmental Protection (Standard Member State Questionnaire, pers. comm., 4th December 2009), has been included throughout this report.

The NPA provides a legislative framework for the protection of nature, including natural habitats, species of wild flora and fauna living in the wild and kept in captivity, and the preservation of green spaces in urban areas. Its purpose is to conserve biodiversity, protect the natural environment and to educate the public through the promotion of conservation at national and regional levels (Article 2, NPA). The establishment, regulation and operation of zoos and botanical gardens are predominantly covered under Chapter 3 of NPA, although their involvement in *ex situ* conservation is the focus of Articles 46 and 47 (NPA). Articles 66 and 67 (NPA) stipulate the zoo licence application procedure, Articles 68 and 77 (NPA), zoo inspection and Article 69 (NPA), the requirements applicable to zoos (similar to those specified by Article 3 of the Directive). The welfare of animals in zoos is covered by NPA in Articles 70 and 72, as well as the Animal Protection Act (21/08/1997) ('APA'). Article 49 of NPA provides the means for the Minister of Environment to establish a list of animal species that require greater protection in Poland; Article 70, enacts the Regulation specific to '*the conditions for the husbandry and keeping respective groups of species in zoological gardens*' ('RZ12/2004'); whilst, Article 73 allows the Minister of Environment to establish a list of hazardous animal species, included in the Regulation on the *Occupational Health & Safety in zoos* (Article 23715(2), Labour Code 26/06/1974) ('RS12/2003').

Chapter 5 of NPA, '*Conservation Authorities*', in particular Article 95, refers to consultative and advisory bodies that are established to evaluate the implementation of the Act, to review strategies concerning nature protection and to advise the Ministry of Environment accordingly. Such an entity appears to exist for zoos, referred to as the '*Zoos Council*' (Standard Member State Questionnaire), which appears to be involved in the zoo licensing procedure (Article 67(2), NPA), although details on its make up and jurisdiction remain unclear.

In Poland, establishments wishing to operate as a zoo (as defined in 'Zoo Licensing Requirements' below) must apply for an operating licence from the General Directorate for Environmental Protection following the application procedure described in Chapter 3, Articles 66 and 67 of NPA. This includes, amongst other things, a description of the zoo or botanical garden, location, an inventory of the species to be kept and a to-scale diagram of the zoo grounds and planned infrastructures. The initial decision with respect to the location of the proposed zoo (or botanical garden) falls

to the relevant municipality, which has 30 days to respond following the application (Article 66, NPA). If permission is granted, the application for a zoo licence is considered by the General Directorate for Environmental Protection, in consultation with the Zoos Council (Article 67(2) NPA). However, it is unclear from information from the NPA and the Standard Member State Questionnaire, whether an on-site inspection of the applicant zoo takes place to check that the requirements applicable to zoos are met, *before* the zoo operation licence is granted. A zoo licence is issued for an indefinite period (Article 67(6), NPA), but this may include conditions for licensing, based upon the information provided in the application (Article 67(5)4, NPA).

Once licensed, regular inspections are carried out, reportedly by representatives of the Regional Directorate for Environmental Protection, an NGO, the Zoos Council, and the General Directorate for Environmental Protection (Standard Member State Questionnaire), as well as Veterinary Services. These inspections take place at least every three years, or on the decision of the Governor (provincially responsible), or at the request of the Minister of Environment (Article 77(2), NPA). Should the zoo be found to be in violation of the legal requirements of Article 69, the General Directorate for Environmental Protection may decide to amend the conditions of the licence, or revoke the licence altogether, ordering the closure of the zoo (Article 68, NPA).

According to the General Directorate for Environmental Protection, there are '*about 20 zoos*', which are listed on a national database, maintained by the General Directorate for Environmental Protection (Standard Member State Questionnaire) (National Zoo Register). At the time of correspondence (Standard Member State Questionnaire, pers. comm., 4th December 2009), 11 of these zoos were Government-owned. A further 11 zoos were reportedly unlicensed and operational. Many facilities still appear to be unlicensed in 2011 (Dr. Sergiel, pers. comm., 6th October 2011). No indication is given why an undisclosed number of 'zoos' remain unlicensed and why they are permitted to operate.

Zoo licensing requirements

At the time of the investigation (and up until June 2011), zoos where regulated through the NPA (16/04/2004) and the 'zoological garden' were defined as '*a designed and developed area, together with the technical infrastructure and functional building to it, where the wild animals are bred and kept for ex situ conservation, scientific research and education and public display, not less than 7 days per year*' (Chapter 1, Article 5(11), NPA, 16/04/2004). This definition differed significantly from that set out in Article 2 of the Directive, as it seems to confirm that an establishment is only a zoo when wild animals are '*bred and kept*' specifically for 'ex situ *conservation, scientific research and education and public display*' rather than first identifying the type of establishment (as in the Directive) before imposing requirements for ex situ conservation, scientific research and education (Article 3 of the Directive). Furthermore, the definition given in the NPA (2004) did not specify criteria relating to exemptions to zoo regulation, unlike Article 2 of the Directive, which refers to '*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 to the public*'. This situation could result in the mis-identification of establishments that should warrant a zoo licence under the Directive, and could therefore be in contravention of the terms of the Directive.

At the time of the investigation, the Competent Authority acknowledged that some zoos remained unlicensed, which could have been as a direct result of these identified inaccuracies in definition and interpretation.

However, in 2011 the Ministry of Environment, in consultation with the State Council for Nature Protection, amended the NPA. This was apparently required to incorporate new law concerning public finances and to update the regulation of national parks, but it also included an amended definition of a zoo (Dr. Sergiel, pers. comm., 6th October 2011). In Chapter 1, Article 5(11), NPA 10/06/2011, a zoo is now defined as "*a designed and developed area, together with the technical infrastructure and functional building to it, where wild animals are kept and displayed to public for not less than 7 days per year, with an exception of: a) circuses, b) pet shops, c) places where no more than 15 species and together not more than 50 of specimens of reptiles, birds and mammals are displayed*". In the revised definition the stipulation of 'ex situ *conservation, scientific research and education*' activities has been omitted, and criteria for

exemption from zoo regulation, as specified by the Directive, is now included. The revised definition is now similar to that of Article 2 of the Directive. However, it now permits authorities to differentiate between zoos and smaller animal collections: 'mini-zoos', based on the number of species and individual animals, irrespective of the species. It stipulates that facilities keeping less than 16 species and less than 51 individuals of reptiles, birds and mammals are exempt from regulation.

The remainder of the requirements applicable to the licence application, licensing procedure and zoo operation remain the same between the NPA editions 16/04/2004 and 10/06/2011, and together, with the requirements of RZ12/2004, RS12/2003 and the APA, zoos are expected to comply with the following:

Conservation

The objective of the NPA is to conserve biodiversity through the development and implementation of programmes to protect species, promote education about conservation and conduct research on issues relating to wildlife conservation, as part of a national strategy (Articles 2 and 3, NPA). A duty is imposed on all scientific and educational institutes to contribute to this objective (Article 4, NPA) and an emphasis is placed particularly on the need to conserve rare species, those that are endemic, vulnerable and endangered (Article 46, NPA). Further, Article 47 states that '*species threatened with extinction in the natural environment should be subject to ex situ conservation in zoos*', with the objective '*to restore individuals of species to their natural habitat*' (Article 47, NPA). The Minister of Environment also has the power to establish a list of species demanding additional protection in Poland (Article 49, NPA), as well as establish *ex situ* programmes for endangered species (Article 57, NPA).

Chapter 3, Article 69 of NPA concerns the requirements applicable to zoos in Poland, stating that zoos must:

- *'Participate in scientific research, which benefits the species conservation.'*
  (Chapter 3, Article 69(1), NPA)
- *'Keep and breed endangered species of flora and fauna for their ex situ conservation and their introduction to the natural environment in accordance to conservation programmes for these species.'*
  (Chapter 3, Article 69(3), NPA)

The Competent Authority does not provide guidance as to how the above requirements should be implemented and enforced (Standard Member State Questionnaire), nor does there appear to be a process of evaluation to assess the 'success' of activities undertaken by zoos to meet the above requirements.

Education

In addition to the requirement to promote nature conservation through educational programmes (Article 3(5), NPA), Article 69(2) of NPA, requires zoos to '*educate the public about the need to protect species of plants, animals and fungi through the conservation of biodiversity*'.

The Competent Authority does not provide guidance to assist in the effective interpretation of the above requirements or how practices in zoos can deliver these largely ambiguous objectives (Standard Member State Questionnaire). Furthermore, there does not appear to be a process of evaluation to determine the 'success' of activities undertaken by zoos to meet the above requirements.

Notably, Polish zoos are not required by NPA to provide information about the species exhibited and their natural habitats, as specified by Article 3(2) of the Directive.

Animal welfare provisions

In Poland, the welfare of vertebrate animals is protected through the Animal Protection Act (APA) of 21 August 1997 (Journal of Laws of 2003 No. 106, item 1002), which refers to animals in zoos in Article 2(5). Conditions specific to the keeping and breeding of species in zoological gardens are identified through the Regulation *on the conditions for the husbandry and keeping respective groups of species in zoological gardens* (20/12/2004) (Journal of Laws No. 5, item 32, 11/01/2005) ('RZ12/2004'), which includes species-specific minimum standards consisting of minimum requirements of enclosure sizes, additional furnishings and apparatus (Annex to RZ12/2004).

The APA requires all humans to respect animals and those that keep animals to ensure their proper care, taking into account the physical and psychological needs (Article 4(9), APA) specific to the species and including consideration of the breed, sex and age of the individual animal (Article 4(15), APA). Article 6(7) of APA requires the protection of the animal against cruelty, mutilation, abuse and unnecessary restraint, whilst Article 17(1 and 4), refers to animals used in performance, specifying that such activities must only involve captive-bred animals, that training must not inflict pain and that any performance that an animal carries out is not contrary to that animal's natural behaviour.

NPA requires zoos specifically to:

- *'keep plants or animals in conditions appropriate to their biological needs.'*

(Article 69(4), NPA)

- *'only keep those animals which can be provided conditions that meet their biological needs.'*
- *'only breed animals when the zoo is able to provide their offspring with appropriate husbandry and conditions that meet their biological needs.'*

(Article 72, NPA)

Article 70 of NPA refers to RZ12/2004, and, specifically, minimum standards for the keeping and breeding of animals in zoos. RZ12/2004 includes details concerning:

- *'the necessary facilities and equipment required for the animal by species and species groups;'*
- *'the minimum space conditions for the appropriate husbandry and keeping of animals of each species or species groups;'* and
- *'the necessary conditions for the reproduction of animals of species or species groups that meet their biological needs.'*

(Article 1, RZ12/2004)

This includes specifications for animal enclosures such as:

- *'ventilation;'*
- *'the adjustment of temperature, humidity and lighting to the requirements of the species, or individual animals. Including pregnant females and infants;'*
- *The ability for the 'animal to hide;'*
- *'maintenance of hygiene;'*
- *'drainage of excess water;'*
- *'removal of litter;'*
- *'regular monitoring of water quality in aquariums and bathing pools;'*
- *'veterinary care;'*
- *'maintenance of food and water;'*

(Article 3, RZ12/2004)

Article 4 refers to the Annex of RZ12/2004, which consists of species-specific requirements for the '*keeping and breeding of animals of each species or species groups*', and Article 5 refers to the specific '*conditions for the husbandry and keeping respective groups of species in zoological gardens*'. Considerations include: isolation from the public; isolation from other animals in the group or from a male (dependent on the species); allowing the rearing of young animals in their natural social group; the provision of suitable furnishings to encourage 'nesting', preparation of confinement and incubation of eggs; and the provision of shelter for animals with juveniles/offspring.

RZ12/2004 does not provide detailed species-specific housing requirements, such as the use of environmental enrichment to encourage natural behaviour, as specified by Article 3(3) of the Directive. However, despite this, according to the Competent Authority (Standard Member State Questionnaire), the zoo inspectorate has the required knowledge and training in wild animal welfare.

As specified by Article 3(5) of the Directive, there is a requirement for zoos in Poland to maintain a stock list of animals kept and any identification, their origin and date of acquisition and their destination, if transfer to a further owner/ establishment is planned. This information is reportedly provided annually to the Competent Authority (Article 69(5), NPA) (Standard Member State Questionnaire).

The Zoo Investigation

A total of eight zoos in Poland were selected. Data was collected at the following zoos during December 2009 (Fig. 1):

- Śląski Ogród Zoologiczny (Chorzow Zoo)
- Zoologiczny w Warszawie (Warszawa Zoo)
- Zoologiczny we Wrocławiu (Wroclaw Zoo)
- Zoologiczny w Płocku (Plock Zoo)
- Ogród Fauny Polskiej Zoo (OFP) (Bydgoszcz Zoo)
- Ogród Zoologiczny w Lesznie (Leszno Zoo)
- Braniewo Zoo
- Ogród Zoologiczny Odejweski – Odan (Odejewski Odan)

Figure 1. Geographical locations of the eight zoos visited in Poland.

RESULTS AND INTERPRETATION
GENERAL ZOO INFORMATION

Overview

The investigation evaluated eight zoos in Poland. The majority of the selected zoos appear to be privately-owned, but the zoos in Leszno, Warsaw and Braniewo are owned by the Municipality. All eight meet the definition of a 'zoo' as specified by both Article 5(11), NPA (10/06/2011) and Article 2 of the Directive. However, at the time of the investigation and the writing of this report, Braniewo Zoo was unlicensed, though still operational (Dr. Sergiel, pers. comm., 6th October 2011). Entrance fees for one adult ranged from being free of charge (Leszno Zoo and Odejewski Odan) to 25 PLN (€6).

Of the eight zoos evaluated, four appeared to be members of a zoo association. Chorzow Zoo, Wroclaw Zoo, Warszawa Zoo and Plock Zoo are members of the *European Association of Zoos and Aquaria* (EAZA). EAZA has a total membership of 264 zoos in the EU (EAZA website), but represents a small minority of the total number of regional zoos (8% of an estimated total of 3,500 zoos in the EU). All EAZA zoos are expected to follow the EAZA *Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria*. Wroclaw Zoo, Warszawa Zoo and Plock Zoo are also members of *World Association of Zoos and Aquaria* (WAZA). Plock Zoo claims to be a Member of the International Union of Zoo Educators (IZA) since 1997 (Plock Zoo website) but no information could be sourced about the IZA. The authors believe this instead to be the International Zoo Educators Association (IZE), although Plock Zoo is not listed as a member of this Association. Representatives of the larger zoos in Poland are reportedly members of the State Council for Nature Protection, which advises the Minister of Environment on zoo-related matters (Dr. Sergiel, pers. comm., 6th October 2011).

A total of 935 species (including subspecies where appropriate) and 1,525 *species holdings* were identified in 905 enclosures in the eight zoos. A total of 31 *species holdings* could not be identified (see online Methodology).

Despite all eight zoos being sent the Standard Zoo Questionnaire, providing an opportunity for each zoo to describe, amongst other things, its conservation and education activities, none of the zoos completed and returned the Questionnaire. Therefore, information concerning their performance and activities was gathered from published materials produced by the zoos, EAZA and information contained on zoo websites.

Prevention of animal escapes

The only Polish legislation to refer to measures preventing animal escapes from zoos is the Regulation on occupational health and safety in zoos (10/12/2003) ('RS12/2003'). Article 3 states that in order to ensure the safety of employees and visitors the following criteria apply:

- *'The zoo area is surrounded by a fence that is sufficient to prevent the escape of animals;'*
- *'Gates mounted in the perimeter fence to ensure external security and to prevent the escape of animals;'*
- *'Animal enclosures are constructed so as to prevent animal escape.'*

(Article 3, RS12/2003; and Article 10(7) RS12/2003 (in relation to venomous snakes))

Unlike Article 3(4) of the Directive, which recognises the threat that escaped non-indigenous animals may pose to the natural environment, the prevention of animal escapes is covered by health and safety law in Poland, with the focus on the protection of zoo staff and the visiting public. Despite this discrepancy, the majority of the selected zoos did have a perimeter fence. However, it was often impossible to determine whether the fencing was sufficient to prevent the escape of any species of zoo animal.

In Warszawa Zoo, Chorzow Zoo, Plock Zoo and Bydgoszcz Zoo, indigenous wild animals (e.g. squirrels, sparrows, etc.), feral cats (*Felis catus*) and a DAISIE-listed species, Indian peafowl (*Pavo cristatus*) were observed to move freely within the zoo and between the different zoo enclosures. House mice (*Mus musculus*), were observed in enclosures at Chorzow Zoo and Plock Zoo. The invasion of indigenous animals into the zoo environment could result in the transmission of infectious diseases or parasites between the indigenous animals and those in the zoo.

Public placed at risk of injury and disease transmission

Measures to protect the public (and zoo employees) are included in both the NPA and the Regulation specific to occupational health and safety laws. Article 73, NPA, concerns the exposure of dangerous and venomous animals to people and requires the Minister of Environment, through regulation, to categorise animals according to their degree of hazard to man and to restrict or prohibit direct contact with these animals. The list of Dangerous Animals is included in the Annex to the Regulation on occupational health and safety in zoos (10/12/2003) ('RS12/2003'). In relation to hazardous animals, Article 17 of RS12/2003 specifies: access to enclosures keeping Category 1 species is prohibited; the public must not have direct access; enclosure doors must have a dual locking system to prevent animals and unauthorised persons accidently unlocking them; and warning signage must notify relevant dangers, specifically concerning venomous animals. Article 22, RS12/2003, requires a distance of no less that 1.5 metres distance between a 'dangerous' animal and the public, with the exception of enclosures with glass partitions.

The risk of disease transmission relating to animal / human contact is recognised by RS12/2003. Article 18 mentions the screening of zoonoses by veterinarians and Article 26 stipulates that hand-washing facilities must be available where the public has access to animals.

Of the eight zoos, four had a section housing domesticated animals which children were encouraged to 'pet' and, in some cases, feed. Two zoos offered horse riding. In particular, Chorzow Zoo appears to encourage the public to have direct contact with a variety of wild animals which, according to the website, includes reptiles, birds of prey and even a rhinoceros (Chorzow Zoo website). Two other zoos from the sample promote the opportunity for visiting school children to 'hold live animals' (Bydgoszcz Zoo website; Wroclaw Zoo website). In addition, the often poor design of enclosures and lack of stand-off barriers allowed for direct contact between the exhibited animals and the public. In some cases, this placed the public at significant risk. The public could easily come into direct contact with animals in 54 out of 205 randomly-selected enclosures (see Sections D and E on online methodology). This included potentially dangerous Category 1 'Greater Risk' Hazardous Animals, as categorised by SMZP and the Minister of Environment's categorisation Annexed to RS12/2003, such as, European brown bear (*Ursus arctos*), Himalayan black bear (*Ursus thibetanus*), mountain zebra (*Equus zebra ssp. hartmannae*), ostrich (*Struthio camelus*), snowy owl (*Bubo scandiaca*), waterbuck (*Kobus ellipsiprymnus*) and greater kudu (*Tragelaphus strepsiceros*). Signage warning the public of the risks of direct contact with potentially dangerous animals was lacking in all the assessed zoos.

Figure 2
Plock Zoo.
In some cases, poorly designed enclosures and a lack of stand-off barriers allowed for physical contact between the public and animals, potentially placing both at risk. The lack of a 1.5 m stand-off barrier at this enclosure exhibiting a 'Category 1 Hazardous Animal' (Andean condor, *Vultur gryphus*), violates Article 17 of RS12/2003

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 activities (Article 3 of the Directive). Zoos in Poland are regulated through the NPA, which is also dedicated to the conservation of biodiversity through the development and implementation of programmes to protect species, to educate and conduct research on issues relating to wildlife conservation (Articles 2 and 3, NPA). Particular emphasis is placed upon '*species threatened with extinction*' and species listed on the Polish Species Red List (Article 49, NPA), together with requirements to participate in scientific research (that brings benefits to species conservation) (Article 69, NPA), *ex situ* conservation of endangered species and reintroduction programmes (Articles 47 and 69, NPA).

Despite the regulations, results of this investigation have identified that the conservation of biodiversity, particularly regarding the protection of Threatened species, appears to be a low priority in these Polish zoos.

Percentage of Threatened Species

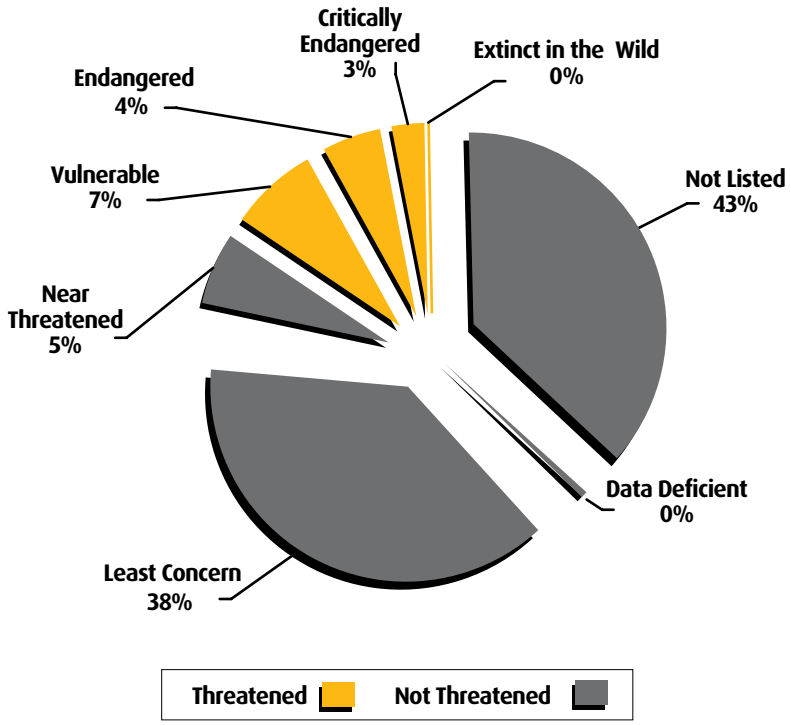

Figure 3.
Proportion of the 935 species identified (including subspecies where appropriate) in the eight Polish zoos that are categorised by the IUCN Red List of Threatened Species™ as Threatened and Not Threatened.

Percentage of Threatened Species and Taxa

IUCN Red List of Threatened Species™ Categorisation	Groupe taxonomique						Total No. Species	Proportion of total no. Species (%)
	Mammals	Birds	Reptiles	Fish	Amphibians	Invertebrates		
Not Listed	23	12	91	151	2	119	398	43%
Not Evaluated	0	0	0	0	0	0	0	0%
Data Deficient	0	0	1	3	0	0	4	0%
Least Concern	71	199	39	29	20	1	359	38%
Near Threatened	12	18	10	0	2	1	43	5%
Vulnerable	23	12	18	7	2	0	62	7%
Endangered	21	8	4	5	2	0	40	4%
Critically Endangered	13	1	9	2	1	1	26	3%
Extinct in Wild	2	0	0	1	0	0	3	0%
Total No. Species	**165**	**250**	**172**	**198**	**29**	**121**	**935**	**100%**
Proportion of total no. Species (%)	**18%**	**27%**	**18%**	**21%**	**3%**	**13%**	**100%**	

Tableau 1 Proportion of the 935 species (including subspecies where appropriate) identified in eight Polish zoos, categorised as Threatened and Not Threatened by the IUCN Red List of Threatened Species™ by taxa.

The results indicate that 14% of the total number of species (n = 128 species) from the selected zoos can be described as Threatened (*Vulnerable* (7%), *Endangered* (4%) and *Critically Endangered* (3%)) (Table 1). Of the 128 Threatened species, 45% were mammals, 24% were reptiles, 16% were birds, 11% were fish, 4% were amphibians and 0% were invertebrates. The remaining 86% (n = 807) of the Not Threatened species were either classified as *Least Concern* (38%) or *Near Threatened* (5%) by the IUCN Red List of Threatened Species™ categorisation, or *Not Listed* (43%) (Fig. 3). **The majority of species exhibited in the zoos were *Not Listed* and of a low conservation priority.** Of the eight zoos, Plock Zoo exhibited the highest proportion of Threatened species (29% of species in the zoo's total observed collection), whilst Bydgoszcz Zoo had the least (1% of species in the zoo's total observed collection). Only 15% of the species observed at Warszawa Zoo are listed as Threatened (IUCN Red List of Threatened Species™).

Of the 685 species of mammal, reptile, amphibian, invertebrate and fish observed at the eight zoos, 7% (n=49) are listed on the IUCN European Red List, which lists Threatened species of mammal, reptile, amphibian and invertebrate. This includes: 21 mammals (2% of 935 species), consisting of 19 Least Concern and one Vulnerable species (*Bison bonasus*); 12 reptiles (1% of 935 species), consisting of 10 Least Concern, one Near Threatened and one Vulnerable species (*Testudo graeca*); 10 fish (1% of 935 species); and 5 amphibians (1% of all 935 species). In addition, a total of 79 birds (8% of all 935 species) are included on the BirdLife International status assessment for birds in the European Union (BirdLife International, 2004) (recommended for use to assess the conservation status of birds in the EU by IUCN (IUCN, pers comm., 21st July 2011)). Of the 79 species, 47 are listed as 'Secure (e.g. *Anas Penelope, Egretta garzetta*); 1 as 'Localised', (*Phoenicopterus roseus*); 5 are 'Depleted' (e.g. *Otus scops, Grus grus*), 5 are 'Rare' (e.g. *Ciconia nigra, Haliaeetus albicilla*); 13 are 'Declining' (e.g. *Falco tinnunculus, Oriolus oriolus*), 7 are 'Vulnerable' (e.g. *Aythya nyroca, Gypaetus barbatus*) and 1 is listed as 'Critically Endangered' (*Tadorna ferruginea*).

In reference to the Polish national Red List, which lists a total of 1844 species of mammal, bird, reptile, amphibian, fish and invertebrate (National Red Lists website), overall, the assessed zoos kept 30 listed species (3% of the 935 total number of observed species). This consisted of 9 species of mammal (including the *Rupicapra rupicapra*), 19 bird species (including Critically Endangered *Burhinus oedicnemus*), one amphibian species (including the Near Threatened *Triturus cristatus*) and one invertebrate species (including the local and globally Critically Endangered *Mantis religiosa*).

Participation in European coordinated captive breeding programmes

The Polish Nature Protection Act (NPA) requires zoos to participate in *ex situ* conservation programmes, which includes the keeping and breeding of endangered species and their reintroduction into the wild to restore natural populations (Articles 47 and 69, NPA). This investigation evaluated not only the number of species within the eight zoos that are listed on the European Endangered Species Breeding Programmes (EEPs) and European Stud Books (ESBs) but, moreover, which individuals of the listed species are participating in the European Species Management Programmes.

The results of the investigation have identified that only 12% of the observed species kept by the selected zoos are listed on the register of either EEPs or ESBs.

Percentage of species in Polish Zoos that have coordinated captive breeding programmes (EEPs or ESBs)

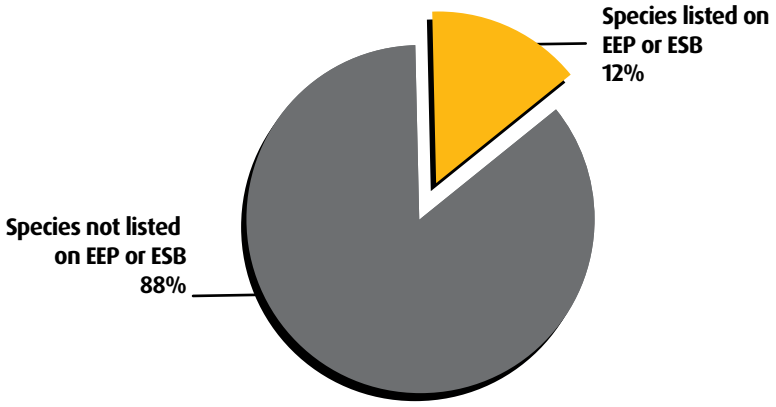

Figure 4
The percentage of the 935 species (including subspecies where appropriate) identified in the eight Polish zoos that are part of an ESB or EEP.

Only 12% (n = 114) of the 935 species in the zoos are listed on either the register of European Endangered Species Breeding Programmes (EEPs) or European Stud Books (ESBs) (Fig 4). All eight zoos kept at least one species listed on European Species Management Programmes. Warszawa Zoo kept the highest number of species registered on the EEP/ESB Programmes (60 species), followed by Wroclaw Zoo (39 species), whilst Leszno Zoo kept the least (3 species). No Standard Zoo Questionnaires were completed by the assessed zoos, so the only way to confirm that individuals of these listed species were actually participating in a Species Management Programme was to review information published by the zoos and, for EAZA members, to refer to the EAZA Yearbook. This information was then compared with the numbers of EEP or ESB-listed species at each of the zoos. Findings revealed that the majority of EEP and ESB-listed species kept by EAZA Member zoos were participating in Species Management Programmes (whereby the individuals of that species were participating in the Programmes). For example, at the time of the investigation, of the 39 observed species at Wroclaw Zoo listed on the European Species Management Programmes, 24 species (62%) could be confirmed as participating in the Programmes (EAZA Yearbook 2007-2008). Similarly, of the observed 16 EEP- and 11 ESB-listed species at Chorzow Zoo (a total of 27 species in European Species Management Programmes), 19 (70%) active Programmes could be confirmed (EAZA Yearbook 2007-2008). No information could be found concerning the success of these Programmes.

Plock Zoo appeared to be the main contributor to these European Species Management Programmes. Of the 65 species observed in the zoo, 19 were listed as Threatened by IUCN Red List of Threatened Species™, 26 species were registered on either EEP or ESB and overall, it was possible to confirm that 25 species were actively participating in the captive breeding programmes at the time of the investigation (EAZA Yearbook, 2007-2008).

Non-EAZA Member zoos, Leszno Zoo, Braniewo Zoo and Odejewski Odan Zoo did not appear to participate in any Species Management Programmes.

Overall, of the 128 Threatened Species in eight zoos, 65 are listed on the register of European Endangered Species Breeding Programmes (EEP) or European Stud Books (ESBs). However, of the identified Threatened species, only 49 (38%) were identified as participating in the European Species Management Programmes.

It was possible to confirm, through zoo websites and published literature that four of the eight selected zoos (Chorzow Zoo, Warszawa Zoo, Wroclaw Zoo and Plock Zoo), have participated in programmes that have reintroduced captive-bred species into the wild (a specific requirement of NPA). This includes: the introduction of '*owl species*' on Wolin Island by Chorzow Zoo (Chorzow Zoo website); the release of grey seals (*Halichoerus grypus*) into the Baltic Sea and Przewalski

horse (*Equus ferus przewalskii*) in Mongolia by Warszawa Zoo (WWF Global website); activities in support of Amphibian Ark at Wroclaw Zoo (Wroclaw Zoo website); and involvement of Plock Zoo in the reintroduction of bearded vulture (*Gypaetus barbatus*) into the Alps and Pyrenees (signage in Plock Zoo). Warszawa Zoo also claims to have a Wild Bird Rehabilitation Centre, which has reportedly released previously-rescued white stork (*Ciconia ciconia*) (Warszawa Zoo website) and Griffon vulture (*Gyps fulvus*) (The Telegraph website). **Four of the eight zoos did not appear to actively release captive-bred animals into the wild (as required by Article 69, NPA).**

Of the eight zoos, five claim through their websites and published literature to participate in scientific research and *in situ* conservation programmes, which appear to bring benefit to species conservation. These include: contribution to and awareness-raising about the EAZA coordinated awareness-raising programmes (e.g. Carnivore Campaign (2009/2010), Ape Campaign (2010/2011), etc.), where funds raised are provided to various global conservation efforts; Warszawa Zoo's PANDA Foundation, which benefits from collaboration with corporate companies and proceeds from zoo sales and animal adoptions, to raise awareness of and funding for conservation programmes, including 'Save the Pandas Campaign' in 2005 (The Warsaw Voice website); support of the organisation, Gorilla Doctors (Warszawa Zoo website); activities in support of Amphibian Ark at Wroclaw Zoo (Wroclaw website), although no details were available as to how the zoos has contributed; Wroclaw Zoo's financial contribution to WAZA's Javan Warty Pig Programme (WAZA website); Plock Zoo's apparently active role in the conservation and protection of amphibian species (Plock Zoo's website); and the Lion Tamarins of Brazil Fund (Holst, 2003). Although no evidence could be found of such activities in Braniewo Zoo at the time of the investigation, in 2011 the zoo was reportedly involved in research investigating the hematologic and serum biochemical values of 'semi' hibernating captive brown bears (Bednarski *et al.*, 2011). **Three of the eight zoos did not appear to partake in any scientific research, or *in situ* conservation, that could bring benefit to species conservation in the wild (as required by Article 69, NPA).**

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). Polish law requires zoos to educate the public about the need to protect species but it does not specifically require zoos to provide information to the public about the species exhibited. No guidance or example is provided by the Competent Authority to help interpret this largely ambiguous requirement.

Of the eight zoos, five appear to have classroom facilities, with Plock Zoo referring to its Education Department (Plock Zoo website). All five of these zoos advertise seminars for pre-organised groups but at an additional cost, ranging from €6.75 (Chorzow Zoo) to €27 per group (Warszawa Zoo), with Bydgoszcz Zoo charging €5 per person. The seminars offer a variety of topics, including titles with reference to threatened species, to a variety of age groups and abilities (websites of Chorzow Zoo, Warszawa Zoo, Wroclaw Zoo, Plock Zoo and Bydgoszcz Zoo). Guided tours are offered in the same five zoos, with three of the zoos appearing to charge extra for the tour. Warszawa Zoo also offers species talks to the general public. Animal encounter sessions, where the public are encouraged to hold both domestic and wild animals, were advertised on the websites of Chorzow Zoo, Wroclaw Zoo, Plock Zoo and Bydgoszcz Zoo, but only Bydgoszcz Zoo appears to charge extra for participation.

No educational activities were observed at, or advertised by Leszno Zoo, Braniewo Zoo or Odejewski Odan.

Animal shows

The use of animals in performances in zoos does not appear to be commonplace in Poland. However, Chorzow Zoo does present a bird of prey show, where the public is able to hold the birds and, until recently, Wroclaw Zoo advertised an 'elephant feeding show' (Wroclaw Zoo website). News on the website of Warszawa Zoo displays keepers taking snow leopard cubs for a walk around the zoo but it is not known if this is a regular occurrence or whether there is any direct contact with the public (Warszawa Zoo website).

Minimal species information

A basic requirement of a zoo is to inform its visitors about the animals exhibited. However, Polish zoo law makes no specific requirement for zoos to provide species information to zoo visitors. Despite this, species information signage was present in the majority of selected zoos though not always present on every enclosure or for each *species holding*.

Information on the species exhibited in the zoos is a requirement of Article 3(2) of the Directive and therefore this parameter has been recorded and analysed as part of this investigation.

Proportion of Species Information Signage Present

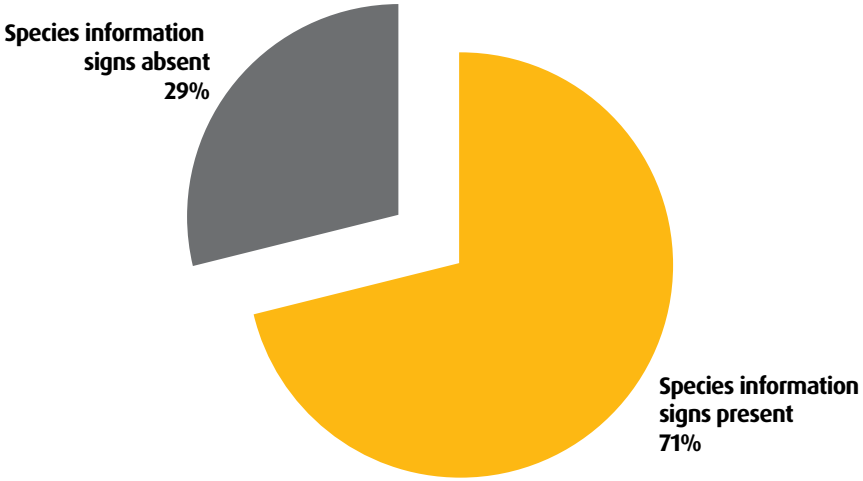

Figure 5
The average percentage of species information signage present or absent (for all 1,525 *species holdings*) in the eight Polish zoos.

On average, 29% of *species holdings* completely lacked any form of species information signage (Figs. 5 & 6). Species information signage was absent for 100% of *species holdings* observed in Braniewo Zoo, 32% at Leszno Zoo, 30% at Odejewski Odan Zoo, 20% at Chorzow Zoo, 18% at Warszawa Zoo, 12% at Bydgoszcz Zoo and 10% at both Wroclaw Zoo and Plock Zoo. Signage for 5% of *species holdings*, over the eight zoos, was incorrect (inaccurate species' scientific or common names), whilst others displayed only minimal information about the species. Figure 7 provides an overview of the content of the signage in the zoos.

Figure 6
Bydgoszcz Zoo.
At the eight zoos, 29% of all *species holdings* did not include basic information about the species, despite the requirements of Article 3(2) of the Directive.

Quality of Species Information Signs

As mentioned above, NPA does not require Polish zoos to inform the public about the species exhibited, but recognising that the Directive requires details of species exhibited and their natural habitats to be made available to the public, signage was analysed in 205 randomly-selected enclosures in the eight zoos.

For continuity, the EU Zoo Inquiry investigations use the SMZP and its requirements for species information signage content as a benchmark.

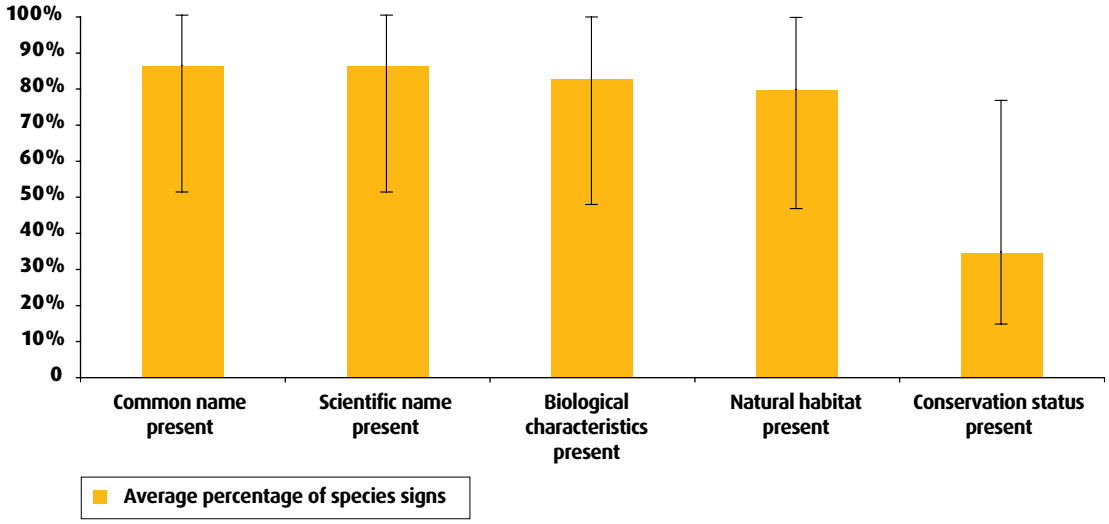

Figure 7 Content of species information signage within the eight Polish zoos. Each column represents specific information, as indicated by best practice criteria (SMZP). Each value (e.g. Scientific name present, 86%) represents the average of the 217 species information signs observed in 205 randomly selected enclosures in the eight zoos. 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 species conservation status information varied considerably between zoos in comparison to the presence of species scientific name).

The results (Fig. 7) show that, of the signage present in the randomly-selected enclosures, on average 65% **did not** contain all the required information, with 65% not including reference to the species conservation status and 20% not including reference to species natural habitat. However, it is important to note that this varied significantly between the zoos: Braniewo Zoo failed to provide any information for those species observed; Leszno Zoo, Chorzow Zoo, Odejewski Odan Zoo and Warszawa Zoo failed to provide information about the conservation status of their exhibited species; whilst Wroclaw Zoo and Plock Zoo included this information on most of the species information signage present.

Figure 8
Warszawa Zoo.
This enclosure exhibited a variety of endemic garden birds (i.e. *Gallus gallus, Turdus pilaris, Passer domesticus*). However, the enclosure was incorrectly labeled, with signage describing a number of species of macaw.

EVALUATION OF ANIMAL ENCLOSURES

To evaluate the suitability and quality of each of the 205 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 '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 addition, analysis also included use of the Polish species-specific minimum requirements concerning enclosure sizes and furnishings, as listed in the Annex to RZ12/2004. The minimum standards were developed by the Ministry of Environment (Standard Member State Questionnaire).

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*

'Food and drink provided for animals to be of the nutritive value and quantity required for the particular species and for individual animals within each species…'

(Article 20, EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria 2008)

The drinking water in numerous enclosures at Leszno Zoo, Chorzow Zoo and Plock Zoo appeared stagnant and unhygienic. Many species exhibited at Chorzow Zoo appeared to have access to bathing water alone. Some animals appeared to be fed inappropriate foods. The European brown bear (Ursus arctos) at Leszno and Braniewo Zoos appeared to be fed a diet of predominantly bread.

Freedom from Discomfort : *Provision of a Suitable Environment*

'Animals [should be kept] in conditions appropriate to their biological needs.'

(Article 69(4), NPA)

Animals should be kept in conditions that are *'ventilated',* and where it is possible to *'adjust temperature, humidity and lighting to the requirements of the species, or individual animals.'*

(Article 3, RZ12/2004)

For many animals, conditions were often cramped and did not adequately take into account the needs of individual species. This was particularly apparent in enclosures housing wide-ranging species which did not appear to have sufficient space to exercise or express all of their natural behaviours. In some cases, animals did not have access to outdoor facilities and their enclosures were subject to poor ventilation resulting in them potentially having to endure high temperatures. Enclosures in Leszno Zoo, Chorzow Zoo and Odejewski Odan Zoo often lacked shelter and, if available, access to indoor facilities.

Figure 9
Braniewo Zoo.
The enclosures for the European brown bear (*Ursus arctos*) and the Asiatic bear (*Ursus thibetanus*) at this zoo failed to provide basic, appropriate living conditions. Polish minimum standards stipulate that 100 m^2 per bear should be provided for the outdoor enclosure – a requirement that this enclosure for Asiatic black bears clearly does not meet.

Freedom from Pain, Injury and Distress : *By Preventative Measures and Provision of Suitable Health Care*

Animal enclosures must be *'kept clean and tidy, including the regular removal of faeces and food remnants with regular cleaning, disinfestations and rat control'.*

(Article 4, RS12/2003)

Animals should be provided suitable 'veterinary care'

(Article 3, RZ12/2004)

The majority of the selected zoos had poor levels of hygiene: standing, stagnant water; an unacceptable build-up of faeces and urine; rotting food; and the occurrence of pests. Unhygienic conditions were observed in Leszno Zoo, Chorzow Zoo, Plock Zoo, Odejewski Odan Zoo and Braniewo Zoo, and pests were observed in Chorzow Zoo, Plock Zoo and Warszawa Zoo. Of note were the animal houses at Chorzow Zoo which were incredibly dirty, unkempt and smelled strongly of urine and decay. The primate and reptile house in particular appeared to have an infestation of cockroaches both within the enclosures and in the public areas. The majority of the primate enclosures were unacceptably dirty with faeces and urine covering the concrete or tiled floor where food had been left and paint flaking from the walls.

Some animals observed appeared to be suffering from illness or debilitating conditions (for example, open wounds, loss of feathers).

Figure 10
Chorzow Zoo.
Poor levels of hygiene were observed in the majority of zoos assessed. Conditions at this particular zoo were deeply concerning, where the prevalence of faeces and urine amongst the animals' food could pose a significant health risk.

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, 2008)

Animals should be kept in suitable conditions, which take into account the species physical and psychological needs.

(Articles 69 and 72, NPA: Article 4(9), APA)

Many enclosures lacked the appropriate facilities, furnishings and environmental enrichment that would permit and encourage the opportunity for the animals to rest, seek shelter or privacy, exercise and encourage natural behaviour. Species requiring features to permit climbing, bathing, diving, flying, or a suitable substrate to dig or burrow in were often housed in conditions where such natural behaviours were compromised and prevented. In addition, some animals of social species were housed in inappropriate social groupings.

Numerous observations of animals displaying what were likely to be abnormal, repetitive behaviours were recorded. This included possible stereotypic behaviour in Japanese macaque (*Macaca fuscata*), European brown bear (*U. arctos*) and Indian peafowl (*P. cristatus*) at Leszno Zoo; African elephant (*Loxodonta africana*), patas monkey (*Erythrocebus patas*), caracal (*Caracal caracal*) and black mangabey (*Lophocebus aterrimus*) at Chorzow Zoo; jaguar (*Panthera onca*) at Warsaw Zoo; fennec fox (*Vulpes zerda*) and Asian elephant (*Elephas maximus*) at Wroclaw Zoo; and Rothschild's giraffe (*Giraffa camelopardalis rothschildi*) at Plock Zoo.

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

'Animal enclosures must be equipped with apparatus to allow the animals to hide.'

(Article 3, RZ12/2004)

'Conditions for the reproduction of animals must be isolated from the public'

(Article 5(1), RZ12/2004)

'There should be no sudden movements and sounds that may contravene the welfare of the animals'

(Article 5(1), RS12/2003)

Results indicated that, in numerous instances, animal enclosures were poorly located. For example, predators were housed in a close proximity to prey species, or highly territorial species placed alongside each other. There were also instances where enclosures were next to busy roads, in close proximity to people or in the midst of major building works. Such conditions could cause the animal(s) concerned unnecessary stress. Furthermore, poorly-designed enclosures allowed for potential contact between the public and animals. Direct or close contact between humans and wild animals can cause unnecessary distress to the animals concerned, possibly exacerbated by the fact that the animals often could not seek shelter or privacy from view. Numerous observations were recorded where the animals exhibited appeared agitated and nervous, in particular the mandrill (*Mandrillus sphinx*) at Chorzow Zoo and the common kestrel (*Falco tinnunculus*) at Plock Zoo.

Environmental Quality of Enclosures

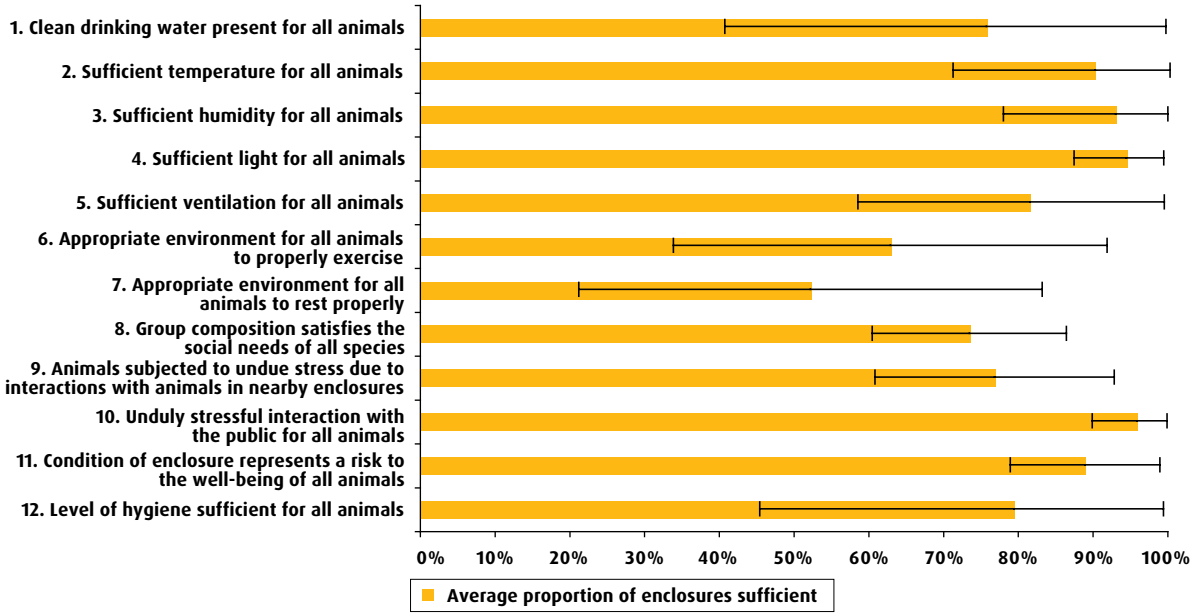

Figure 11 *Environmental quality* of the 205 randomly-selected enclosures from eight Polish zoos. Each column represents a criterion used to assess the suitability of the enclosures to meet the needs of the animals contained. Error bars are a visual representation of the standard deviation from the mean 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 more consistently adequate). Where the presence of a condition or factor could not be determined, data were not included.

The results (Fig. 11) demonstrate that while most enclosures appeared to provide the animals with adequate temperature, light and humidity at the time of assessment, lower values were recorded for: the availability of suitable facilities to allow the animal(s) to rest (on average, 48% of the selected enclosures failed to provide appropriate structures or facilities to allow the animals to rest properly); an opportunity for the animal(s) to exercise and express their natural locomotive behaviour (on average, 37% of the selected enclosures were of an inadequate size and complexity); a group composition that satisfies the social needs of the species (on average, 26% of the selected enclosures did not provide the species with the appropriate social structure); and the provision of clean drinking water and the general cleanliness of the enclosures (on average, 24% of enclosures did not appear to provide clean drinking water and 20% of enclosures were unhygienic).

Figure 12
Warszawa Zoo.
Enclosures for many species lacked environmental complexity and the opportunity for the animals to express natural behaviour. This enclosure, exhibiting white-tailed eagles (*Haliaeetus albicilla*), lacks suitable height, space, shelter and furniture to encourage natural behaviour.

Figure 13
Chorzow Zoo.
Despite the availability of an outdoor space, this African elephant (*Loxodonta africana*) appeared to be locked indoors in highly inappropriate conditions. The animal was displaying repetitive and abnormal circling behaviour, most probably exacerbated by the adjacent, loud construction work.

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%)

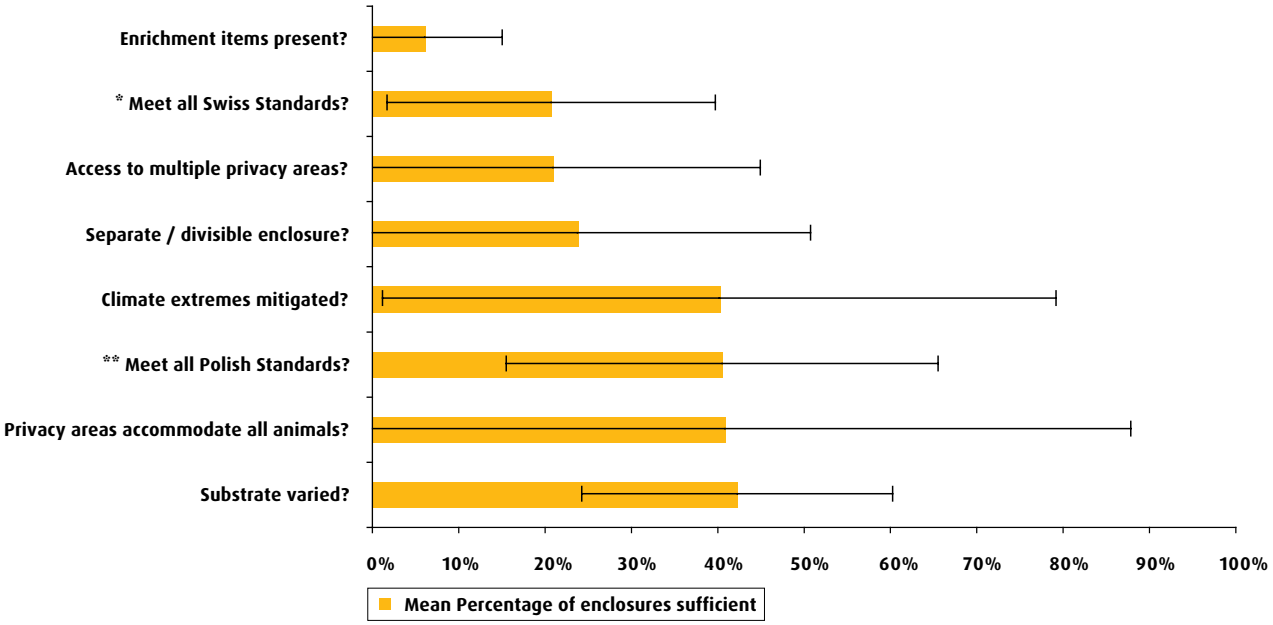

Figure 14 Issues requiring immediate attention following assessment of 205 randomly selected enclosures from the eight Polish zoos. Error bars are a visual representation of the standard deviation from the mean value, demonstrating the variation in performance (e.g. the presence of varied substrate and each animal's ability access to privacy varies considerably between zoos). Where the presence of a condition or factor could not be determined, data were not included.

The level of animal welfare was assessed in 205 randomly selected enclosures in the eight zoos (Fig. 14). Findings show that the majority of the enclosures assessed did not adequately provide for the species-specific needs of the animals exhibited. In particular, enclosures lacked environmental enrichment that would encourage natural behaviour.

On average, 94% of the assessed enclosures did not include any behavioural or occupational enrichment items or techniques such as toys or feeding devices; 79% of the enclosures failed to provide the animals with access to multiple privacy areas; 76% of the enclosures did not provide the opportunity to divide or separate the animals; 60% of enclosures did not provide adequate facilities to mitigate climate extremes; 59% of enclosures did not provide privacy areas that could accommodate all animals; and 58% of enclosures did not provide a varied substrate.

Widely Represented Issues of Concern (where the percentage of enclosures failing to comply is between 49% and 30%)

- On average, 47% of enclosures did not have species-specific furnishings or features that can be moved
- On average, 44% of enclosures did not provide food in more than one place
- On average, 43% of enclosures did not provide shelters that could accommodate all animals in the enclosure
- On average, 41% of enclosures were not environmentally-varied
- On average, 40% of enclosures did not provide bedding in the shelters, where available
- On average, 36% of enclosures did not provide shelters for the animals
- On average, 36% of enclosures were not considered to be large enough for the animals exhibited
- On average, 31% of enclosures did not provide water and/or food in a hygienic manner

Less Widely Represented Issues of Concern (where the percentages of enclosures failing to comply is less than 30%)

- On average, 27% of enclosures did not provide a suitable substrate
- On average, 26% of enclosures did not provide species-specific furnishings that all animals could use at the same time
- On average, 25% of enclosures did not provide enough distance to the back of the enclosure for the animal to retreat from the public
- On average, 23% of enclosures did not provide the appropriate food to the species
- On average, 22% of enclosures did not provide access to clean drinking water
- On average, 18% of the animals assessed did not appear interested in their surroundings
- On average, 16% of enclosures did not contain permanent species-specific furnishings or features
- On average, 14% of enclosures did not provide the animals with an adequate quantity of food
- On average, 12% of enclosures did not provide the individual animals with enough room to get distance from their cage companions, if necessary

Using the Annex to RZ12/2004, which provides species-specific minimum requirements for enclosure sizes and furnishings, **the results indicated that on average, 59% of enclosures failed to meet the Polish minimum standards.**

Figure 15
Warszawa Zoo.
A jaguar (*Pantera onca*) paces repetitively, back and forth, along the wall of the enclosure. Defined tracks (often the result of such pacing) within enclosures are commonly seen into zoos, particularly in enclosures containing wide-ranging species (Mallapur *et al.*, 2002; Mason & Rushden, 2006; Zoocheck Canada, 2006).

The Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008 (APOS) was used in the investigation to ascertain whether the enclosures were suitable for the species contained. APOS was selected as it represents an independent set of internationally-recognised species-specific standards and environmental enrichment from a non-EU Member State. All selected enclosures (from Sections D and E analysis) were assessed against the standards.

The results determined that, on average, 79% of enclosures that exhibited species listed on APOS did not meet these minimum requirements. In particular, this identified that almost 80% of the randomly-selected enclosures failed to provide the species contained with their species-specific needs, as required by Article 70 of NPA, RZ12/2004 and the APA.

CONCLUSION

This investigation has assessed eight zoos in Poland. Seven are believed to be licensed, with one, Braniewo Zoo, unlicensed but operational. The Competent Authority has admitted that some zoos in the country remain unlicensed (Standard Member State Questionnaire) but do not appear to be seeking to ensure that they are properly regulated. The Directive has been transposed into national legislation but inaccuracies in transposition have been identified. Concerns have also been raised about the quality, procedure and regularity of the zoo inspection, which appears to be dependent upon co-operation of the regional authority. Findings have indicated that there is a wide variation in performance between zoos, with those affiliated to EAZA maintaining higher standards. However, overall, zoos in Poland are making an insignificant contribution to the keeping and breeding of Threatened species, the promotion of species conservation and appropriate animal care. Over half the animal enclosures failed to meet the minimum standards required by Polish Regulation on the '*conditions for husbandry and keeping respective groups of species in zoological gardens*'.

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

1. Implementation of the Directive

In Poland, zoos are licensed and regulated through the Nature Protection Act ('NPA') and the Regulation on '*conditions for husbandry and keeping of respective groups of species in zoological gardens*' ('RZ12/2004'). Zoo regulation is the responsibility of the General Directorate for Environmental Protection, in consultation with the relevant provincial authority and the Zoos Council, whilst zoo inspection is administered by the Regional Directorate for Environmental Protection.

All EU Member States (25) were required to have transposed and implemented the requirements of the Directive (1999/22/EC) by April 2005. 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 each Member State to accurately transpose all the requirements of the Directive into their respective national law and apply it. According to the General Directorate for Environmental Protection, this was achieved in Poland in 2004, with the implementation of NPA (2004) and the RZ12/2004 (General Directorate for Environmental Protection, pers. comm., 9th September 2011). Unlike other EC Directives, Directive 1999/22/EC includes no guidance or explanatory notes and, therefore, effective application relies on the interpretation and any guidance provided by the EU Member State Competent Authority. This has led to inconsistencies in its application amongst EU Member States as a result of a lack of guidance, different interpretations of requirements, definitions and licensing and inspection procedures.

This was the case, until very recently, in Polish zoo law. At the time of the zoo investigation, the definition of a zoo (Chapter 1, Article 5(11) of NPA (amended version 2004)) varied significantly from that of Article 2 of the Directive. In fact, it included additional, conflicting criteria compared to the Directive definition and omitted important criteria relating to exemptions to zoo regulation. In particular, the previous zoo definition specified that only those establishments that participate in '*ex situ conservation, scientific research and education*' should be licensed, which meant that those establishments which display animals of wild species to the public for 7 days or more, which did not partake in these above listed 'scientific' activities, would not require to be licensed. This is an incorrect interpretation of the Directive and this situation may well have resulted in the mis-identification of establishments that should warrant a zoo licence under the Directive. In June 2011, the NPA was amended and the zoo definition changed, which has now bought it in line with that of the Directive.

The Directive's overall objective to conserve biodiversity, has been effectively enacted by Poland's Nature Protection Act (NPA), with an emphasis given to the conservation of Threatened species and *ex situ* conservation. Zoos are required to be licensed and regularly inspected to ensure they meet the requirements applicable to zoos (Articles 69 and 70, NPA), which are largely similar to those of Article 3 of the Directive.

The revised NPA (2011) authorises the Competent Authorities to exempt facilities that display small numbers of

species and/or individual animals from zoo regulation. Although the requirements of APA still apply, the exemption of those facilities that display wild animals to the public and which are usually less likely to provide their animals with suitable conditions, are seemingly not inspected to ensure acceptable standards in animal care and husbandry are applied. This could result in hundreds of wild animals being kept in substandard captive conditions (e.g. the situation at Braniewo Zoo). Furthermore, the exemption criteria, reportedly promoted by the State Council for Nature Protection (which includes zoo representatives), are not species-specific. Therefore, irrespective of whether the species is of conservation-significance, or is hazardous in nature, it appears that zoo regulations no longer apply. **These matters require further investigation and perhaps revision to ensure requirements for species conservation, stipulated by NPA, are not compromised.**

These changes to the 'zoo' definition in the NPA may well address the significant numbers of unlicensed zoos in Poland, providing the General Directorate for Environmental Protection and the regional authorities effectively enforce the law. However, the ambiguity relating to the majority of the requirements of zoo law allow for broad interpretation and therefore the greater probability of ineffective law enforcement. In particular, the lack of guidance to further explain the ambiguous requirements of Article 69 of NPA could explain the poor level of legal compliance with the law. For example, Article 69(2) of NPA requires zoos to educate the public about the protection of species, however it does not specify how this should be achieved. The requirement of Article 3(2) of the Directive, which specifies that information should be displayed about all species exhibited at the zoos, is seemingly omitted. This ambiguity undoubtedly leads to mis-interpretation and, as in the example above, may result in a potential breach in the requirements of the Directive.

The General Directorate for Environmental Protection should consider reviewing Chapter 1, Article 5(11) of NPA at the earliest opportunity to ensure that all establishments displaying any number of species of wild animal to the public for seven days or more are licensed and regulated to ensure, amongst other things, that animals are housed in appropriate conditions. Furthermore, by establishing 'best practice' zoo guidance, the ambiguities relating to legal requirements will be better explained, which should lead to conditions in zoos being improved.

2. Ineffective enforcement

All zoos in Poland were required to comply with the requirements of NPA and specifically, RZ12/2004, by January 2005, and thus meet the requirements of the Directive, by the deadline, April 2005. After April 2005, any zoo found not licensed in accordance to the Directive should face closure (Article 4.5 of the Directive).

However, despite an indication in Article 68 of NPA that the Minister of Environment may revoke, or impose conditions on a license if a zoo fails to comply the requirements applicable to zoos (Articles 69 and 70 of NPA), this investigation has not only identified that 11 zoos remain unlicensed (Standard Member State Questionnaire), but, furthermore, that of the eight zoos assessed, none complied with all the requirements of NPA. Identified problems included failure to: contribute significantly to the conservation of 'endangered' or Threatened species; participate in scientific research that benefits species conservation; raise awareness of the conservation of biodiversity; provide information about all the species exhibited; and keep animals in an appropriate manner as required by RZ12/2004 and APA. Three of the eight selected zoos failed to meet any of the legal requirements. At the time of the assessment, one of the eight zoos, Braniewo Zoo, was unlicensed. These findings call into question the enforcement of the law and, in particular, the quality and regularity of the zoo inspection.

According to the Competent Authority, zoos are licensed for an indefinite period, but are inspected at least every three years, or as instructed by the *voivode* (governor) of the Province, or Minister of the Environment (Article 77(2), NPA) (Standard Member State Questionnaire). Inspections are reportedly (Standard Member State Questionnaire) administered by the Regional Directorate for Environmental Protection, in collaboration with the Zoos Council, the General Directorate for Environmental Protection and the veterinary authorities, which are expected to follow a

protocol, submitting a report to the *voivode* and the Minister of Environment (Article 77, NPA). However, Chapter 3 of NPA provides no further reference to or explanation of the inspection procedure such as: the assessment criteria; the type of conditions imposed on the zoo licences (should a zoo not meet the necessary requirements when inspected); the protocol used; an indication of the authorities involved; or their specific function. The EU Zoo Inquiry 2011 investigation was therefore unable to review the zoo inspection procedure itself. However, as compliance with the various legal requirements in the selected zoos ranged from satisfactory to poor, indications are that either the quality of inspection is inconsistent between the *województwa* (Provinces) of Poland, or enforcement levels are varied and have limited efficacy throughout Poland, with the zoos largely left to their own devices.

Leszno Zoo, which is located in a park close to the city centre, keeps the majority of its observed 26 species in poor housing conditions, with limited space and environmental enrichment. Local media reports have acknowledged public concern for the poor conditions endured by many of the zoo's animals. In a news article in 2009, Council Members acknowledged that despite public complaints and expert recommendations to improve the conditions in order to comply with NPA, no improvements had been undertaken (Ekologia Poland website). An inspection of the Zoo was reportedly undertaken in October 2009, which acknowledged that conditions were below national requirements and, as a result, the General Directorate of Environment Protection ruled that the zoo should be relocated outside the City of Leszno to allow for greater space for the animals (Regional Directorate of Environmental Protection Public Information Bulletin website). However, news reports in 2011 confirmed that the zoo remains in the same location and although the bears have since been relocated by an animal welfare NGO to an animal sanctuary, the conditions largely remain the same. NPA dictates that if a zoo is unable to meet the legal requirements it should close and all the animals be rehomed. This has clearly not happened. This matter requires further and urgent investigation.

According to the Competent Authority and the National Zoos Register, Braniewo Zoo is unlicensed. According to the authorities, the zoo complies with local law, and since the revision of the NPA, is recognised as a 'mini-zoo' and therefore exempt from zoo regulation (Dr. Sergiel, Pers. Comm., 6th October 2011). However, if Braniewo Zoo's claims are confirmed: that it keeps more than 30 species of wild animal (Pora.pl website), then this facility should be licensed as a 'zoo', notwithstanding the fact that it has been unlicensed for years (National Zoos Register). Conditions for the animals not only violate the requirements of RZ12/2004, but also those of the APA, and the animals' welfare is severely compromised.

These findings not only raise serious concerns about the enforcement of NPA and RZ12/2004, but, further, the willingness and ability of national and regional enforcement personnel to effectively identify zoos, apply the law and penalize substandard zoos. No evidence was provided by the Competent Authority to substantiate the existence of unlicensed but operational zoos, which appear to violate the law. Ultimately, the effective enforcement of Article 68 of NPA would result in the termination of a licence(s) and zoo closure. However, as of December 2009, reportedly no zoos in Poland have been closed (Standard Member State Questionnaire). The findings appear to indicate that the monitoring and inspection of zoos, as specified in Chapter 3, Article 77 of NPA, and the actions necessary to address substandard and non-compliant conditions, are either not being undertaken, or the regional and national enforcement personnel are not sufficiently knowledgeable and trained in the effective application and enforcement of the law.

Despite assurances from the Competent Authority that there is a sufficient knowledge base (Standard Member State Questionnaire) and the zoo inspectorate is competent in the enforcement of the NPA and relevant Regulations, **concerns over regularity, quality, consistency and practice mean that the process of inspection warrants further investigation.**

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.

The threat that an escaped non-indigenous animal might pose to the natural environment or native species is seemingly not recognised by the NPA, but is acknowledged by Article 3(4) of the Directive. The prevention of animal escapes from zoos is, however, specified in the Regulation on Occupational Health and Safety in Zoos (10/12/2003) ('RS12/2003'), Article 3, which identifies the risk that such an incident may present to the safety of zoo employees and visitors. Despite the requirement for all zoos to have a sufficient perimeter fence to retain escaped animals, the Competent Authorities in Poland do not appear to recognise the significant risk zoos pose by presenting pathways for the introduction of Invasive Alien Species (IAS) (Fábregas *et al.*, 2010), particularly, concerning the prevalence of DAISIE-listed species kept by zoos. 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, 2010). Of the eight zoos, five did not appear to have a perimeter fence that seemingly could effectively contain an escaped wild animal from the zoo.

During the assessment, indigenous wild animals, feral cats (*Felis catus*) and a DAISIE-listed species were observed to move freely within the zoo and between the different zoo enclosures, whilst house mice (*Mus musculus*), were observed in enclosures at two zoos. The invasion of indigenous animals into the zoo environment could result in the transmission of infectious diseases or parasites between the indigenous animals and those in the zoo.

4. Public placed at risk of injury and illness

The Regulation on Occupational Health and Safety in Zoos ('RS12/2003'), requires zoos to implement numerous measures to prevent direct contact between the zoo visitor and potentially 'dangerous' wild animals. This includes the establishment of a list of hazardous animals, designated by the Minister of Environment and Annexed to RS12/2003 (Article 73, NPA), and contact with Category 1 hazardous animals prohibited (Article 17 of RS12/2003).

Five of the eight zoos actively encouraged visiting members of the public to have direct contact with their animals. This included three zoos where the public could have direct contact with wild animals such as various reptile species, including green iguana (*Iguana iguana*). In Chorzow Zoo, the website shows the public holding species of birds of prey and touching a Category 1 hazardous animal, the white rhino (*Ceratotherium simum*). This violates Article 17 of RS12/2003.

Furthermore, of the 205 randomly-selected enclosures across the eight zoos, the public could have possible direct and unsupervised contact with animals in 54 enclosures which, in some cases, placed the public at risk. This included 10 cases where poor enclosure design, the lack of the required stand-off barriers and the lack of zoo staff allowed the public to have contact with Category 1 Hazardous-listed species (Annex to RS12/2003). Furthermore, of the 65 randomly-selected enclosures that were observed to contain a Category 1 Hazardous-listed species, 47 did not have signage to warn the public of the potential dangers. **These failures violate various requirements in RS12/2003, particularly Article 17 of RS12/2003, which specifies no contact between the public and dangerous animals.** In 2005 at Chorzow Zoo, a woman managed to climb onto a ledge to view the European brown bears, she fell into the enclosure and was mauled to death (News24.com, 2005).

The risk of disease transmission relating to animal / human contact is also recognised by RS12/2003, including the screening for zoonoses by veterinarians and the need to have hand-washing facilities for the public. However, concerns remain about the direct contact between the public and reptiles and birds in some of the selected zoos. Animals, particularly wild animals, are thought to be the source of >70% of all emerging infections (Kuiken *et al.*, 2005). For example, both reptiles and birds can harbour *salmonella* (Centres for Disease Control and Prevention website; Mermin et al., 2004). In particular, up to 90% of green iguanas (*Iguana iguana*) can be host to this organism (Kaplan, 2009), or a strain of intestinal bacteria (Woodland Park Zoo website). The risk of infection for people who hold or stroke birds or reptiles is therefore highly probable (Warwick *et al.*, 2009). The risk of disease transmission, particularly zoonoses is often an overlooked risk in zoos. **Although RS12/2003 discourages contact between the public and animals, prohibiting contact with dangerous animals, the law appears to be failing to take the necessary preventative measures to protect the public against potential injury and disease. Zoos should be required to take a far greater responsibility for the safety of the visiting public and indeed, the welfare of their animals.**

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). This requirement is reflected in the NPA, which requires zoos (and botanical gardens), not only to contribute to the conservation of 'rare' species, but also to ensure threatened species are subject to *ex situ* conservation, with a particular objective, '*to restore individuals of species to their natural habitat*' (Articles 47 and 69(3), NPA).

Findings from this investigation have revealed that whilst some zoos contribute more than others, overall, zoos in Poland **are not making a significant contribution to the conservation of Threatened species.** The majority of species kept by the eight zoos are of low conservation importance, with only 14% of observed species (n=128) listed as Threatened by the IUCN Red List of Threatened Species™. Mammals, reptiles and birds dominate, with Threatened amphibians a minority (4%) despite the fact that there are more Threatened amphibians than Threatened mammals (IUCN Red List of Threatened Species™). Of the eight zoos, Plock Zoo exhibited the highest proportion of Threatened species within its collection (29% of the total observed species), whilst Bydgoszcz Zoo had the least (1% of the total observed species).

Of the 128 Threatened species identified from a total of 935 species observed within the eight zoos, 49 species (7%) are listed on the IUCN European Red List (of mammals, reptiles, fish, amphibians and invertebrates). 26 birds are listed as *Rare, Declining* or *Vulnerable*, and one species is *Critically Endangered*, according to BirdLife International's status assessment of birds in the European Union (BirdLife International, 2004). Collectively this represents just 10% of the total number of bird species observed. Similar concerns must be raised about the efforts by Polish zoos to conserve national protected species (National Red List website). Across the eight zoos (935 observed species), only 30 species included on Polish Red List were observed. Overall, the **Polish zoos included in this assessment are only making a low level contribution to the conservation of threatened European and national species. This appears to be inconsistent with the clear objectives of Articles 46, 47 and 69 of NPA.**

Captive breeding, usually through a cooperative Species Management Programme, is a recognised component of *ex situ* conservation, together with participation in scientific research and information exchange that directly benefit the conservation of the species. These are all *options* for EU Member States, as stipulated by Article 3(1) of the Directive, but under Article 69 of NPA these are all *obligations*. Polish zoo law not only places an emphasis on threatened species but also requires zoos to play an active role in captive breeding programmes. Again, overall findings raise doubts about the commitment of Polish zoos to 'rare' and threatened species and, therefore, it is questionable whether zoos are complying with the requirements of NPA. It is evident that EAZA Member zoos are participating in more Species Management Programme than non-affiliated zoos, however, compared to the total number of species exhibited by the zoos and the proportion of Threatened species, this commitment is less than might have been expected. In addition, it must be noted that whilst zoos might keep numerous species that are *registered* with European Endangered Species Breeding Programmes (EEPs) or European Stud Books (ESBs), which in this case accounted for 12% of the total number of species kept at the eight zoos, it does not necessarily mean that individuals of all those species are *participating* in the Species Management Programme. For example, of the 128 Threatened species in eight zoos, 65 (51%) are listed on the register of European Endangered Species Breeding Programmes (EEP) or European Stud Books (ESBs) but, just 49 (38%) were identified as participating in the European Species Management Programmes. Furthermore, no information is provided by the zoos, or the EAZA Yearbook concerning the progress or success of the Species Management Programmes. Two of the selected zoos did not appear to be involved in any captive breeding. Four of the selected zoos released individual animals from four species (out of 935 held) into the natural environment. This represents a low level commitment to keeping, breeding and reintroducing threatened species.

Despite not receiving completed Standard Zoo Questionnaires from any of the eight selected zoos, it was possible to identify (through websites and zoo literature) that five of the eight selected zoos appeared to undertake scientific research. Some of that research appeared to focus on zoo-related activities, such as the research into 'semi' hibernating

captive brown bears in Braniewo Zoo, but some zoos did appear to be participating in research that went on to benefit species conservation overseas (Warszawa, Wroclaw and Plock) and indigenous wildlife (Wild Bird Rehabilitation Centre, Warszawa Zoo). These findings appear to demonstrate that while some zoos are modestly contributing to *in situ* conservation, the conclusions by Rees (2005) that most current zoo research is concerned with [captive animal] behaviour, environmental enrichment, nutrition and reproduction, (which are largely irrelevant to conservation) hold true.

Although findings have identified some commitment to species conservation programmes by individual zoos, overall, zoos in Poland are making an insignificant contribution to the conservation of national, European and global biodiversity, particularly for those species classified as Threatened. Furthermore, the provision of conservation information is also lacking, particularly on public displays and on species information signage. **Findings suggest that such activities may be being left to the discretion of the zoo management rather than being actively enforced requirements by the Competent Authorities.**

Recognising that the EU Zoo Inquiry 2011 relied upon published information about species conservation programmes at the zoos, which may not have been completely representative, it is recommended that further investigation is undertaken by the Regional Directorate of Environmental Protection and the Zoos Council to assess the activities and commitment of each individual zoo to species conservation and their compliance with NPA. With no guidance available as to the level of commitment required, the General Directorate of Environmental Protection should consider establishing specific 'conservation' targets for zoos through NPA and RZ12/2004, together with a process of evaluation to assess the outcomes of such activities.

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, particularly by providing information about the species exhibited and their natural habitats (Article 3(2) of the Directive). However, the NPA is not so specific; in fact it includes a rather ambiguous requirement. In Poland, zoos are required to educate the public about the importance of conserving biodiversity, but with no further explanation or guidance available. Interpretation has been left to the zoo inspectorate and the zoos themselves.

Encouragingly, findings confirm that five of the assessed zoos undertake educational activities but clearly some zoos participated in more activities than others. For example, Plock Zoo claims to be a Member of the International Union of Zoo Educators (IZA) (Plock Zoo website), although no evidence could be sourced to verify their Membership to the IZA, or the IZEA, and three zoos did not appear to have any educational activities at all. In those zoos offering such activities, the majority of the seminars and tours incurred an additional cost on top of the zoo entrance fee. In some of the assessed zoos the public were encouraged to have 'encounters' with wild animals, or to watch animal shows, but as none of these activities were observed during the time of the assessment, it is not known what these entail, how much public / animal contact is involved and what measures are taken to ensure appropriate animal and public protection. This requires further investigation.

Unlike the Directive (Article 3(2)), NPA does not include the mandatory requirement that zoos should provide species information for all the *species holdings* exhibited as part of their obligation to educate the public. However, in this investigation, which has evaluated the application of the Directive in EU Member States, the number of absent species information signs was recorded while those present were assessed for educational content, based on those requirements of the SMZP. Findings revealed that **over a quarter of signage for *species holdings* was absent and, of the signage present, 5% contained an incorrect scientific name.** In the eight assessed zoos, the majority of randomly-selected signage did not include all the SMZP required information about the species exhibited. Of the signage evaluated, 65% did not include reference to the species' conservation status and 20% did not include reference to the species' natural habitat.

Amongst the assessed zoos, there was huge variation in the quality of educational material produced and promoted. Again, EAZA Member zoos appeared to undertake more educational activities than the non-affiliated zoos. However, recognising that the EU Zoo Inquiry 2011 relied upon published information about educational activities undertaken at the zoos, which may not have been completely representative, further investigation should be undertaken by the Regional Directorate of Environmental Protection and the Zoos Council to assess the quality of these activities. To date, few Competent Authorities undertake an independent quality assurance assessment of educational activities in zoos to determine whether they can effectively deliver quality education and justify their role as educators about the conservation of biodiversity.

Additional guidance is much-needed to encourage best practice, which should, at a basic level, stipulate that all *species holdings* are properly labelled.

7. Unsuitable living conditions for animals

The assessment of zoo enclosures in Poland identified a wide range of conditions in the eight assessed zoos. Those zoos affiliated with EAZA generally provided their animals with more appropriate housing conditions (with the exception of Chorzow Zoo), as compared to the non-affiliated zoos included in this investigation which largely kept their animals in poor to appalling conditions. Overall, the *environmental quality* of the assessed enclosures frequently failed to provide the species with a suitable environment. Natural behaviour was often compromised or prevented and a significant number of animals were exposed to potential dangers and stress. Of particular concern:

- Many far-ranging species and birds were kept in small enclosures that did not attempt to meet their spatial needs;
- Species requiring adequate features to climb, bathe, dive, fly, or a suitable substrate to dig or burrow in were often housed in conditions where such natural behaviours were compromised or prevented;
- In five zoos in particular, poor levels of hygiene were observed which, in some cases, had encouraged the prevalence of pests and, in others, the potential build-up of harmful pathogens;
- The majority of enclosures were devoid of furniture, apparatus and materials to allow the species to exercise, express normal behaviour and seek privacy;
- In some of the zoos, little consideration had been given to the essential biological and behavioural needs of the animals;
- In all the zoos there were situations or instances that placed the animals at risk from public contact, supervised and unsupervised, and potentially heightened levels of distress.

Similar conclusions were published in a recent investigation into the keeping of bear species in Polish Zoos (Maślak & Sergiel, 2009). The study identified that, largely due to a lack of resources, particularly in the smaller zoos, carnivores were usually kept in small, inadequate enclosures lacking in species-specific enrichment, suitable substrate and appropriate features and that largely failed to comply with the minimal standards of RZ12/2004. Many animals were observed displaying abnormal behaviours (Dr. Sergiel, pers. comm., 6th October 2011). The study concluded that conditions for bear species in Polish zoos need to be drastically improved.

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.

The Polish Animal Protection Act, APA, is based upon the key principals of animal welfare, which not only require all facilities and activities in zoos to safeguard the welfare and protection of the animals, but assert that no animal should be kept in a zoo if its welfare cannot be guaranteed (Article 72, NPA). In addition, the Annex to RZ12/2004 provides species-specific minimum standards which aim to ensure animals kept in zoos are assured housing conditions that meet their physical, psychological and social needs. Therefore, were these laws applied effectively, and by authorities

and veterinarians with sufficient knowledge of fundamental and applied animal welfare, then it would be reasonable to assume that these basic requirements in animal care and management would be guaranteed. However, evidence from the EU Zoo Inquiry 2011 has revealed a low standard of animal care and many cases where an animal's welfare is compromised. This seems often to be intrinsically linked with the poor environmental quality of the enclosures and, furthermore, whether the zoo is affiliated to a zoo membership association.

This investigation included the assessment of four EAZA zoos (Chorzow Zoo, Wroclaw Zoo, Warszawa Zoo and Plock Zoo). All Members of EAZA (n=264 in the EU) are expected to comply with the EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria (2008), which impose higher standards of animal care and management, often over and above national legal requirements. If these zoos are checked by EAZA to ensure compliance with membership criteria then the animals' needs should be adequately provided for, however, as indicated by this investigation, even EAZA zoos are failing to provide their animals with suitable living conditions and, in the case of Chorzow Zoo, appear to place many of their animals at potential risk. At Chorzow Zoo, housing conditions for the animals and safeguards to protect the health and safety of the public were particularly poor - the legal requirements of APA, RZ12/2004 and RS12/2003, had neither been recognised nor implemented. The other EAZA zoos included in this assessment faired better, but there were still enclosures and situations where the animals' welfare was compromised.

Of the 205 randomly-selected enclosures assessed as part of this investigation, many were of insufficient size and lacked the environmental complexity required by the different species to allow for exercise and rest, to escape potential conflict with cage companions and to express natural behaviour. Of the randomly-selected enclosures, **59% failed to meet all the requirements in the Annex to RZ12/2004, which should be regarded as the required minimum standard. The lack of opportunities for species to express natural behaviours** was further emphasised through analysis using the Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008 (APOS), which identified that 79% of the enclosures failed to adequately provide the species concerned with their spatial, biological and behavioural needs and appropriate species-specific environmental enrichment.

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). Without such stimulation, animals are likely to develop abnormal repetitive behaviours, recognised as indicators of poor animal welfare (Mason & 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).

The RZ12/2004, which was implemented in January 2005, replaced a previous Regulation (2003) based on the former Nature Conservation Act of 16 October 1991 (Journal of Laws of 2001 No. 99, item 1079). The 2003 Regulation provides similar guidance to RZ12/2004, based on the revised Nature Conservation Act of 16 April 2004, but with some notable differences, particularly in relation to the scope of requirements applicable to zoos. The 2003 Regulation had a greater focus on standards of hygiene, food quality and the environmental quality of the captive environment, with the minimum standards dictating larger spatial requirements than those required by RZ12/2004. For example, two European brown bears were required to be housed in a minimum area of 400 m^2, on natural substrate and with opportunities to bathe in the 2003 Regulation; in the revised, RZ12/2004, a pair of the same species is required to be housed in a minimum area of 100 m^2 and there is no reference to specific environmental enrichment. Similarly, for a pair of wolves or African hunting dogs, the Regulation in 2003 required an area of 1,000 m^2, but in the RZ12/2004, the same pair would only require a minimum of 200 m^2. There is a significant difference between the original and revised minimum space requirements. Dr. Agnieszka Sergiel, a scientist who has been studying the keeping of bear species in Polish Zoos (Maślak & Sergiel, 2009) explains, '*the 2003 Regulation was amended in 2004, in consultation with the zoos, resulting in species-specific minimal space requirements being dramatically reduced. These are now not suitable at all and do not meet the biological needs of the animals. It is thought that many zoos were unable or perhaps unwilling to adjust to the previous standards*' (Dr. Sergiel, pers. comm., 6th October 2011).

When the Polish Competent Authority was asked to explain the reasons behind these alterations to species-specific standards, they justified the change as being consistent with the accession of Poland to the EU (General Directorate for Environmental Protection, pers. comm., 9th September 2011). The authors of this report cannot find any evidence to support this argument and do not believe that this response validates the decision to reduce the space allotted to animal species. The authors recommend that an independent review is undertaken to ensure that the minimum standards in the Annex to RZ12/2004 are in keeping with international scientific evidence and animal husbandry standards. **Ironically, even with this amendment of the minimum standards, over half of the randomly-selected enclosures across the eight zoos do not meet the lower required standards of RZ12/2004.**.

It is apparent that despite the implementation of minimum standards in the husbandry and keeping of animals in zoos, **more guidance and training is required, both of the Competent Authorities and zoo operators, to ensure that the specific needs of species are better understood and to highlight the importance of effective environmental enrichment** to the physical and mental health of a captive animal. During the investigation, large numbers of individual animals were observed displaying repetitive, abnormal behaviour, commonly known as stereotypic behaviour, which often arises as a consequence of an impoverished environment. Environmental enrichment was lacking in the majority of assessed enclosures, including a lack of suitable substrate, furniture and shelter to provide an animal with its basic requirements and to encourage natural behaviour. For example, many of the enclosures containing bear species had concrete floors and the enclosures for birds at Plock Zoo were devoid of enrichment despite hand-painted murals of trees on the walls which provide no enrichment for the animals enclosed.

Figure 16
Wroclaw Zoo.
A large zoological collection. Enclosures for many species lacked environmental complexity and the opportunity for the animals to express natural behaviour. This enclosure, exhibiting Asiatic black bears (*Ursus thibetanus*), lacks sufficient space, opportunities to dig, forage and bathe, privacy from view or to escape cage companions. No environmental enrichment was observed.

Figure 17
Leszno Zoo.
An example of a small zoological collection. Both European brown bears (*Ursus arctos*) exhibited at this zoo were exhibited in cramped and barren housing conditions that could not provide the opportunity for the animals to express natural behaviours: both individuals displayed probably stereotypic behaviour. In 2011, both these bears were relocated to a bear sanctuary in Germany.

Despite wide variations in the quality of enclosures provided both within and between the zoos assessed, in many instances animals were housed in conditions that compromised their welfare and therefore the requirements of APA and Article 70 of the NPA. If the conditions provided are unable to offer the species concerned with their species-specific need then the zoo should not be permitted to keep the species, (as per Article 72 of NPA). The fact that such cases were identified raises fundamental concerns about the quality and regularity of zoo inspections.

According to the Competent Authority all zoos have a qualified vet on their premises and all zoos are required to ensure effective veterinary care and screening for zoonoses (RZ12/2004 and RS12/2003). During the zoo assessments, however, animals were often housed in unhygienic conditions and some animals showed obvious signs of illness or debilitating conditions. These findings again raise concerns over the regularity and the quality of zoo inspections.

The basic principles set out in APA, RZ12/2004 (Article 70 of NPA) and RS12/2003, concerning the provision of an animal's basic welfare needs, are generally not being met. Without the effective enforcement of the law in Polish zoos, any attempt to keep animals in a suitable environment is severely compromised. The findings of this investigation have identified that the health and welfare of many animals within the eight zoos visited may well be compromised. More must be done by the national and regional Competent Authorities to ensure effective enforcement of the NPA, to adopt the recommendations contained in this report, to make the necessary improvements in line with international best practice, and implement relevant penalties (Article 68 and Chapter 11 of the NPA), including zoo closure where necessary. **A code of best practice, specific to zoos, including species-specific guidance that is in keeping with international standards and examples of environmental enrichment, would provide support for and ensure effective implementation of the provisions contained within the Annex to RZ12/2004.**

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

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