

The Zoological Park, a new ally for Biodiversity



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The Zoological Park, a new ally for Biodiversity

Guide for the application of law 31/2003*
on the conservation of wild fauna in
zoological parks (2nd edition)

* Spanish transposition of the Council Directive 1999/22/EC.

Cristina Narbona Ruíz

*Minister of Environment, Spain
(2004-2008)*

Knowledge of the natural environment has become increasingly accessible to urban populations due to the abundance of information now available in magazines, articles, scientific books and films, and also due to expanded opportunities for travel experiences in exotic destinations. Rising social interest in our natural environment and animal welfare has opened a broad-ranging debate on the function of zoological parks, which includes opinions that question the benefits of their activity, and even their very existence.

The earliest zoological parks, established for strictly recreational purposes, assigned insufficient attention to the enormous value embodied in the wild fauna housed in their facilities; valuable not only from an environmental perspective, but also as a highly effective means of educating an emotionally engaged public. Today's zoological parks, which receive over 600 million visitors annually, have tremendous potential as vehicles of communication with the visiting public, capable of heightening its awareness of the need to protect wild species and their habitats. Furthermore, many zoological parks around the world are currently involved in *ex situ* conservation programs that contribute to the conservation and recovery of wild populations. The importance of these actions is reflected in the 1992 United Nations Convention on Biological Diversity, the 1993 World Zoo Conservation Strategy, and, more recently, in European level regulation of the sector through Directive 1999/22/EC relating to the keeping of wild animals in zoos.

I concur with Achim Steiner, former Director General of the IUCN, who stated that the latest World Zoo and Aquarium Conservation Strategy "...brings *ex situ* institutions into the mainstream of biodiversity conservation and sustainable development: not only can zoological parks contribute to an understanding of biodiversity and its interactions, they are in the unique position of providing conservation in a genuinely integrated way."

Foreword

To achieve this goal, the conservation actions of zoological parks must be involved in international, regional, national and local biodiversity action plans and species recovery programs, to ensure that their activities are not isolated. Zoological parks can and should perform serious conservation work, through their involvement and collaboration with environmental organizations, national and regional authorities, scientific institutions, universities, professional associations, and NGOs.

Stimulated by rising social sensitivity and the desire to promote the welfare of their animals, zoological parks in Spain had already commenced work to reinforce their educational, research, and conservation activities through their national associations and strategies. *Law 31/2003 of 27 October on the conservation of wild fauna in zoological parks*, which incorporated the European Directive into national law, is the first national legislation that situates the activities of zoological parks in the realm of the protection of wild fauna and the conservation of biodiversity.

The Ministry of Environment understands that for collaboration toward compliance with the law, a knowledge of the law must first be ensured, and that all parties involved must be encouraged to participate and contribute toward its application. Since *Law 31/2003* provides a definition of the conditions for adaptation by zoological parks to their role in conservation, it is desirable that the actions undertaken by public and private sectors converge and are coherent with the objectives pursued by *Directive 1999/22/EC* throughout the European Community.

I trust that this document will facilitate an adequate understanding of the legislative and technical aspects of *Law 31/2003*, and will prove useful to everyone interested in the new function to be assumed by zoological parks in this great undertaking of the conservation of biodiversity, in which we should all participate.

December 2006

Elena Espinosa Mangana

*Minister of Environment, and
Rural and Marine Affairs, Spain
(2008-2010)*

Three years after the initial publication of *A guide for application of Law 31/2003 on the conservation of wild fauna in zoological parks*, in which the first edition of four thousand copies was fully distributed, the Ministry of Environment and Rural and Marine Affairs sees enormous interest in providing for the continued availability of this enlightening, informative and educational document, the only one of its kind written in Spanish, on the legal and technical aspects of the Spanish law regulating the role of zoological parks in the conservation of biodiversity.

The guide has become a document of reference, not only for public administrations and the private sector, but also for students, educators, associations with similar objectives, and for the visiting public. Its purpose is to explain the objectives and measures that should be undertaken by zoological parks, whose tasks include the conservation of species through conservation programs and actions for public education and awareness, while also guaranteeing the welfare of the animals comprising their collections.

This document remains in high demand. On the one hand, many zoological parks continue their process of adaptation to *Law 31/2003*. At the same time, new zoological parks are being established, and must submit to inspection procedures prior to receiving a license, as well as to the annual reviews performed by the competent bodies of the public administrations charged with ascertaining that previously licensed zoological parks continue to meet requirements. On the other hand, the specialized training actions directed at public managers and zoological park personnel are clearly insufficient. The guide is a great aid to these conservation managers, particularly given the inevitable turnover of public employees and the rising numbers of professionals working in the zoological sector.

Now in 2010, which has been designated the International Year of Biodiversity by the UN General Assembly, the European Union should establish new goals to halt the loss of biodiversity. In its first semester Presidency of the European Union, Spain firmly promoted the EU biodiversity policy through adoption of the

community goal and post-2010 vision, and led the coordination and representation of the EU in international biodiversity negotiations on the ministerial level, (the Global Environmental Forum in Bali, Indonesia, in February), for the Conferences of the Parties to conventions (the Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES, in Doha, Qatar, in March), during the preparatory sessions for the Tenth meeting of the Conference of the Parties to the Convention on Biological Diversity (Nagoya, Japan, in October), and for related political, technical and scientific forums.

Spain ranks among the European nations with the greatest biodiversity, but also with the highest number of threatened and endangered species. The Ministry of Environment and Rural and Marine Affairs is taking decisive steps to meet our international commitments for their conservation, and to apply the new *Law 42/2007 on Natural Heritage and Biodiversity*, which calls for zoological parks to participate in captive breeding and endangered species repopulation programs, such as *ex situ* conservation actions complementing *in situ* efforts, aimed at building gene banks and/or obtaining specimens apt for reintroduction into the natural environment.

The objective of the International Year of Biodiversity is to raise public awareness of the need to protect life on Earth, precisely to ensure that, of the current biological diversity of natural ecosystems, future generations are not left with merely a pale reflection in zoological parks.

In this framework, with this second edition of the Guide for Application of *Law 31/2003*, I reaffirm the support of the Ministry of Environment and Rural and Marine Affairs for the role of zoological parks in the conservation of biodiversity (as further reflected in the framework convention for collaboration, between this Ministry and AIZA, the Iberian Association of Zoos and Aquariums), along with our hope that this document serves to facilitate the essential collaboration of public and private agents, and a call for the necessary participation of all in the preservation of our biodiversity.

May 2010

Foreword

to the 2nd Edition

Ana Leiva Díez

Director,
Biodiversity Foundation, Spain
(2008-2011)

The conservation of natural heritage and biodiversity is a strategic line of action for Biodiversity Foundation, in which it collaborates with a broad network of entities and institutions spanning the public sector, civil society, and the business community. Among these is the zoological sector, that houses a representative sampling of species of wild fauna, and, like protected spaces, receives a great number of visitors.

At the Biodiversity Foundation, education, awareness, and communication are essential tools for promoting knowledge of biodiversity, and involving society in its preservation and protection.

Further, sustainable development in the rural environment is currently a matter receiving special attention from the Biodiversity Foundation. In this regard, the conservation activities of zoological parks can promote and incentivize the compatible use of these spaces by assigning their resources to the conservation of native fauna, and by contributing to the preservation and recovery of the natural habitats of the species that they protect. A tremendous impact can also be made by the greater knowledge of the rural environment gained through the educational message that can be transmitted by zoological parks on the natural values of wild fauna and flora. Their educational actions on the benefits that species preservation has for the life of mankind, expressed in terms of social, economic and environmental yields, can also help conserve the natural values in rural areas.

In 2007, the Biodiversity Foundation and the General Directorate on the Natural Environment and Forestry Policy of the Ministry of Environment and Rural and Marine Affairs, collaborated in the first edition of this *Guide for the application of law 31/2003 on the conservation of wild fauna in zoological parks*. Three years later, the goal, of providing public authorities and private bodies with a tool that would contribute to the proper implementation of the Law, and to the furtherance of the role of zoological parks in the conservation of wild fauna, is apparently being achieved. The competent public administrations, professionals and administrators of zoological parks have acknowledged the usefulness of the Guide in the performance of their respective duties toward the application of this legislation. Given that the process of adaption in zoological parks continues, and the

Introduction

ranks of the professionals involved grow and change, the Guide revalidates its own currency. Even so, it requires updating for inclusion of the applicable national and autonomous community legislation that has been passed since the first edition, and of the new strategies of the zoological sector in national, European and international spheres. It is also an opportunity to correct a few printing errors, reflect the latest advances, and incorporate relevant information that has appeared in recent years.

The six chapter structure of the first edition of the Guide was maintained, with each chapter responding to a question. Chapter One, “WHY a law on conservation in zoological parks?”, describes the application of *Law 31/2003* within the framework of biodiversity, and provides background information on previous legislation. Chapter Two, “WHAT constitutes a zoological park?”, provides a detailed legal definition of zoological parks, and Chapter Three, “HOW should they conduct their activity?”, analyses the conservation measures required of zoological parks under the Law. Chapter Four, “WHO is involved?”, explains the roles of the various public and private bodies that may be involved, including citizen collaboration, and Chapter Five, “WHEN is the deadline for compliance?”, summarizes the past and current situations of the adaptation processes of zoological parks to the Law. The last section, “WHERE to find more information?”, provides a list of reference documents and internet resources for further information on the subjects addressed, and relevant administrative information.

Our acknowledgement and gratitude to the Iberian Association of Zoos and Aquariums and ANDA/Eurogroup for Animals for allowing us, once again, to count on their valuable participation. We thank both for the contribution of their updated texts, and encourage them to continue to collaborate in the protection and welfare of wild fauna, as well as in programs for the education and awareness of the 12 million visitors to zoological parks.

Year 2010, the International Year of Biodiversity, is undoubtedly an excellent occasion for a renewed impulse of high quality conservation activities in zoological parks.

May 2010

Sonia Castañeda Rial

*Director,
Biodiversity Foundation, Spain*

In 2012, two years after its second edition, the Ministry of Agriculture, Food and Environment's Biodiversity Foundation decides to undertake the publication of the Guide on the Application of the Spanish Legislation on Conservation at Zoological Parks in its English language version.

While in Spain the Autonomous Communities continue working to adapt the zoological parks in their territories to the requirements of the EU Directive (1999/22/CE), the member countries of the European Union still acknowledge its application as complex and demanding. The technical aspects to be tackled during an inspection and the difficulties derived from the definitive closure of centre, which do not comply with the legal requirements and cannot find an acceptable solution, are highly diverse.

This guide is a document unique in its field, as declared by those who know it and use it in their professional capacities, both in the public and in the private sectors. It has also been received with great enthusiasm by environmental and animal welfare non-for-profit organisations and associations. The objective of the guide to inform, develop and detail everything private managers and public agents need in order to properly apply the Law, does not hinder its generalist vocation as an educational manual valid also for students and those interested in the subject.

“The Zoological Park: a new ally for Biodiversity” delivers directly and succinctly what must be understood as the requirements of the EU Zoos Directive established in 1999. In the simplest possible language and with the most useful information it explains how zoological parks should conduct their activities. It is a handbook incorporating guidelines, studies, research and recommendations of European and international scope, gathering the doctrine and current approaches to resolving any imprecision or indeterminacy of the regulations to be complied with.

The translation of this text into English fulfils the demand of certain sectors, which consider it valuable not just within Europe but also for countries where the function of zoos has not even been specifically legislated. Despite the specific references to the Spanish Law as the transposition of the European Directive, the content of this book is, for the most part, useful for any professional or student as well as for a general audience with an interest in animal welfare and environmental protection.

The Biodiversity Foundation would like to continue its task in supporting and promoting the effort being made by the Public Administration and Zoological Parks to convert themselves into true “Allies for Biodiversity”.

October 2012

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to the English version

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Why

a law on conservation
in zoological parks



Cooperation for survival

In an increasingly globalized world, interdependence is the predominating characteristic, and cooperation an emerging necessity. In the 21st century, the need for global efforts and mechanisms to manage the global public resources --our air, water and biodiversity-- is more pressing than ever. The use being made of these gifts of nature is leading to their deterioration, scarcity and, in some cases, extinction. One example is the Aral Sea, which in the 1960's was the world's fourth largest lake. 80% of its original volume has since been lost to water transfers for crop irrigation, and its remaining waters are highly contaminated from industrial projects, arms testing and dumping... events similar to those affecting Spain's Tablas de Daimiel.

While we remain tremendously ignorant of the full complexity of the life on Earth, we do know that the deterioration of natural systems now being experienced translates into the breakdown of biological cycles that are essential for life and sustainable development; it means the loss of health and security of food supply, economic and supply crises; social upheaval due to resource scarcity, poverty, migration and natural disasters, that affect us all in one way or another. Humanity now faces the challenge of overcoming short-sighted visions, and of reaching local, regional and global agreements that guarantee the sustainable management of the world's limited resources.

One of the global resources of greatest current concern is the Earth's atmosphere, which is endangered due to the greenhouse effect caused by human activity. Here, the United Nations led the effort for international cooperation that culminated in approval of the UN Framework Convention on Climate Change, that combats the impacts of climate change, which are most devastating to the poorest and least responsible for its cause.

In the area of agricultural diversity, the FAO International Treaty on Plant Genetic Resources for Food and Agriculture is based on the premise that international cooperation and the free exchange of such resources are essential to guarantee food security, since no country is self-sufficient, and all countries depend on the genetic diversity of crops originating elsewhere.

Regarding natural and cultural heritage, the UNESCO World Heritage Convention protects sites of outstanding universal value through their designation as World Heritage Sites. Regardless of their location, the sites are the universal

heritage of all citizens worldwide. Among the designated World Heritage Sites are the Alhambra, the Cathedral of Burgos, Iguazú Falls, the Great Coral Reef of Australia, the Pyramids of Egypt and Doñana National Park.

Within the scope of biodiversity, *The United Nations Convention on Biological Diversity* represents efforts by the global community to establish common policies and standards providing for the conservation and sustainable use of, and the fair and equitable access to, biological diversity. Article 9 of the Convention states that each Party to the Convention shall adopt a series of *ex situ* conservation measures to complement and complete *in situ* measures. These may be performed through zoological parks, botanic gardens, or gene and tissue banks. Examples of the measures include aspects such as the integration of environmental considerations in sectorial policies, the establishment of protected areas, and the recovery of damaged ecosystems. In the course of its nearly twenty years of existence, the *Convention on Biological Diversity* has created a global forum for encounters among government representatives, non-governmental organizations, scientific institutions, the private sector, and individual citizens, who share ideas and establish common strategies.

In this globalized and interdependent world, where human activity is driving species to extinction on a daily basis, and the conservation of nature is a question of survival and also of solidarity, zoological parks can be a key ally, provided that they properly fulfil their role as tools to educate the public--particularly the urban public, which is increasingly distanced from wildlife--. For this, zoological parks must expand their vision beyond the exhibition of live animal collections to one that embraces cooperative, future looking programs that educate the public. By doing so, zoological parks can open new avenues to nature, that provide us with insight as to our place on the planet, without the need to change cities. As breeding grounds of biodiversity, like Noah's Ark, zoological parks can contribute to the survival of endangered species, and serve as living classrooms that put us in closer contact with Mother Earth, so that we come to understand not only the debt of gratitude owed, but also the amount of work yet to be done.

Maite Martín-Crespo Muro.

Head of Environment and Climate Change Spanish Agency for International Cooperation and Development Ministry of Foreign Affairs and Cooperation

The conservation of biodiversity, everyone's concern

The need to protect the environment in which we live, and the importance of conserving the biodiversity upon which we depend are concerns affecting every member of society. In Spain's 1978 Constitution, Title I, on fundamental rights and duties, establishes the right to enjoy an environment suitable for quality of life personal development.

Article 1. Aim.

"The purpose of this law is to guarantee the protection of wild fauna in zoological parks, and the contribution of these latter to the conservation of biodiversity."

Article 45 of the Spanish Constitution:

- "1. Everyone has the right to enjoy an environment suitable for quality of life personal development, as well as the duty to preserve it.
2. The public authorities shall safeguard the rational use of all natural resources with a view to protecting and improving the quality of life and preserving and restoring the environment, by relying on essential collective solidarity.
3. Criminal or, where applicable, administrative sanctions, as well as the obligation to make good the damage, shall be imposed, under the terms established by the law, against those who violate the provisions contained in the previous clause".

In 1980, the European Union Strategy on Biodiversity noted that concerted international action was required to combat the global dimensions of reduction or loss of biodiversity due to the transborder interdependence of different species and ecosystems. Two years later, in the World Charter for Nature, the UN General Assembly expressed its conviction that "the benefits which could be obtained from nature depended on the maintenance of natural processes and on the diversity of life forms and that those benefits were jeopardized by the excessive exploitation and the destruction of natural habitats", stating that it was "firmly convinced of the need for appropriate measures, at the national and international, individual and collective, and private and public levels, to protect nature and promote international co-operation". Among the principles set forth: "the genetic viability on the earth shall not be compromised; the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end necessary habitats shall be safeguarded".

Under Title V of the Treaty of Lisbon, one of the aims included among external actions taken by the European Union is to develop international measures to preserve and improve the quality of the environment and the sustainable management of global natural resources, in order to ensure sustainable development. (Article 21.2f, Consolidated Text of the Treaty of the European Union).

The conviction that we are facing a problem of global dimensions has led to the development of international policies and agreements such as the Global Conservation Strategy, the Convention on Biological Diversity and the Convention on Climate Change. Environmental protection is also a priority issue in Europe, as manifested in the Community programs and action plans whose strategies, guidelines and objectives prioritize the conservation of biological diversity.

In 2006, the Executive Secretary of the Convention on Biological Diversity, Ahmed Djoghah, called for the involvement of the world population to help achieve the 2010 Biodiversity Target through a global alliance to reduce the rate of biodiversity loss. To underscore the importance of this target, the United Nations declared 2010 the **International Year of Biodiversity**. At the opening ceremony,

Djoghah emphasized that “governments, industrial leaders, non-governmental organizations and citizens are increasingly speaking as one in demanding urgent action on the environment and biodiversity, issues that affect both our economies and our survival”, since “(...) we now understand that biodiversity and ecosystems are foundational pillars of development that, by providing the goods and services needed to overcome poverty, advance efforts toward a stable and peaceful world .”

In October 2010, representatives from 192 nations will meet at the historic 10th Conference of the Parties to the Convention on Biological Diversity to evaluate the efforts to date toward the achievement of Target 2010 and establish a broad common strategy, with the participation of the global community, to stop the loss of biodiversity in the future.

Biodiversity in zoological parks?

Zoological parks provide children and adults with the opportunity to observe and learn about live animals of wild species, a source of fascination that has always transcended age, culture and profession. The fact that zoological parks are recreational settings multiplies their potential to inform the public through attractive scenarios and markedly educational activities. Due to their special ability to convey the value of the different species and habitats to the public, zoological parks have an equally special responsibility to educate and raise public awareness of the importance of learning about, and caring for, our environment.

In addition to this, most zoological parks already have a combination of factors in place that can be extremely valuable for conservation actions: staff experienced in the handling and care of different species, and the necessary infrastructure and resources. Research and studies conducted on wild species housed in zoological parks should also focus on contributions to the conservation of biodiversity and protection of the environment in general.

As society has gained sensitivity to animal welfare and a better understanding of the value of the conservation of certain species, so has the justification declined for the keeping of wild animals in zoological parks for their commercial use through public exhibition. Zoos are increasingly called upon to assume greater responsibility for the care of the animals they house and to justify

ZOOLOGICAL PARKS	BEFORE Law 31/2003	AFTER Law 31/2003
Type of establishment	Recreational establishment Public entertainment	Conservation institutions Training and education centres
Purpose of the use of animals	Commercial Recreational	Protection and care of wildlife Study and research on wildlife Education of the public about biodiversity
Conditions of animal enclosures	Health and hygiene measures Public safety measures	Animal health measures Animal welfare measures Environmental enrichment measures Public and environmental safety measures
Activity objectives and benefits provided	Public recreation and entertainment Business profit	Social appreciation and prestige Public awareness Scientific research on wildlife conservation Conservation of biodiversity

Figure 1. Under Law 31/2003 zoological parks are called to refocus their activities toward a new goal: conserving biodiversity.

“The zoos and aquaria of the 21st century have the enormous responsibilities of the animals in their care and of helping to conserve biodiversity. As with all institutions dedicated to nature, their greatest responsibility is to inspire people to have a deeper respect and understanding of nature, thus transforming them into conservation enthusiasts. An informed public is more likely to feel enthusiastic and compassionate about conservation, more willing to change its lifestyle as regards day to day decisions affecting the environment, and more likely to vote for politicians seeking to implement progressive conservation policies”.

EX SITU CONSERVATION AND ZOOLOGICAL PARKS

The **Convention on Biological Diversity** defines “*ex situ* conservation” as the conservation of components of biological diversity outside their natural habitats. *Ex situ* collections include plant or animal collections, zoos, botanical gardens, wildlife research facilities, and germplasm collections of wild and domestic *taxa*.

In its 2002 *Technical Guidelines on the Management of Ex-Situ Populations for Conservation*, the **International Union for Conservation of Nature** states that a diverse range of complementary conservation approaches and techniques is required to maintain biological interactions, ecological processes and function, and to guarantee the survival of the increasing number of endangered *taxa*. *Ex situ* conservation should be considered a tool for ensuring the survival of the wild population. In this regard, the IUCN recognizes the considerable resources committed to *ex situ* conservation by zoological parks, botanical gardens, gene banks and other *ex situ* facilities throughout the world.

The **European Community Biodiversity Strategy** notes that in certain cases *in situ* conservation requires additional *ex situ* initiatives in which gene banks, captive breeding programs,

zoological parks and botanical gardens can all play highly valuable roles if their activities are enrolled in the framework of coordinated reintroduction or integrated conservation programs.

The **Spanish Strategy for the Conservation and Sustainable Use of Biological Diversity** states that the reintroduction or use of captive individuals of wild species to aid recovery of that species in the wild should constitute part of the functions of zoological parks. Conservation programs now form a part of the quality certification process for zoological parks throughout the world.

For its part, the Conference of the Parties to the **Convention on International Trade in Endangered Species of Wild Fauna and Flora**, in its resolution 13.9, urges the Party States to encourage all *ex situ* breeding programs involving *CITES* Appendix I species to adopt coordinated measures that support *in situ* conservation programs, such as technical evaluations, the exchange of individual specimens for reintroduction, the fostering of training technology transfer, and other measures.

the motivations for wild animal captivity, beyond the scope of public entertainment.

Law 31/2003 on the conservation of wild fauna in zoological parks, which was drafted and passed in a climate of tremendous social concern for animal welfare and for the environment, imposes new requirements on zoological parks, principally of an environmental nature. According to this Law, **the keeping of wild animals in captivity and their exhibition in zoos is not justified unless the conditions and objectives established within the framework for the conservation of biodiversity are met**. Thus, only zoological parks that are committed to high quality conservation will be authorized to continue their activities.

Under the new law, modern-day zoological parks must become scenarios in which the zoo-going public gains a greater understanding of the value of biological diversity, wild flora and fauna, ecosystems, and the interdependence of all living organisms on Earth, including the human species. As shown in **Figure 1**, *Law 31/2003* calls for a transformation of traditional zoological park activity, toward a new focus revolving around the conservation of biodiversity, pursued through a commitment to the conservation of wild fauna, education of the public, scientific research and animal welfare.

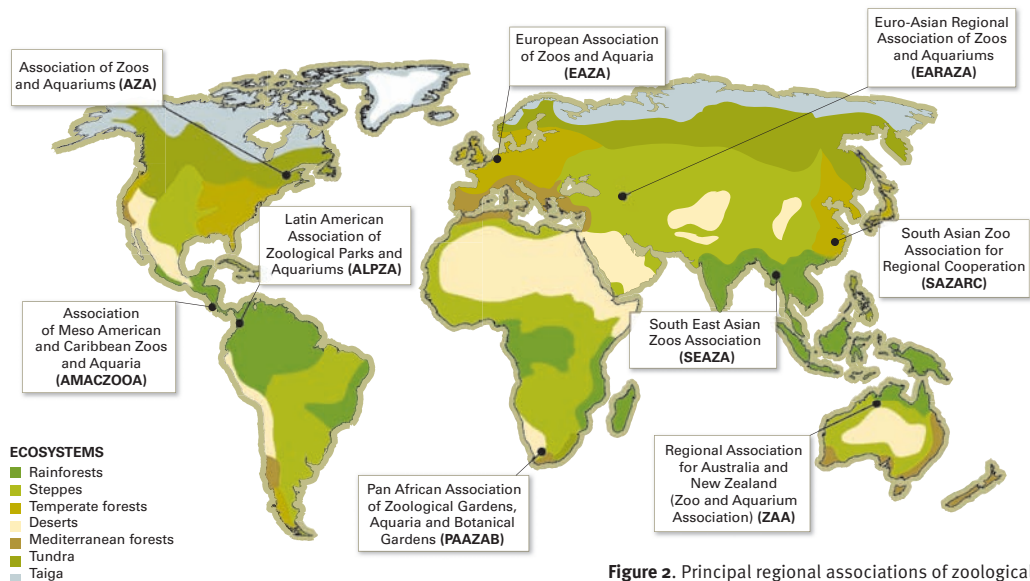


Figure 2. Principal regional associations of zoological parks.

WHAT CONTRIBUTION CAN ZOOLOGICAL PARKS MAKE TO THE CONSERVATION OF BIODIVERSITY?

More than 250 zoos and aquariums are institutional members of The World Association of Zoos and Aquariums, and another 1,100 zoos and aquariums are linked to WAZA through their membership in a regional or national association. The network includes approximately 1,300 institutions located throughout the world, that receive over 600 million visitors each year.

Among the objectives of the World Association of Zoos and Aquariums are to:

- Enable people living far from natural settings to be close to animals and enjoy their beauty, thereby motivating visitors to care about animal welfare and the conservation of biodiversity.
- Educate the public on the biology, behavior, ecology and conservation needs of animals.
- Obtain information and enable scientific research with animals that can be crucial for the survival of wild populations.
- Develop conservation based captive breeding programs in order to maintain zoological reserves under human oversight and eventually breed individuals apt for reintroduction into the wild.

The World Association of Zoos and Aquariums understands that the responsibilities of zoos are defined in relation to

the conservation of the global diversity of nature. In this context, it establishes the conditions that individual zoos and aquariums and their corporate networks should meet in order to realize their full conservation potential.

***Ex situ - in situ* Conservation in Zoos:**

- Many animal species are in danger of extinction and human custodianship is not enough to protect global biodiversity. Ecosystem conservation is the only way to guarantee the survival of nature on Earth. Thus, zoos housing endangered species have a higher calling, beyond the maintenance of reserves of *ex situ* populations, and must increasingly enhance their *ex situ* activities through *in situ* conservation projects.
- The World Association of Zoos and Aquariums maintains 119 International Studbooks in coordination with the Zoological Society of London. Over 850 animal species and subspecies are managed through captive breeding programs in coordination with regional members.
- The members of the World Association of Zoos and Aquariums manage and maintain *in situ* conservation projects around the world to contribute to biodiversity maintenance. The goal is to increase the number of zoos involved in habitat conservation, and for these to become premier institutions in the field of conservation.

Starting point

Since the Wild Animal House opened in Madrid's Retiro Park in 1770, the number of zoological parks open to the public in Spain has risen steadily. When *Law 31/2003* was enacted, Spanish zoological parks formed a dynamic sector of nearly one hundred highly heterogeneous establishments that varied greatly by size, condition of facilities, composition of zoological collections and

degree of involvement in activities for biodiversity conservation. **Figure 3** provides a summary of the sector's overall strengths, weaknesses, opportunities and threats regarding the application of *Law 31/2003*. The section on threats refers to external factors that impede the achievement of the objectives planned, thereby posing setbacks or limitations to sector development. The

WEAKNESSES

- Lack of coordinated, decisive conservation policy on animal acquisition and the planning of zoo collections.
- Low staffing levels and high turnover of subcontracted personnel.
- Insufficient investment in qualification and continuous training of technical and auxiliary staff.
- Tendency to outsource veterinary care to non-specialists.
- General absence of environment enrichment technicians.
- Low involvement in educational and research projects relevant to conservation.
- Insufficient planning of the conservation, education and veterinary care tasks performed.
- Absence of a broad stable network of collaboration with universities, professional associations, and public administrations.
- Low investment capacity in projects benefiting species conservation.
- Tendency to use specimens from zoo collections in shows and other activities that clearly fall outside the confines of the spirit of *Law 31/2003*.
- Existence of unsafe animal enclosures and of poor environmental quality.

THREATS

- Insufficient professionalization within the sector.
- Rising cost of housing, handling, and maintenance of zoo collections, due to more stringent animal health and welfare requirements.
- Little government control or monitoring of zoo collections (includes specimen traffic and reproduction).
- Absence of updated Autonomous Community level registry of existing zoos.
- Economic sector overly linked to tourism, recreation and leisure activities.
- General societal ignorance of the conservation role of modern zoological parks.
- Lack of knowledge and experience of zoo managers and staff on the new requirements under *Law 31/2003*.
- Absence of Autonomous Community level inspection services with proper expertise.

Figure 3. SWOT analysis of the sector conducted in 2004, based on requirements of *Law 31/2003*. (Source: *Estudio de la situación actual de los parques zoológicos en España*. Spanish Ministry of Environment and Cardenal Herrera University. Unpublished report. 2004).

section on weaknesses refers to limitations and deficiencies in skills, knowledge, technology, information and financial resources that ultimately keep the sector from seizing opportunities and defending itself against threats. The list of opportunities refers to social, economic, political, and cultural situations that are beyond the sector's control, but which under the right circumstances could

be used to favorable advantage. Strengths refer to the human resources and materials available to the sector that can enable it to adapt, seize the advantages, and face the potential threats with greater possibilities for success. Although Spanish zoological parks have improved markedly since *Law 31/2003* went in to force, some of the threats and weaknesses cited in **Figure 3** persist.

STRENGTHS

- Technical and auxiliary staff generally motivated by their work.
- Availability of zoological collections useful for conservation.
- Capability of attracting and channeling economic resources to new conservation projects (*in situ* and *ex situ*).
- Potential for collaboration in internships leading to the qualification and specialization of future zoo professionals.
- Great potential to attract a wide range of public due to presence of living animals of wild species.

OPPORTUNITIES

- Greater social concern for the conservation of biodiversity and animal welfare.
- Legislative and regulatory advances in the sector (*Directive 1999/22/ EC, Law 31/2003, Royal Decree 1333/2006*, etc.).
- High social opinion of zoological parks as sites for leisure activity.
- Incorporation of new information technologies for zoo collection management and knowledge sharing.
- Diversification of conservation activity offerings.
- Publicly owned centers working in wild fauna conservation are overwhelmed (recovery centers, rescue centers for confiscated animals, etc.).
- Richer social environment with more economic resources available for investment in conservation activities.
- Existence of a consensus based global strategy for zoo participation in biodiversity conservation.

Directive 1999/22/EC relating to the keeping of wild animals in zoos

Council Directive 1999/22/EC relating to the keeping of wild animals in zoos is a European Union law regulating the activity of zoos within the framework of biodiversity conservation. The European Union's legislative competences on environmental protection are described in articles 191 and 192 of the Treaty on the Functioning of the European Union.

Article 191.1, Treaty on the Functioning of the European Union:

“Union policy on the environment shall contribute to pursuit of the following objectives:

- preserving, protecting and improving the quality of the environment,
- protecting human health,
- prudent and rational utilization of natural resources
- promoting measures at international level to deal with regional or worldwide environmental problems, and in particular combating climate change.”

The legal bases of *Directive 1999/22/EC* are taken from the international agreements and community provisions on the conservation of biodiversity and the protection of wildlife cited below (see **Figure 4**).

The United Nations Convention on Biological Diversity is a major international agreement signed in Rio de Janeiro in June 1992 that pursues “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources (...)”. In application of Article 9 of the Convention, the European Union considers that its zoological parks must contribute to the conservation of biodiversity. In accordance with the community obligation to adopt *ex situ* conservation measures, zoos are considered

highly valuable assets in whose facilities such measures could be properly developed.

Article 9 of the Convention on Biological Diversity:

“*Ex-situ* Conservation:

Each Contracting Party shall, as far as possible and as appropriate, and predominantly for the purpose of complementing *in-situ* measures:

- (a) Adopt measures for the *ex-situ* conservation of components of biological diversity, preferably in the country of origin of such components;
- (b) Establish and maintain facilities for *ex-situ* conservation of and research on plants, animals and micro-organisms, preferably in the country of origin of genetic resources;
- (c) Adopt measures for the recovery and rehabilitation of threatened species and for their reintroduction into their natural habitats under appropriate conditions;
- (d) Regulate and manage collection of biological resources from natural habitats for *ex-situ* conservation purposes so as not to threaten ecosystems and *in-situ* populations of species, except where special temporary *ex-situ* measures are required under subparagraph (c) above; and
- (e) Cooperate in providing financial and other support for *ex-situ* conservation outlined in subparagraphs (a) to (d) above and in the establishment and maintenance of *ex-situ* conservation facilities in developing countries.

Council Regulation (EC) 338/97 on the protection of species of wild fauna and flora by regulating trade, to which the Commission added further regulations, embraces all of the provisions of the *Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES)*. The CITES Convention, which has been signed by 175 Party States, constitutes one of the most important environmental agreements ever reached. Its purpose is to prevent international trade in wild plant and animal species that could pose critical risks for the survival of these. The CITES Convention currently provides varying degrees of protection to some five thousand species of fauna and over twenty-eight thousand species of flora. While many

species subject to trade are not endangered, the application of controls is deemed advisable to guarantee sustainable trade practices.

In this regard, the European Union is one of the three main markets for international trade in wild flora and fauna, and the regulatory legislation on such trade constitutes a priority for species conservation. In exercising its legislative competences, the European Union chose to include further regulations imposing even more stringent conditions on foreign trade than those included in the CITES Convention.

In this sense, the text of **Directive 1999/22/EC** directly alludes to **Council Regulation 338/97**, noting that [the Regulation] “requires evidence of the availability of adequate facilities for the accommodation and care of live specimens of a great many species before their importation into the Community is authorized” and “prohibits the display to the public for commercial purposes of specimens of species listed in Annex A thereof unless a specific exemption was granted for education, research or breeding purposes”.

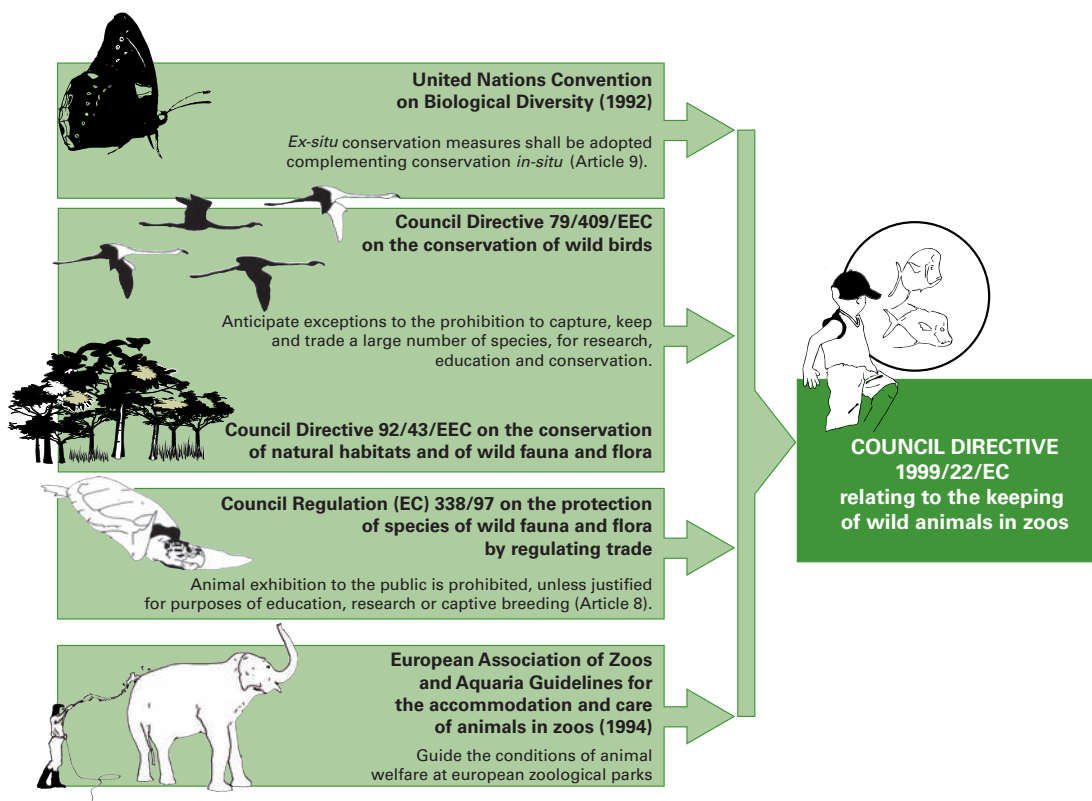


Figure 4. Precedents and legal basis of Directive 1999/22/EC

These two specific limitations configure the use and maintenance standards for certain animal species in zoological parks: in addition to compliance with the legislation regulating trade in animals protected under CITES, zoos must guarantee the welfare and proper accommodation of the animals involved, and if animals are exhibited to the public, this exceptional situation must be justified for non-commercial reasons, such as education, research or captive breeding, and oriented toward the conservation of biodiversity.

The objectives of two other Directives, **Council Directive 79/409/EEC on the conservation of wild birds** (The Birds Directive) and **Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora** (The Habitats Directive) are to contribute to the conservation of biodiversity in Europe through legislation that protects wild species and their habitats. While the Birds Directive procures the long term conservation of all wild bird species of the European Union, the goal of the Habitats Directive is to protect all other wild species and their habitats through the establishment of a network of special conservation areas (SCA) known as *Red Natura 2000*. These include Areas of Special Protection for Birds (ASPB), and establish a comprehensive species protection system. Under the aforementioned Directives, zoos are prohibited from acquiring or making use of certain wild species unless specifically justified for purposes of research and education, repopulation, reintroduction or breeding.

In addition to the legal bases, Directive 199/22/EC notes the important contribution to be made by zoos in animal husbandry, and recognizes the value of the **European Association of Zoos**

and Aquaria Guidelines for the accommodation and care of animals in zoos⁽¹⁾. The mention in the Directive of these guidelines reflected the interest of zoos and international animal protection organizations in a European level law to regulate the conservation role of zoos.

Council Directive 1999/22/EC relating to the keeping of wild animals in zoos is the first European Union legislation to regulate zoo activities in Europe. The initial proposal and primary objective of the European Commission was to guarantee the welfare of zoo animals through a directive establishing clear obligations for Member States. However, because the European Union has no legislative competences in animal welfare, it could only issue a non-binding recommendation at the risk of defeating its purpose. Hence, the European Commission chose to refocus the proposal and pass a directive on the environment -an area in which the European Union does have legislative competences- thereby assuming a firmer commitment to the **protection of wild fauna** and the **conservation of biodiversity**, the objectives cited in Article 1 of the Directive.

(1) Approved in April 2006 and updated in September 2008.

Article 288, Treaty on the Functioning of the European Union:

“To exercise the Union’s competences, the institutions shall adopt regulations, directives, decisions, recommendations and opinions.

A regulation shall have general application. It shall be binding in its entirety and directly applicable in all Member States.

A directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods.

A decision shall be binding in its entirety. A decision that specifies those to whom it is addressed shall be binding only on them. Recommendations and opinions shall have no binding force.”

The scope of application of *Directive 1999/22/EC* is all zoological parks in the European Union. Pursuant to the objectives of this community law, Article 3 establishes a series of requirements applicable to zoological parks, which are known as “conservation measures”.

Directive 1999/22/EC establishes that Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with the Directive by means of:

- adequate **licensing and inspection procedures** (Article 4).
- a **closure procedure** for cases of serious non-compliance (Articles 4 and 5).
- a specific **system for breaches in compliance**, with effective, **proportionate and dissuasive penalties**. (Article 8).

Directive 1999/22/EC provides for a four-year adaptation period (Article 4.2), during which zoological parks must bring their facilities and practices into compliance with the new regulation and qualify for relicensing. Prior to issuing the license, the competent authorities will conduct an inspection to verify implementation of the conservation measures contained in Chapter II. In cases of non-compliance, the authorities must close the zoological parks and ensure proper care of the animals previously housed in the facility (Article 6). *Directive 1999/22/EC* granted Member States a three-year adaptation period, ending in April 2002, in which to institute the legal, regulatory and administrative provisions required for application of the Directive (Article 9). That deadline proved too short for most European Union countries, including Spain, which transposed the Directive into national law on October 27, 2003, with the passage of *Law 31 on the conservation of wild fauna in zoological parks*.

Law 31/2003: an environmental law for zoological parks

Law 31/2003 of October 27 on the conservation of wild fauna in zoological parks incorporates *Directive 1999/22/EC* into Spanish legislation and is the first national law regulating the activities of zoological parks within the scope of biodiversity conservation.

In Spain, the State holds powers over “basic legislation on environmental protection, without prejudice to the powers of the Autonomous Communities to establish additional protective measures” (Article 149.1.23 of the Spanish Constitution). While the transposition of European Directives into national law is the responsibility of the State, according to a ruling of the Spanish Constitutional Court, in matters regarding environmental protection, “the degree of detail of the basic national legislation transposed may not be such as to usurp the competences of the Autonomous Communities by allowing no leeway for these latter to expand the scope of the law as they deem fit, and establish even higher levels of protection “ (STC 102/1995). Thus, given the distribution of constitutional jurisdictions and existing legal doctrine, because **Law 31/2003 is a basic law on environmental protection** transposed from an European Directive, the Autonomous Communities may choose to implement it as such, or to exercise their right to expand its basic content to include additional regulations as they deem fit. As mandated under *Directive 1999/22/EC*, Spain’s *Law 31/2003* establishes a new zoo inspection and licensing system and defines the conservation, research and education requirements to be met. However, **in Spain’s transposition of the law the requirements and scope of application are more stringent than those of the European Directive**. While the Directive refers to a minimum number of days that a facility must be open to the public to be considered a zoological park, the scope of application of the Spanish law is broader, in that it sets no minimum number of opening days for facilities to be defined as zoological parks. And, while the Directive allows for exemptions in other cases, the Spanish law limits its exemptions strictly to circuses and pet shops. The Spanish law also introduces new requirements beyond those of the Directive, and provides a more detailed description of how conservation measures are to be implemented, so as to facilitate interpretation and application of the law.

Article 1. Aim.

“The purpose of this law is to guarantee the protection of wild fauna in zoological parks, and the contribution of these latter to the conservation of biodiversity.”

Article 193 of the Treaty on the Functioning of the European Union refers to the possibility of Member States adopting stricter provisions than the original directives they transpose into national law:

“The protective measures adopted pursuant to Article 192 shall not prevent any Member State from maintaining or introducing more stringent protective measures. (...)”

What is new in *Law 31/2003* is its reference to the contribution that zoological parks can make to biodiversity by including “conservation measures” in their activities. These measures refer to aspects such as animal health, welfare, research, education, public safety, all of which should center around one primary goal: the protection of wild fauna and the conservation of biodiversity. In a reflection of latest tendencies regarding the role that zoological parks should play in the

conservation of wild fauna, the Statement of Purpose of *Law 31/2003* says: “Zoological parks should be a source of scientific knowledge made available to universities, research institutions and nature conservation organizations, to enable these latter to make contributions not only to the “*ex situ*” conservation of wild species, but also to their “*in situ*” conservation, as natural habitats gradually diminish and become more geographically fragmented”.

Law 31/2003 establishes:

A **principal objective** of activity as regards the environment:

- The **protection of wild fauna and conservation of biodiversity** (Article 1).

A series of requirements to be met through implementation of the following “conservation measures”:

- **Animal welfare measures** (Article 3.a and b)
- **Prophylactic measures** (Article 3.c)
- **Environmental and ecological measures** (Article 3.d)
- **An *ex situ* conservation program for wild species** (Article 4.a).
- **A program to educate the public in the conservation of biodiversity** (Article 4.b)
- **An advanced or high quality veterinary care program** (Article 4.c).
- **Specialized staff and proper material resources** (Article 5)
- **A current registry of the species and specimens of the zoo collection** (Article 6)
- **Public safety measures** (Additional Provision 1)



Other laws applicable to zoological parks in Spain

Zoological parks as “Zoological Nuclei” or “Livestock Operations”

Zoological park’s activities have traditionally been regulated under livestock health legislation, within a section on animal groupings known as “zoological nuclei”. The first national Spanish law to impose health related requirements for zoological nuclei was *Decree 1119/1975 of 24 April, on the licensing and registration of zoological nuclei, equestrian stables, domestic pet breeding and care facilities, and similar establishments* and a *Ministerial Order issued on 28 July 1980*, which is currently under revision. The Ministerial Order established a National Registry for zoological nuclei and other zoological groupings, which, while still in force, has ceased to be useful and is no longer updated. Autonomous Communities have exclusive competences on the licensing and registration of zoological nuclei, and make their own decisions on the procedures and requirements to be implemented, most of which address aspects of health and hygiene.

In later legislation, on 24 April 2003, ***Law 8/2003 on animal health and hygiene*** was passed for the purpose of establishing and coordinating basic regulations on foreign animal and health requirements. Article 2 of this Law included zoological parks in a section entitled “animal based operations”. The Law was further developed under ***Royal Decree 479/2004 of 26 March***, which called for the establishment of a *National Registry of Livestock Operations*, to which the Autonomous Communities would supply updated information from their respective registries on all animal based operations, including zoological parks.

Although the scope of application of this Law generally excludes wild fauna, it does require

the registration of any facility keeping animals for purposes “of production”, and the list provided in Annex I of the Law includes certain species of wild fauna. Thus, zoological parks housing any of the wild species included in Annex I are legally bound to register as livestock operations in their Autonomous Community, and to comply with the health and hygiene requirements provided for under law.

Zoological parks as “entertainment establishments” offering recreational activities

The primary purpose of zoological parks has always been the entertainment of the visiting public. Even as zoological parks have become increasingly involved in research, conservation and educational activities, their traditional role as recreational facilities has remained intact. The increased scientific, educational and conservation potential of these recreational parks has boosted the demand for the services provided by this sector, due to public interest in nature and the animal world.

As recreational establishments, zoological parks must comply with current public safety legislation, as set out in ***Royal Decree 2816/1982 of August 27, approving the general regulation on the policing of public entertainment and recreational activities***. The scope of application of this supplementary law regarding autonomous community competences includes publicly and privately owned “zoological parks and safari-parks”, whether these are commercial or non-profit establishments. The purpose of the law is to guarantee public health and safety, protect children and youth, and to defend the general public interest, as well as to prevent fires and other risks. Its Article 71 also makes

a passing reference to the protection of the animals used in these establishments: “(...) shows or activities that involve or may involve the mistreatment of or cruelty to animals may also be prohibited.”.

Article 4.5 of a later law, **Law 50/1999 of 23 December on the legal regime for the keeping of potentially dangerous animals**, states: “All establishments and associations keeping the potentially dangerous animals referred to in this Law, dedicated to the use, breeding, trade or training of these, including training centers, breeding establishments, animal shelters and kennels, recreational centers or shops, must be licensed by the competent authorities and comply with the registry obligations laid out in Article 6 of this Law.” Although the regulatory development foreseen has yet to come, it will fall under the purview of local governments and the Autonomous Communities, who are the competent authorities for passing further legislation developing the law and application of its provisions in the area of public safety.

Zoological parks must also hold a municipal license, and any plans for activities requiring an environmental impact assessment must comply with the provisions of current environmental impact legislation.

Zoological parks as “fauna recovery and protection centers” and “CITES specimens rescue centers”

In Spain, the right of citizens to enjoy a suitable environment is accompanied by a societal duty to preserve it. The conservation of biodiversity and the protection of wild fauna and flora constitute objectives to be pursued by all public administrations through legislation, management, monitoring, and controls designed

to ensure compliance with, and the enforcement of, the requisite conditions for conservation.

As part of the duty to conserve and the objective of guaranteeing the rights of people to an adequate environment, **Law 42/2007 of 13 December, on Natural Heritage and Biodiversity**, establishes the basic legal regime on the conservation, sustainable use, improvement, and restoration of Spain’s natural heritage and biodiversity. It repeals and replaces *Law 4/1989 of 27 March on the conservation of natural spaces and of wild fauna and flora*, that included the Birds Directive and Red Natura 2000, the ecological network of the Habitats Directive, and also the *ex situ* conservation measures complementing *in situ* conservation of biodiversity advocated by the Convention on Biological Diversity. In this regard, in 1999, the **Spanish Strategy for the Conservation and Sustainable use of Biological Diversity** affirmed that zoological parks and botanical gardens should make contributions to *ex situ* conservation, but the conditions and objectives governing their activities in these areas would not be defined until 2003, after the enactment of *Law 31/2003*.

The aim of the new law, *Law 42/2007*, was to improve upon previous transpositions of European legislation, thereby achieving adequate conservation levels and guaranteeing a better legacy of natural heritage and biodiversity to future generations. In the area of *in situ* conservation actions, with emphasis on the species included on Spain’s Catalogue of Endangered Species, the aim was to encourage the development of breeding and propagation programs, particularly those already foreseen under conservation strategies and/or recovery and conservation plans. *Law 42/2007* further called for public

administrations to promote the creation a network of gene and tissue banks, so as to preserve the genetic and biological heritage of wild species, and integrate both *ex situ* and *in situ* efforts into conservation programs.

The inspiring principles of *Law 42/2007* listed in its Article 2 are:

- a) Maintenance of essential ecological processes and basic vital systems supporting ecosystems services for human welfare
 - b) Conservation of biodiversity and geodiversity
 - c) Planned and orderly utilization of resources to ensure the sustainable use of natural heritage, particularly as regards species and ecosystems, and the restoration and improvement of these
 - d) Conservation and preservation of the variety, singularity and beauty of natural ecosystems, geological and landscape diversity
 - e) Integration in sectoral policies of requirements for the conservation, sustainable use, improvement and restoration of natural heritage and biodiversity
 - f) Prevalence of environmental protection over territorial and urban planning, and basic aspects of said prevalence
 - g) Precaution regarding interventions that may affect natural spaces and/or wild species
 - h) Guarantees of citizen information and participation in the design and implementation of public policy, including in the drafting of general provisions designed to achieve the aims of this Law.
 - i) Contribution of improvement processes on the sustainability of development associated to natural and semi-natural spaces.
-

On another front, trade in endangered wild species creates serious problems for the conservation of certain species, and is an issue on which zoological parks must act responsibly. The aim of the provisions included in the *CITES* convention and ***Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade*** (mentioned earlier) is the conservation of endangered species in Europe and the international community. Under the terms of the Convention and those of European Union legislation, in transactions involving

the acquisition or exchange of specimens, zoological parks must rigorously comply with applicable legislation, and demand that their counterparties do the same.

In response to the scarcity of wild animal rescue shelters, many zoological parks have begun working in the rescue, healing and care of wild animals that are injured, ill, abandoned and/or have been confiscated by authorities. Many make their facilities and resources available to act as recovery centers, and sometimes as *CITES* rescue sites in exchange for the right to exhibit the animals to the public, or even for captive breeding. The legal framework under which zoological parks and other institutions are allowed to function as rescue centers is defined in ***Royal Decree 1333/2006, regulating the destination of confiscated specimens of endangered wild fauna and flora species protected under trade restrictions***.

Autonomous Community legislation on nature conservation is heterogeneous, but the general tendency is to focus on protecting local native species of wild fauna by establishing regional or autonomous community endangered species lists. For cases of species protected under *CITES* and/or *Regulation 338/1997*, the competent wildlife protection authorities must issue reports, which are usually binding, on the legality of possessing animals belonging to those protected species. The animal protection laws in the Autonomous Communities generally contain provisions on health and public safety in the housing and care of animals, although more recent laws are expanding the scope of animal welfare protection, principally in the area of “domestic” and/or “companion” animals.

Without prejudice to the regulatory framework enveloping zoological park activity on the

levels described, the commitment assumed by Spain in international environmental conventions, the impulse of European animal welfare organizations, and the obligations arising from community legislation on the protection of wild fauna, particularly Council *Directive 1999/22/EC relating to the keeping of wild animals in zoos*, make national *Law 31/2003* the law of reference for the regulation of zoo activities, which should all revolve around the conservation of biodiversity.

Over the past years the Autonomous Communities have gradually passed legislation for the

application and development of national *Law 31/2003*. While some have simply designated bodies competent in the subject, others have also established the administrative procedures and created the new zoological park registries, and still others have established licensing requirements. Pages 81-82 contain a list of the Autonomous Community legislation passed up to the date of publication of this document. This legislation was drafted and passed fundamentally on matters of fauna protection and species conservation, and with very few exceptions, the bodies designated for monitoring and enforcement were departments with environmental competences.

Figures. Areas of zoological park activity and applicable legislation.

TYPE OF ESTABLISHMENT ACTIVITY	REGULATORY SCOPE	COMPETENT ADMINISTRATION	AUTONOMOUS COMMUNITY LEGISLATION	NATIONAL LEGISLATION	LICENSING AND REGISTRY
Zoological Nuclei - Livestock Operations	ANIMAL HEALTH	National Government and Autonomous Communities	Autonomous Community Law Zoological Nuclei and Animal Health	Animal Health Law ¹ RD on Registration of Livestock Operations ²	Autonomous Community Registries of Zoological Nuclei and/or Livestock Operations - General Registry of Livestock Operations (REGA) ²
Entertainment Establishment - Recreation & Education	PUBLIC SAFETY - ENVIRONMENTAL IMPACT	Autonomous Communities and Municipal Governments	Autonomous Community Law Public Safety - Autonomous Community Law Environmental Impacts	Regulation of Public Entertainment and Recreational Activities ³ - Law on Environmental Impact Assessment ⁴	Municipal License - Environmental Impact Assessment where applicable
Zoological Park - Biodiversity Conservation, Research and Education	BIODIVERSITY CONSERVATION	National Government and Autonomous Communities	Autonomous Community Law on Nature Conservation, Protection of Wild Fauna and Zoological Parks	Law on Natural Heritage and Biodiversity ⁵ - Law on Conservation of wild fauna en zoological parks ⁶	Autonomous Community Registries of Zoological Parks - Spanish Inventory of Zoological Parks ⁶
CITES Wild Fauna Recovery and Rescue Centers - Animal Car	PROTECTION OF WILD ANIMALS AND ANIMAL WELFARE	National Government and Autonomous Communities	Autonomous Community Law on Protection of Wild Fauna and Animal Welfare	RD on Control of Trade in Endangered Species ⁷ - RD on Destination of Specimens seized by Law Enforcement ⁸	CITES Specimen Certificates ⁷ - Designation as CITES Specimen Rescue Center ⁸

(1) Law 8/2003, of 24 April, on animal health (BOE No. 89, 25 April, 2003).

(2) Royal Decree 479/2004, establishment and regulation of general registry on livestock operations (BOE No. 89, 13 April 2004).

(3) Royal Decree 2816/1982, approving general regulation on the policing of public entertainment and recreational activities (BOE No. 267, 6 November 1982).

(4) Royal Legislative Decree 1/2008, of 11 January, approving revised text of the Environmental Impact Assessment Law for projects (BOE No. 23, 26 January 2008) and amendment under Law 6/2010, 24 March (BOE No. 73, 25 March 2010).

(5) Law 42/2007, of 13 December, regarding natural heritage and biodiversity (BOE No. 299, 14 December 2007).

(6) Law 31/2003, on the conservation of wild fauna in zoological parks (BOE No. 258, 28 October 2003).

(7) Royal Decree 1739/1997, of 20 November, on measures for application of the Convention on International Trade in Endangered Species (CITES, 1973) and Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade (BOE No. 285, 28 November 1997).

(8) Royal Decree 1333/2006, of 21 November, regulating the destination assigned to endangered wild fauna and flora subject to restricted trade that is seized during law enforcement operations (BOE No. 286, 30 November 2006).

SUMMARY OF THE LAW 31/2003

Law 31/2003 on the conservation of wild fauna in zoological parks is divided into five Chapters, three Additional Provisions, one Transitional Provision, and six Final Provisions.

Chapter I refers to the aim of the Law, the protection of wild fauna and the conservation of nature, and its scope of application: zoological parks. The Law defines zoological parks as permanent establishments exhibiting living animals of wild species, as does the European Directive it transposes, but the Spanish law is even stricter in that it does not define the number of days that establishments are open to the public. Like the European law, it expressly excludes circuses and pet shops, given the difficulties that these types of establishments and activities undoubtedly have in compliance with any species conservation conditions, due to which it considers that their regulation falls under a different area more specific to the protection of animal welfare.

Chapter II contains the “conservation measures”, that refer to the requirements that should be met by zoological parks for licensing and registration in accordance with the requirements of the Directive, and also incorporates additional requirements:

- The “measures for animal welfare” refer to the housing of the animals under conditions that enable the fulfillment of their biological and conservation needs. For this, “environmental enrichment techniques” are to be included in species management, in order to promote the development of species-typical behavior patterns and improve general well-being. This serves to facilitate the tasks of conservation, education and research.

- The “prophylactic and environmental measures” refer to prevention of the transmission of pests and parasites, and also genetic alterations and environmental threats, by preventing the escape of the animals.

- The Law calls for the design and implementation of specific programs to ensure adequate compliance with other measures for the conservation of biodiversity:

- An “*ex situ* conservation program” for wild fauna species, aimed at contributing to the conservation of biodiversity. For compliance with this, some of the activities noted in the Directive such as research, training, information exchange, and participation in captive breeding programs, may be performed “where appropriate”, in other words, in accordance with specific rules of application and/or specific licensing conditions.

- An “education program” to raise public awareness and sensitivity regarding the conservation of biodiversity. In this regard, the requirements of the Law are stricter, in that compliance requires not only information on the species exhibited, but also education of the public and institutional collaboration.

- An “advanced veterinary care program”, which also includes more requirements than the Directive, one of which is the periodical examination of healthy animals.

- New requirements included under the Spanish Law call for specialized staff, and the proper material means to institute the measures and programs required by the type of animals kept in the zoo’s collection, including continuous training for all animal caretakers and zookeepers.

- The keeping of an updated registry of species and specimens, for which a specific list of the information to be included is provided, noting that animal identification

should be performed as required by current animal health legislation.

Chapter III contains the provisions regarding the licensing and inspection of zoological parks: the opening to the public, substantial modification and enlargement of zoological parks are subject to licensing by the competent body of the corresponding Autonomous Community, which will perform the inspections required to verify compliance with the conservation measures cited in Chapter II. It further notes that zoo management and/or employees are obligated to facilitate the work of the inspection teams.

Chapter IV calls for the establishment of the Spanish Inventory⁽¹⁾, as well as the creation of zoological park registries in the individual Autonomous Communities. Working under the national Ministry of the Environment and Rural and Marine Affairs, the purpose of the Spanish Inventory of Zoological Parks is to provide statistical and other data for the orientation of institutional cooperation mechanisms, and use in coordinated conservation actions undertaken with other bodies and institutions. The Inventory data will be taken from the individual autonomous communities registries, that must forward their data on the zoological parks licensed within their respective territories.

Chapter V establishes the legal liability for infringement, pursuant to *Law 30/1992 on the legal system of public administrations and common administrative law*, and typifies infringements as minor, serious, or grave, depending on the jeopardy posed to the objectives. The Autonomous Communities hold the right to self-governance and self-administration in this area, due to which, the competent body for decisions on infringement

and sanctions shall be the body designated by each Autonomous Community.

Regarding sanctions and penalties, the amounts of all fines shall be those currently applicable for the national legislation in force on the conservation and protection of wild flora and fauna, *Law 42/2007* (Art.77).

The Law states that all unlicensed zoos are subject to immediate **closure**, and also foresees closure for other serious and grave infringements. In the event of closure, the competent autonomous community body will decide the proper steps to be taken by the zoo management for the handling, conservation and transfer of the animals affected. In case of non-compliance by zoo management, the competent authority will act in its place to ensure performance of the steps prescribed, with costs assigned to this former.

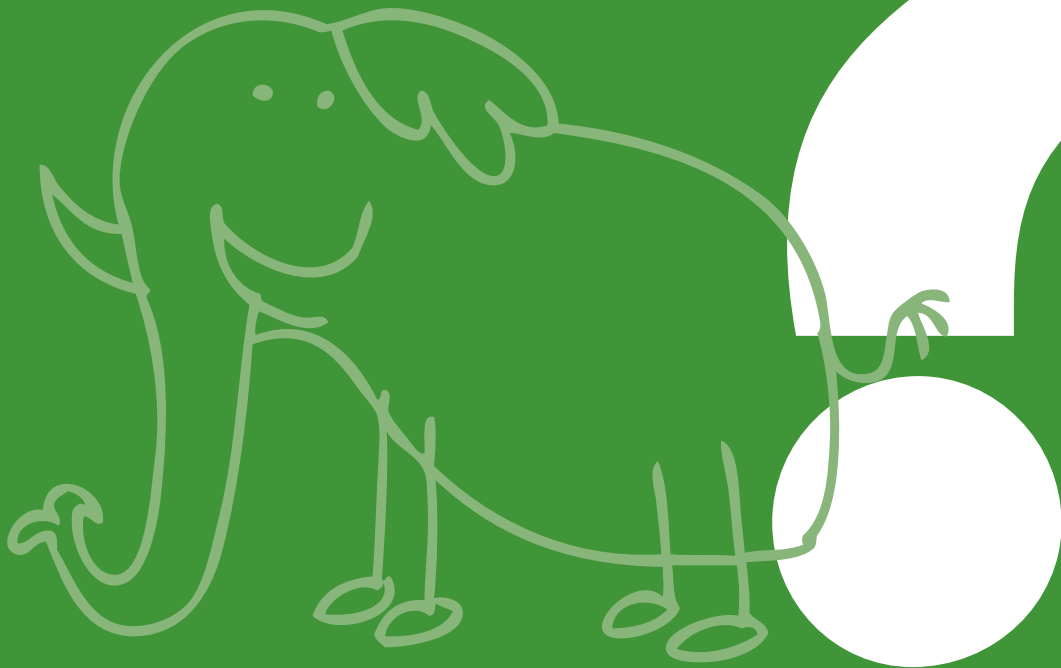
The Additional Provisions describe general public safety measures to prevent visitor accidents and risk, the extension of prophylactic and environmental measures to non-wild species, and make mention of a pending Government regulation regarding authorized *CITES* Rescue Centers.

The Transitional Provision of the Law allowed for a one year transition period to enable zoological parks to adapt to the provisions of the Law and apply for licenses prior to 28 October 2004. The Law went into force on 28 October 2003, one day after its publication in Spain's Official State Journal.

(1) Under *Law 42/2007* the term "National" was changed to the current term "Spanish".

What

constitutes a zoological park



The new functions of zoological parks

The concept of a zoological park open to the public, as we know it today, was first introduced by the Zoological Society of London, which opened its famous Zoological Gardens in Regent's Park in the mid 1880's. The idea of exhibiting wild animals to the public in a garden setting proved so attractive that, in later years, many large cities around the world followed the lead of this pioneering initiative. The concept of a zoological park fit perfectly in the social context of the day: a rising middle class with more leisure time for family entertainment, and a greater interest in educational activities. The exploration of new lands, and the subsequent discovery of new species, further contributed to the popularity of zoological parks.

Because the visitors to those 19th century zoological parks viewed animals as mere extravagances of nature, not as representatives of a rich and complex biological diversity, the mere exhibition of specimens was seen as more than sufficient reason to justify the existence of zoological parks. But this perspective would soon change. With the gradual development of audiovisual media over the course of the 20th century, and the increasing ease of travel to the furthest corners of the world, the interest of keeping wild animals captive simply for their exhibition was called into question. This, coupled with greater social concern for animal welfare, led a growing number of citizens to reconsider the advisability of having zoological parks, and even to question their very legitimacy (**Figure 6**).

As institutions housing captive wild fauna, zoological parks have not remained isolated from the new conservationist ideas that have permeated society in recent decades. In fact, the rising social awareness of the environmental issues faced by our society in the new millennium has brought new reasons for the existence of zoological parks as centres for biodiversity conservation. The fact is that if we hope to achieve the goal of maintaining the current zoological diversity in the coming decades, a broad range of conservationist actions must be implemented. They include establishing new protected areas, mitigating the pressure caused by hunting and by the capture of living wild animals for trade, and developing special protection measures for critically endangered populations. Zoological parks also have an important role to play in the global conservation strategy. First of all, they should actively support the conservation of endangered animal species and their ecosystems by establishing gene banks, for which management is coordinated through international networks. A second

Article 2. Scope of Application.

- “1. This law is applicable to zoological parks, which are defined as follows: any continuously operating public or private facility keeping live animals of wild species for purposes of their exhibition to the public, regardless of the days the facility is open to the public.
2. This law is not applicable to circuses or pet shops.”

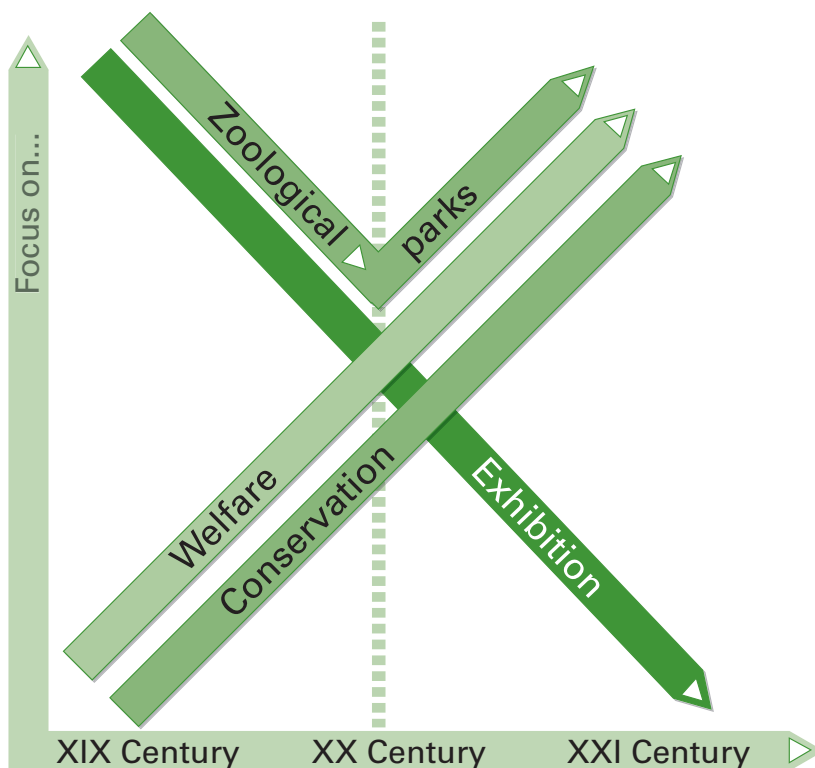


Figure 6. Waning societal interest in the mere exhibition of animals, and greater concern for environmental issues and animal welfare have led to a new purpose for zoological parks: to serve as biodiversity conservation centres.

-and no less important- task is to contribute to the education of the public, and raise public awareness of the need for biodiversity conservation, while informing of the principal difficulties faced by conservation efforts. Thirdly, they should foster the development of research programs leading to the conservation of species and their ecosystems. And, zoological parks can also receive funding that helps to finance *in situ* and *ex situ* conservation programs.

The new conservationist function required of zoological parks involves a need for the transformation of establishments formerly dedicated to the mere exhibition of animals into modern institutions, equipped to perform relevant and quality work. This transformation

encompasses a broad spectrum of zoological park activities such as zoological collection planning, the adaptation of animal facilities and of the handling techniques employed, technical and auxiliary staff training, and enhanced organizational planning of all tasks, material, and spatial resources, to cite only a few. In short, in order to adapt to the new social conservation demands of the day, zoological parks must transform themselves, through a reordering of interests and priorities. (Figure 7).

Zoological parks are now the centre of a compelling social debate. Zoo proponents and detractors alike have long sought a solution to the ethical dilemma arising when the needs of the “species” (whose conservation depends,

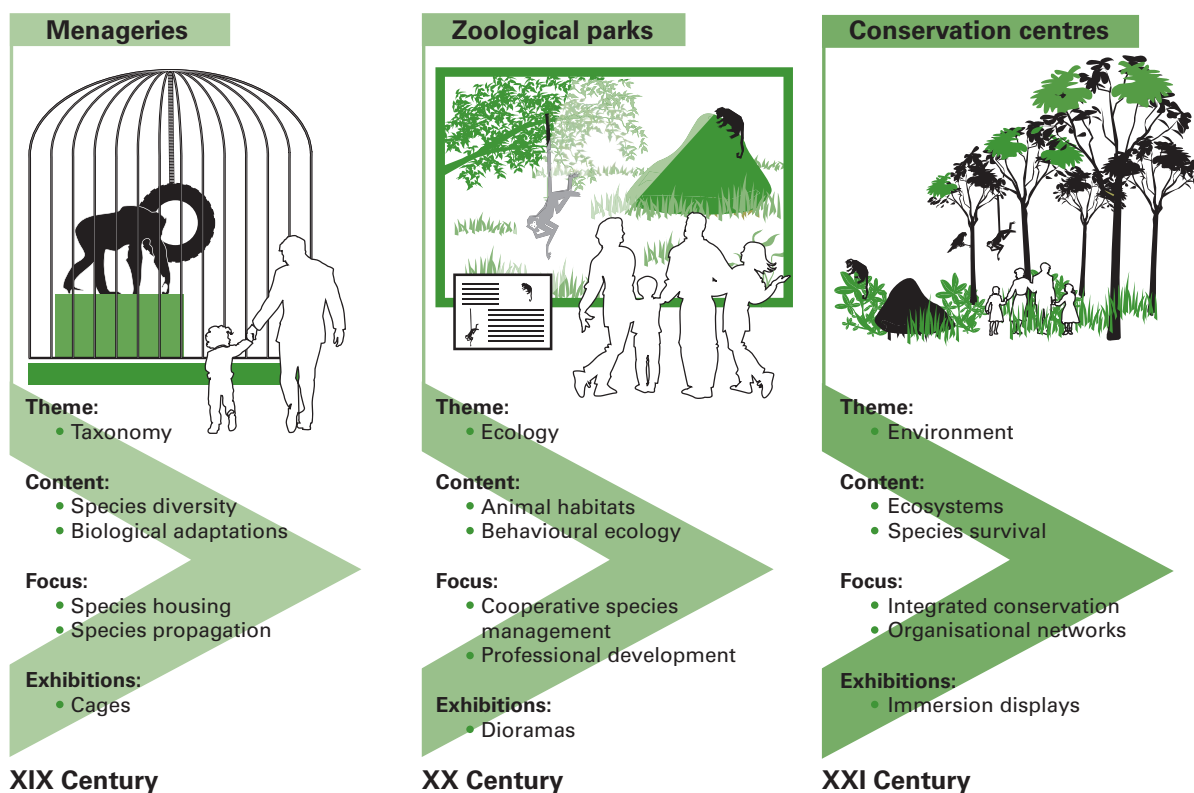


Figure 7. Evolution of zoological parks from the wild animal houses of the 19th century to modern conservation institutions of the 21st century. (Taken from Rabb, 1994)⁽¹⁾

among other actions, on the establishment of self-sustaining captive populations) come into conflict with those of the “individual” (whose welfare may be negatively affected by captivity in conditions unlike those to which it is adapted). Regardless of the outcome of this debate, one of its most salient effects is a recognition of the need to imbue modern zoological parks

with new and socially relevant content, and of the fact that, the greater the relevance and scope of the work done in zoological park facilities, the greater the justification for their existence. *Law 31/2003 on the conservation of wild fauna in zoological parks* requires that this work also make a real contribution to the conservation of biological diversity.

(1) Rabb, G.B. (1994). The changing roles of zoological parks in conserving biological diversity. *American Zoologist*, 34: 159-165.

What does the sector think?

Zoo and aquaria associations have provided their own definition of zoological park, which has evolved in tandem with society's rising sensitivity to animal welfare and interest in the conservation of nature. The inclusion of other facets of activity beyond the purely recreational has also been driven by the scientific and conservationist interest of their animal collections, and finally, by new legislation passed to regulate the various areas of their activity, particularly aspects for the protection of the wild fauna they house.

In 1993, the International Union of Directors of Zoological Gardens (IUDZG) and the Conservation Breeding Specialist Group (CBSG), with the support of the World Conservation Union (IUCN) and the World Wildlife Foundation (WWF), approved the first World Zoo Conservation Strategy. The document noted the evolution of zoological parks from their antiquated role as living museums to one of modern conservation centres, and stated that the functions proposed shall range beyond the purely recreational to include education and research, captive breeding programs for threatened and endangered species, and the promotion of institutional support for reintroduction programs aimed at the reintroduction of wild species in their natural habitats.

The current **World Zoo and Aquarium Conservation Strategy** published in 2005, defines the strategic vision of the World Association of Zoos and Aquariums (WAZA), pointing out the conservation mission of zoological parks. It states that "zoos and aquariums [should] be recognized as institutions dedicated to nature, whose responsibility is to inspire

IN THE 2ND CONGRESS OF THE IBERIAN UNION OF ZOOS [UNIÓN IBÉRICA DE ZOOS], HELD IN BARCELONA IN 1971, THE FOLLOWING CLASSIFICATION WAS MADE OF ZOOLOGICAL EXHIBITION CENTRES:

Zoological park or garden: any institution or establishment open to the public housing a representative zoological collection, that is duly equipped from an ecological perspective, and dedicated to scientific, cultural, exhibition, recreational and/or conservation purposes. Under this definition, the term zoological park or garden may not be used by establishments keeping only a small number of species, or by facilities lacking the proper health and enrichment conditions for the purpose.

Zoo-Safari: an exceptional mode of presentation of captive animals living in semi-freedom, conceived primarily for the practice of animal photography, allowing visits by the public using private or institution-owned motor vehicles, which keep to specific fixed itineraries so as to avoid affecting the natural balance of the zoological species exhibited. In such compounds, special care will be devoted to preserving the natural vegetation and environment.

Aquarium: any representative collection of fish and marine invertebrates open to the public that is duly equipped from an ecological perspective, and dedicated to scientific, cultural, exhibition, recreational or conservation purposes.

Oceanarium: any collection of marine mammals and fish that is duly equipped, and is dedicated to cultural, exhibition and recreational purposes.

people to have a profound respect and understanding of nature, thus transforming them into conservation enthusiasts.”

In its awareness of the crucial problems threatening marine biodiversity, in 2009 WAZA drafted and published its **Global Aquarium Strategy for Conservation and Sustainability**, in order to foster the special contributions that aquaria can make to the study, research, and conservation of aquatic species and habitats.

In the European sphere, the zoological parks that are members of the European Association of Zoos and Aquaria (EAZA) observe **EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria**. In September 2008, this pan-European organization, which is a member of the IUCN, issued a revised version of its 2006 definition of zoological parks and aquaria, in which it sidelined the relevance of the recreational function of zoological parks, and, in accordance with the new European Union legislation, stated that the main purpose of their activities is the conservation of nature, without prejudice to other functions of public education and entertainment.

The European Association of Zoos and Aquaria defines these as “all establishments open to and administered for the public to promote nature conservation and to provide education, information and recreation through the presentation and conservation of wildlife. This definition includes zoos, animal parks, safari parks, bird gardens, dolphinariums, aquaria and specialist collections such as butterfly houses, as defined in article 2 of Council Directive 1999/22/EC of 29 March, 1999.”

Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria, EAZA 2008

The Iberian Association of Zoos and Aquariums (AIZA) **Standards for Species and Facilities Maintenance** were updated in July 2009 to adapt them to the most recent versions of the aforementioned Global Aquarium Strategy for Conservation and Sustainability and to EAZA Standards. The revised document defines zoological parks as “any (public or private) establishment, open to the public, that keeps live animals of wild species for exhibition to the public”. It further states that “the function of these establishments is the conservation of the species, while at the same time serving the functions of education, recreation and research.”

The Iberian Association of Zoos and Aquariums (AIZA)

AIZA is a non-profit professional association of the zoological parks of Spain and Portugal, founded in 1988, whose current membership includes a total of 38 zoological and aquariums (34 in Spain and 5 in Portugal). Of the twelve million visitors received by member parks each year, approximately two million are school children on educational excursions. Nearly 2,000 qualified professionals perform specialized work at these sites: veterinarians, curators, specialized keepers and auxiliary staff, educators, monitors, trainers, aquarium technicians, operations and administrative personnel, and staff working directly with the public. The total number of employees, including staff not directly involved in the strictly zoological aspects, comes to over 5,000.

All zoological parks seeking admission to AIZA must complete an admissions procedure established by the AIZA Technical Committee. The members pledge voluntary compliance with the 2009 revised version of the Association Standards and with current legislation, thus assuming the obligation to uphold high professional quality standards in all of their activities. They must also abide by the recommendations of EAZA (*European Association of Zoos and Aquaria*), and WAZA (*World Association of Zoos and Aquariums*), of which AIZA is a member.

The principal goals of AIZA are to:

a) Achieve the recognition of zoological entities as educational and scientific institutions that protect animal species, promote biodiversity, and help raise public awareness on the importance of biodiversity and the need for its conservation.

b) Contribute to member compliance with the highest standards of animal welfare, encourage excellence in the biological knowledge and understanding of the animals they house, and foster participation in conservation, research, and educational programs.

c) Intensify inter-institutional relations in the sector, facilitating the establishment of forums for discussion and the exchange of opinions among zoological park professionals, along with the consistent updating of their knowledge.

d) Cooperate with Public Administrations in the establishment of a legal framework for zoological parks and aquaria, acting as the voice and interpreter for zoological institutions.

AIZA has five Working Groups: Veterinary Affairs, Conservation, Education, Aquaria, and Marketing and Communication. Their purpose is to provide a communications and collaborative network among the professionals holding AIZA membership, by acting as forums for discussion and debate, experience and knowledge sharing, and opinion exchange, and as advisory bodies of the Association itself.

Aware that zoological parks should not limit their actions to conservation and *ex situ* research, but should also play a decisive role in *in situ* conservation, AIZA sets aside 10% of its budget for the annual AIZA “Conservation Award” to motivate membership involvement in this type of activities. The purpose of the award is to foster and support the *in situ* conservation projects of members, and to recognize the efforts made toward habitat and species conservation, and the maintenance of biodiversity.

The World Zoo and Aquarium Conservation Strategy (WZACS)

In 1993, The World Association of Zoos and Aquariums (WAZA) published a document entitled **The World Strategy for Conservation in Zoos and Aquaria**, in response to the changing world scenario after the “Earth Summit”, the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. With its publication, zoological parks and aquariums worldwide finally had a single document reflecting common objectives and practices that would enable them to all work in the same direction and effectively perform their roles in the conservation of biodiversity. The Strategy, which was the result of the international collaboration by prestigious professionals in the field, and was translated into several languages, became a true guide for the world’s zoos and aquariums. In 2005, a revised and updated version was published. Entitled the **World Zoo and Aquarium Conservation Strategy**, it followed the basic lines of the first edition, while introducing *ex situ* institutions into the conservation of biodiversity and sustainable development.

The World Zoo and Aquarium Conservation Strategy defines the principal characteristics of **modern zoological parks**:

- **The primary goal** of modern zoological parks and aquariums is **conservation**, that is, the long term maintenance and protection of populations of species in natural habitats and ecosystems.
- They **hold education as a core value**. Have a well-defined educational policy, promote educational programs and cultural and recreational activities for the public, and actively participate in local and international environmental education programs, cooperating with other educational institutions (schools, universities, training centres, etc.).
- They dedicate major **efforts to research** (veterinary issues, animal diet and animal social behaviour), use advanced technologies (data bases and new communications technologies), and participate in global breeding programs.
- They are technologically advanced and efficient institutions that tend to implement **measures for global environmental sustainability**.
- They provide exhibits that are innovative, attractive and suggestive for the public, while also providing for the **highest level of welfare of the animals** they house, in a habitat suited to their needs.
- They **act collectively and through teamwork**. Through active membership in local or regional zoological associations, work in a coordinated manner with Public Administrations on issues concerning the environment.
- They **cooperate with other bodies and institutions**, linking their activities to global conservation strategies (*ex situ* conservation - *in situ* conservation projects) and striving to optimize the use of limited resources.
- They adhere to a **legal and ethical framework** in all activities. Comply with the legislation in force, and act in keeping with regulations affecting conservation and animal welfare (animal acquisition and placement, animal transfer, transport, veterinary aspects, reintroduction programs, etc.), and with the standards and codes of ethics of the associations of which they are members.
- They are **qualified training centres** that have expert technical staff with major knowledge and experience on subjects such as breeding, species recovery, and animal welfare.

In 2009, WAZA published **A Global Aquarium Strategy for Conservation and Sustainability**, which was drafted by aquarium experts and collaborators to provide a tool for the implementation of the World Strategy for Aquariums. Zoos and aquaria undoubtedly have many points in common, but they also have different aspects such as their very nature, their internal operations, different communities of critics, different achievements in environmental conservation and sustainability. This is why WAZA decided to prepare a document specific to aquariums. The new Strategy, entitled “Turning the Tide”, plots the course for today’s aquariums in a world where marine, coastal and fresh water resources are being ruthlessly exploited. Aquatic biodiversity is constantly declining and the careful management of all aquatic ecosystems is crucial for the planet to function correctly.

The legal concept of zoological park

A bit of history

Prior to the passage of *Law 31/2003 on the conservation of wild fauna in zoological parks*, the concept of zoological park had not been specifically defined in Spanish law.

Since the pre-constitutional ***Law on epizootics of 20 December 1952***, national laws on animal health had placed zoological parks in the generic category of “zoological nuclei”, because their collections contained animals that could constitute a potential health risk. In these, zoological parks are considered one more type of zoological grouping that is subject to zoo sanitary requirements, in accordance with the objectives of “the conservation and health of national livestock, and its protection against infectious and contagious diseases”.

In developing the said law, ***Decree 1119/1975 of 24 April on the licensing and registration of zoological nuclei, equestrian stables, companion animal and pet care centres and related establishments***, included zoological parks under the definition of zoological nuclei. “For purposes of zoo sanitary regulation, zoological nuclei are those housing zoological collections of indigenous and/or exotic animals for scientific, cultural, recreational, reproductive, recovery, adaptation and/or conservation purposes, including zoological parks and gardens, zoo-safari compounds, zoological reserves and animal banks, private zoological collections, and other zoological groupings.”

Twenty-eight years later, as noted earlier, *Law 8/2003 on animal health*, updated the national legislation and included zoological parks under the concept of “zoological nuclei”,

defined as “any facility, building, or in the case of outdoor breeding, any site, keeping, breeding, handling animals, or exposing them to the public, whether doing so for, or not for, profit”. ***Royal Decree 479/2004, on the establishment of a general registry for livestock operations*** assigns zoological parks the status of “animal based operations”, and includes, under special livestock operations, those involving entertainment, teaching and research – thus providing a list of the activities of today’s zoological parks.

The European definition of zoological park

The current concept of “zoological park” was initially adopted and defined under ***Council Directive 1999/22/EC relating to the keeping of wild animals in zoos***. In accordance with the definition given in Article 2 of the Directive, all permanent establishments exhibiting live animals of wild species to the public shall be considered zoological parks, and must comply with a series of “conservation measures” regarding the keeping of wild animals in captivity for exhibition to the public.

Article 2 of Council Directive 1999/22/EC relating to the keeping of wild animals in zoos:

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

Council Directive 1999/22/EC exempts circuses and pet shops from its scope of application. These establishments could have been considered zoological parks in accordance with the definition established in the European law, but it opted to exclude them, due to the fact that their activities (pure entertainment and animal trade for profit) fall in areas that are irreconcilable with the objectives of the Directive. Given the enormous difficulty of enforcing fauna protection requirements in circuses and pet shops, the legislator deemed that these required a specific regulation.

The concept of zoological park under Law 31/2003

In its scope of application, *Law 31/2003*, in accordance with the Directive, **notes the permanence of the establishment and the exhibition of wild animals to the public as being determining characteristics of the definition of zoological park**, regardless of the denomination adopted by each establishment. Therefore, the terms “definition” and “denomination” should not be confused: the legal definition of a zoological park has more to do with the characteristics of the establishment, than with the name assigned by its owner. In fact, leading members of the sector employ a variety of names to distinguish themselves from others, and call attention to one or another aspect depending on their animal collections, emphasizing aspects that are commercially useful for attracting the public.

Therefore, regardless of the name chosen, (zoological garden, nature centre, marine park, etc.), if the substantive characteristics

of an establishment fit the legal definition, they are all considered zoological parks according to the applicable legislation.

Spain transposed the broadest scope of application of *Directive 199/22/EC* into national law. The Spanish law does not establish a limit regarding days open to the public, deeming that the existence of a permanent establishment is sufficient connotation of a vocation of ongoing activity, and that the number of days the establishment decides to remain open to the public is irrelevant. Like the European law, Spain’s *Law 31/2003* expressly excludes circuses and pet shops. Conversely, it does not allow the exemption of establishments exhibiting small numbers of animals or species, or those whose activity is seen as not jeopardizing the objectives of the law. The sheer number of cases and exceptions that would arise, the risks arising from the lack of determination of the cases of exemption proposed, the difficulty of establishing national evaluation criteria or indicators, and society’s growing opposition to the use of animals in public entertainment were preponderant reasons against allowing any potential exemptions, other than those of circuses and pet shops. Thus, Spanish legislators decided to establish a scope of application that allowed no exceptions, due to which *Law 31/2003* is considered to be rigorously applicable to all those establishments that exhibit living animals of wild species to the public, even if exhibiting only one single species or a few individuals, or if such exhibition is not the principal purpose of the establishment. This enables authorities to invoke this law to prohibit the exhibition of animals in establishments with a wide range of activities (i.e., restaurants, discotheques, hotels, etc.), where animals are frequently

used as decoration, to attract customers, or simply for amusement. These establishments, whose activities are totally unrelated to the care and protection of animals or nature (to the contrary, they distort the objectives set forth by *Law 31/2003*), must either cease exhibiting animals, or close their doors to the public.

Law 31/2003 is applied to the activities of zoological parks independently of other laws on animal health and public safety that zoological parks, as zoological nuclei, must

also obey. The innovative aspect of *Law 31/2003* therefore resides in the fact that **the new concept is defined in the framework of environmental legislation** that regulates not animal health, but **the protection of wild fauna and biodiversity conservation**.

To date, all of the autonomous community legislation passed for the application of *Law 31/2003* has faithfully reflected the Law's definition of a zoological park, and framed the regulation within the scope of conservation.

In accordance with *Law 31/2003*:

An establishment will be considered a “zoological park” when it has the following characteristics:

- **permanence** of establishment
- **public or private** entity
- **commercial or non-profit** entity
- **open to the public**, without a minimum or maximum time limit
- **that houses or keeps animals:**
 - **live** individuals,
 - that belong to native or exotic species of **wild fauna**
 - any number of individuals or species
 - that the said animals are **exhibited to the public**

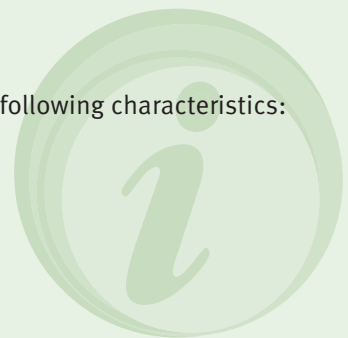
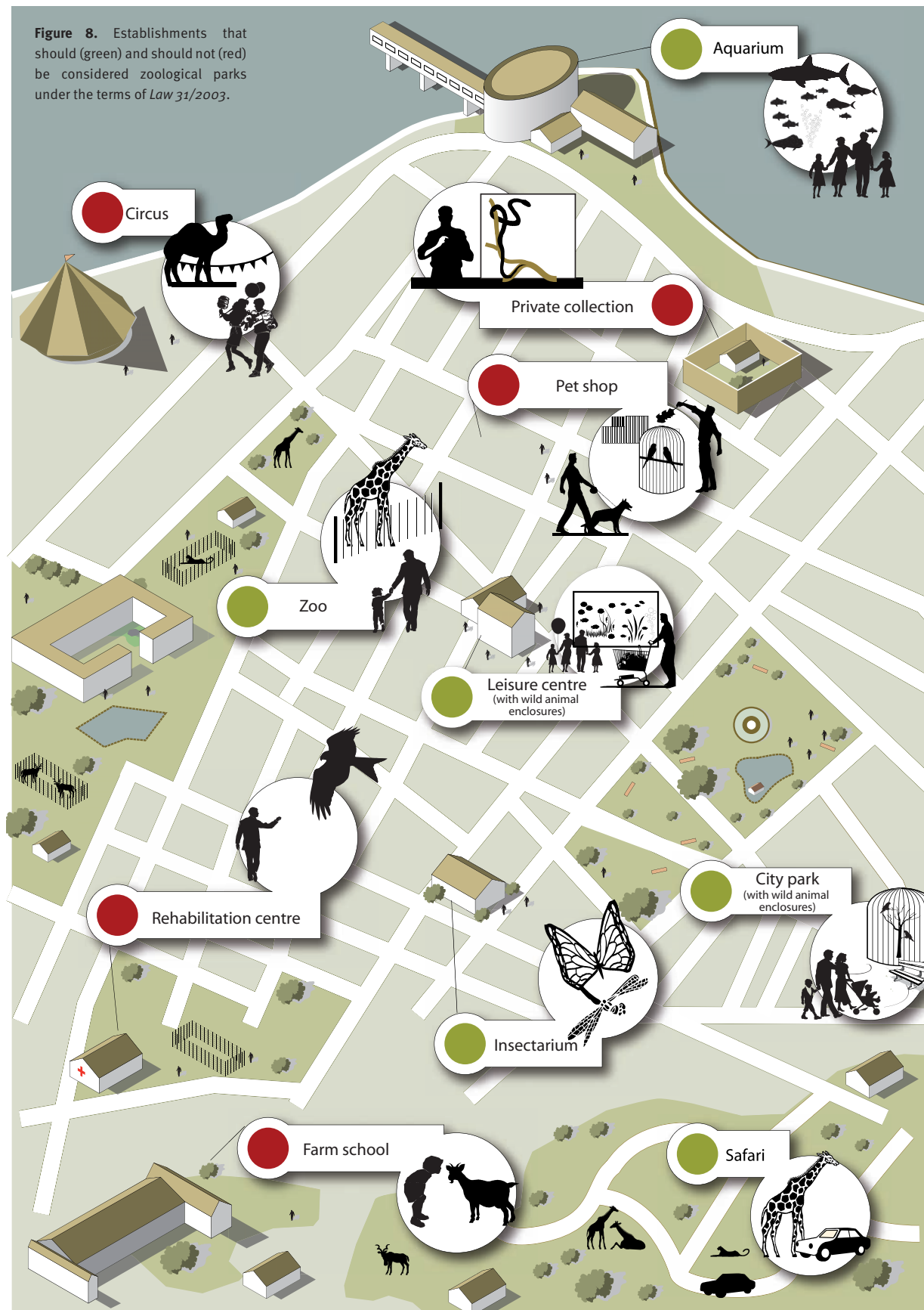
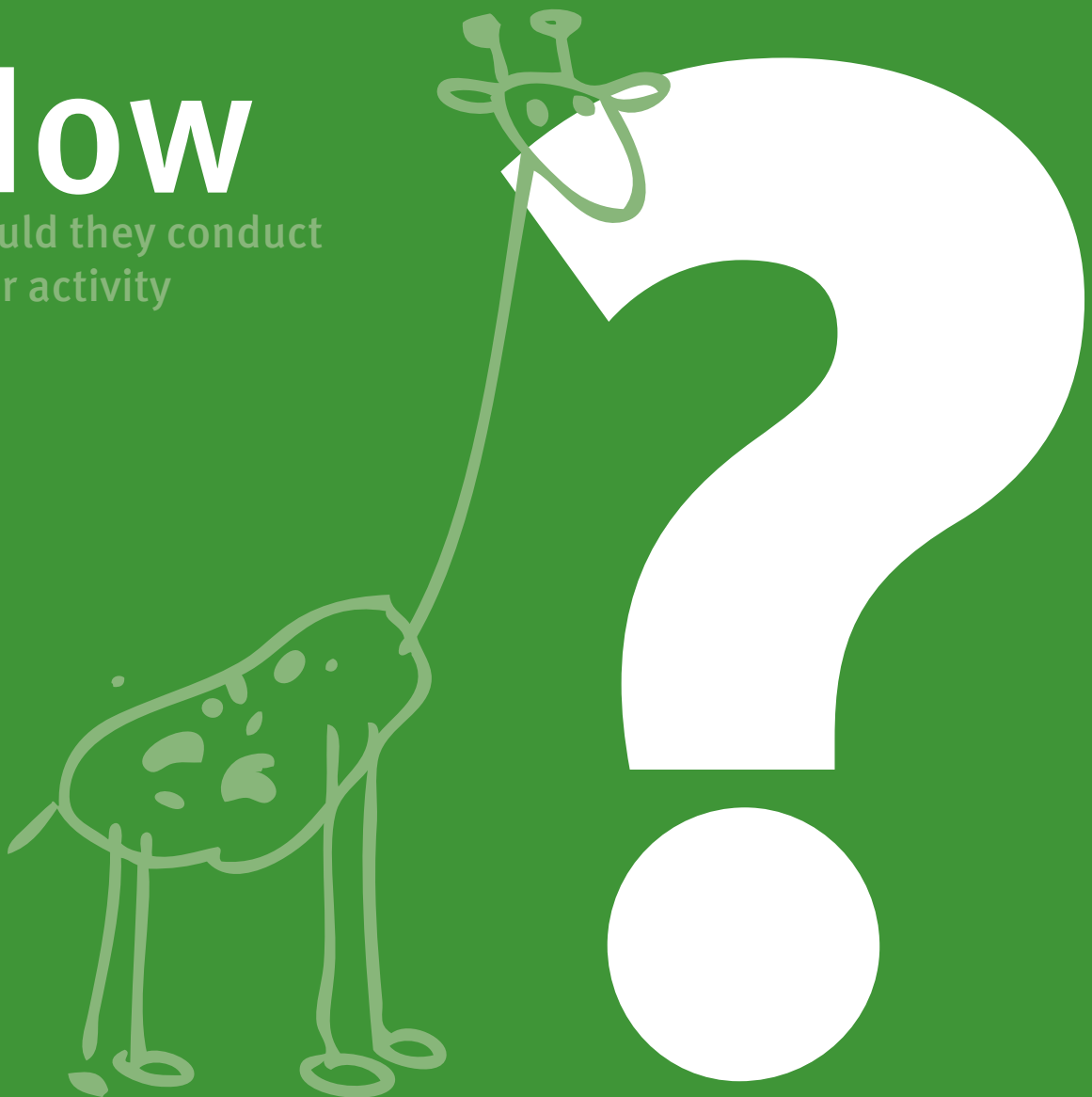


Figure 8. Establishments that should (green) and should not (red) be considered zoological parks under the terms of *Law 31/2003*.



How

should they conduct
their activity



Animal welfare

One of the primary objectives in the management of any zoological park should be to promote the welfare of the animals housed. Of the two reasons supporting this statement, the first and most evident is of an ethical nature: the animals housed in zoological parks are directly dependent upon our care, due to which, we have the moral obligation to ensure their welfare and satisfy all of their biological needs. The second is simply practical: decades of research have provided consistent findings of the close relationship between an animal's welfare and its effective functioning as a biological system. In other words, a poor state of welfare not only reduces an animal's survival and reproductive capabilities, but also makes it more difficult to achieve the conservation purpose for its captivity.

Ensuring the welfare of animals kept in zoological parks involves more than providing for good nutrition and disease control. While these are certainly important factors, animals have many other biological needs that are equally important to their welfare. Of the many that could be cited are the needs for an appropriate social environment (this includes both group size and social structure), sufficient space for adequate physical exercise, the ability to predict and control social and physical variables (e.g. physical proximity to congeners, place and time of feeding, etc.) and the existence of visual barriers, resting areas, alternative escape routes, etc. Fulfilling this long list of needs benefits the animal by enabling it to more successfully adapt to the changes and challenges of its environment in a way natural to its species. It is ultimately a question of giving the animal greater control over its environment.

What are environmental enrichment programs and what purpose do they serve?

Only a few decades ago, zoological parks were characteristically non-complex environments, lacking in appropriate stimuli to enable the species of animals they housed to express a full range of typical behaviors. They were overly predictable environments (due to a lack of novelty or variation in daily routines), where animals were frequently housed in small enclosures that restricted their range of movement, and their ability to choose when or what they ate, where they slept or who they associated with. These were circumstances that not only compromised animal welfare, but also the very function of zoological parks. With the recognition of these facts came the realization that

Article 3. Prophylactic and environmental animal welfare measures.

“Zoological parks are obligated to comply with the following prophylactic and environmental animal welfare measures, and with those established by the autonomous communities:

- a) Accommodate animals under conditions which aim to satisfy their biological and conservation requirements.
- b) Provide species specific environmental enrichment in the facilities and enclosures where they are housed in order to diversify the interactive behaviour of the animals with their environment, thus enhancing animal welfare and survival and reproductive capabilities. (...).”

Additional provision two

Conservation measures for non-wild animals.

The conservation measures laid down in Article 3 of this law that are applicable to wild fauna living in zoological parks are also applicable to any non-wild captive fauna living in zoological parks.

changes were needed in zoological park enclosures and handling techniques, the goal being to create more naturalistic environments (i.e., enclosures more closely replicating the physical and social environment of the species in the wild), so as to minimize the potentially adverse effects of captivity. Essentially, this meant adapting the conditions of captivity to the needs of the animals, rather than adapting the animals to the constraints of captivity.

The changes that can be made to the environmental conditions experienced by an animal living in captivity, that ultimately serve to enhance its functioning as a biological system, are known as *environmental enrichment*.

Of the multiple possibilities for providing environmental enrichment to captive animals, a short list of these options would be the inclusion of: structures and devices that provide individuals with opportunities for exploration and manipulation; structures that serve as visual barriers, alternative escape routes, refuge and resting areas; changes in the size and structure of social groups; the development of training programs that promote the acquisition of behaviours that increase the survival of animals freed into the wild. This broad range of actions is generally known as *enrichment techniques*, which are usually grouped as follows: *structural* (size, design and complexity of enclosures), *social* (group composition and size) and *instrumental* (feeding tubes, artificial prey, biologically relevant sounds, resting platforms, etc.) *enrichment techniques*.

In order to be effective, environmental enrichment techniques should be employed within a

comprehensive program of actions geared to address the specific problems and needs of each situation, otherwise the actions taken could fail to make a real contribution to promoting animal welfare and behavioural competences.

Figure 9 shows the steps that should be followed in the planning and implementation of an environmental enrichment program. Here we would highlight two fundamental aspects: the need to establish clearly defined objectives for the enrichment program (which is impossible without a prior situational analysis of the facilities to be improved). The second refers to the evaluation of the results achieved after implementation of the alternatives selected (otherwise it would be impossible to determine the extent of successful achievement of the objectives).

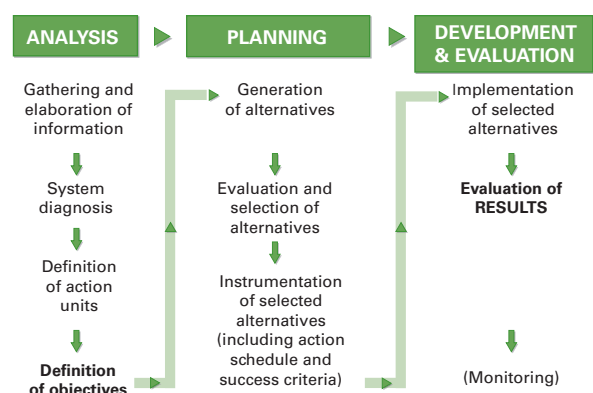


Figure 9. Steps to be followed in the planning and implementation of environmental enrichment programs. (Guillén-Salazar, 2002)¹

Environmental enrichment techniques are currently providing other equally important and legitimate benefits beyond the original purpose of promoting greater animal welfare. For

(1) Guillén-Salazar, F. (2002). El papel de los parques zoológicos en la conservación de los primates: un reto para la etología. In: *Primates: evolución, cultura y diversidad*. (J. Martínez and J.J. Veà, Eds.), pp. 227-252. México: Centro de Estudios Lombardo Toledano.

example, enriching the environment of a captive animal helps it reproduce more successfully. There are two reasons for this: on the one hand, captive animals housed in appropriate social and physical settings find these conducive to the expression of reproductive and parenting behaviours, which leads to higher reproductive success; and, on the other hand, since their offspring are raised in an appropriate environment, conducive to the development of typical adult behaviour patterns, offspring tend to become viable reproducers themselves. Similarly, when animals are housed in social groupings like those of their natural habitat, they tend to exhibit a broader range of natural behaviours that makes their observation much more interesting to the public, without compromising the conservation value of the colony. This shows, despite occasional arguments to the contrary, that animal welfare and conservation are not necessarily conflicting propositions. In fact, the measures adopted to promote animal welfare lead to higher survival and reproduction rates, and so make it easier for modern zoological parks to comply with the conservation tasks that they should assume. Well-planned environmental enrichment programs are ultimately beneficial because they give animals greater control over their environment. The enhanced physical and social complexity provided by enrichment techniques will enable animals to more successfully cope with environmental changes and challenges, in a way habitual for its species. In summary, the idea is to imitate naturally occurring settings where animals have two essential elements at their disposal, the absence of which may compromise their survival and reproductive capabilities. These are: a resource rich environment (food sources, social support networks, alternative escape routes, places of refuge, nesting materials, etc.)

and *the freedom to use those resources* in the most appropriate manner at any moment.

Parameters defining the environmental quality of enclosures

The criteria followed in the construction of the animal enclosures at zoological parks can vary greatly (depending on the space available, the species and number of individuals to be housed, degree of naturalized setting sought, etc.). Regardless of the design and construction materials chosen, when evaluating the quality of the environment as experienced by captive animals, it is highly useful to ask seven basic questions:

Does the enclosure have the space and structural elements appropriate to enable performance of every type of locomotion specific to the species? With the exception of sessile species (e.g., anemones, sponges, etc.), animals have developed a variety of means of locomotion (walking, flying, climbing, swimming, diving, jumping, digging, etc.). Normally, each individual animal needs to use more than one type of locomotion. The physical characteristics and typical behaviours of the species should be taken into account when evaluating the space available for animal movement. For example, certain avian species (e.g., vultures) require lengthier enclosures to enable flight and landing. Many aquatic species (e.g., fish, cetaceans) need a certain volume of water to enable them to turn about. In addition to space, enclosures should provide animals with the structural elements they need to execute these movements. These can be highly diverse (e.g., trees, branches, ponds and lagoons, elevated platforms, underground lairs, etc.).

Do the space and structural elements provide for suitable resting spots? The response to this question requires prior consideration of the physical characteristics of the animals and their typical behaviour patterns (e.g. tree-dwelling primates need resting spots set above the line of vision of the public; pinnipeds need dry surfaces that are easily accessible from the water; hippopotami need ponds deep enough for full submersion; birds of prey need high perches that are thick enough to prevent self-injury due to claw overlap, etc.). The number and distribution of resting sites should be commensurate with the number of individuals housed in the enclosure. In other words, a group enclosure should provide a sufficient number of suitable resting sites to allow simultaneous repose of the entire group.

Is the environment reasonably free of risk and nuisances? In choosing the location and technical aspects of an enclosure, care should be taken to avoid ongoing nuisances (e.g., continuous vibrations or loud noises) and risks (e.g., poorly protected incandescent lights and electrical installations, protruding wires on metal fencing, overly abrasive flooring, presence of potentially toxic substances, forgotten tools, accumulated food remains, feces, or exterior waste, etc.) that could pose physical and health hazards to animals.

Do enclosure conditions guarantee the animal's feeling of safety from the public and other animals? Animals should always feel protected from the public and from other animals posing a potential danger to their species (e.g., clearly incompatible members of their own species, potential predators, etc.). For this, they must have visual barriers (e.g., bushes, rocks, elevated platforms, refuges, etc.) and buffer zones (e.g., providing sufficient distance) to help them gain

an acceptable feeling of safety. The number of visual barriers should be sufficient to enable simultaneous use by all individuals housed in the same enclosure. Multi-species enclosures should only be used to house species that have the same environmental requirements, but different ecological niches and dietary needs. Potential predators and prey should never be housed together. When such species must be kept in close proximity, they should be separated by barriers that, at least, impede visual contact.

Does the animal have a reasonably suitable social environment? One general rule is to avoid housing animals from highly social species in isolation. The demographic characteristics of the groups formed (i.e., number of individuals, gender and age distributions, etc.) should be reasonably similar to those expected to be found in the wild (taking into consideration the degree of social flexibility of each species). To facilitate the group's handling of social conflict, enclosures should provide alternative escape routes, visual barriers and other suitable environmental resources. Animals belonging to "loner" species, that (temporarily or permanently) share an enclosure with the same species will need sufficient access to the structural elements described, and enough space to keep comfortable distances (very important in the case of highly territorial species). If this is not possible, these animals should be housed individually.

Do enclosure conditions enable the animal to maintain body temperature within an appropriate range of variation? There are two basic ways to provide the temperatures needed by a captive animal. The first is to keep it in a closed environment (e.g., aquarium, insectarium, terrarium, etc.) equipped with a thermostat for artificial temperature regulation. A second possibility is to create different thermal

gradients within the enclosure to allow the animal to regulate its own body temperature. Thermal gradients can be set up by including warm spots (e.g., heaters, lamps, areas with sun exposure, etc.) and cool spots (e.g., trees, structures providing canopy-like shade, pools, ponds, etc.) in the enclosure. The choice of

format depends on the biological needs of the species, and on the geographical location of the zoological park. Special attention must be paid to species requiring stricter temperature controls (e.g., insects, tropical fish, reptiles, New World primates, etc.).

HOW TO KNOW IF A ZOOLOGICAL PARK IS SUCCESSFUL AT PROMOTING THE WELFARE OF ITS ANIMALS?

Evaluations of animal welfare are based on indicators derived from knowledge of the biology of the species. It is highly recommended to have an understanding of the strategies that the animal uses when facing environmental challenges, and of the signs that its attempts to cope may be failing. In brief, high states of welfare are typically associated with compliance with the broad range of indicators cited below. The higher the number of indicators complied with, the higher the probability of a good state of animal welfare.

- Capacity to exhibit behavioural patterns specific to the species in appropriate situations
- Absence of qualitatively and quantitatively abnormal behaviours
- Capable of predicting and controlling principal physical and social variables of environment (e.g., distance from congeners, place and time of feeding, etc.)
- Reasonably low physiological stress response hormone levels (especially glucocorticoids)
- Effective response to immunological challenges
- Absence of wounds, bodily injuries and other possible sources of pain
- High rates of reproduction and offspring survival
- Long life-expectancy
- Other indicators based on biological knowledge of the species

Is there sufficient water supply and environmental humidity? Depending on the species, the water sources supplied (regardless of physical presentation) can serve a variety of purposes, such as drinking water, a more or less permanent living environment, or an environmental resource enabling certain activities essential to the species (e.g., grooming, feeding, body heat regulation, construction of refuges, etc.). The salinity of water for aquatic species (e.g., fish, aquatic invertebrates, cetaceans, etc.) should be similar to that of their natural habitats. Proper management systems (e.g., filters and oxygenation systems) are needed to maintain water quality and allow adjustments to meet the specific needs of each species and zoological group. Aquariums should keep a log of the periodical water quality testing conducted. Semi-aquatic animals (e.g., anurans, penguins, pinnipeds, hippopotami, etc.) need both dry and wet zones. Terrestrial animals need continuous access to sufficient amounts of clean and fresh drinking water, and should also have access to ponds that enable biologically relevant activities (e.g., grooming, body temperature regulation, etc.). When the species so requires (e.g., terrestrial arthropods, New World primates, semi-aquatic amphibians, reptiles, etc.), enclosures should also be equipped with appropriate humidity regulators.

Safety of enclosures

Article 3. Prophylactic and environmental animal welfare measures (Cont.).

“Zoological parks are obligated to comply with the following prophylactic and environmental animal welfare measures, and with any that may be established by the autonomous communities:

- c) Prevent the transmission to zoo animals of outside pests and vermin, and by zoo animals to species outside the zoo.
- d) Prevent the escape of animals, particularly of potentially invasive species, in order to prevent potential environmental threats to, and the genetic alteration of, indigenous species, subspecies and populations, habitats and ecosystems.”

Additional Provision One

Public safety measures.

- “1. Without prejudice to any other applicable legislation, in order to prevent health and safety risks to the visiting public and park personnel and to prevent animal escape, zoological parks shall establish specific safety measures for the general facility and for each animal enclosure, with these latter being determined based on the characteristics of the species housed.
- 2. For particularly hazardous animals, a permanent monitoring and control system supervised by qualified zoo personnel shall be implemented. Clear and legible signs shall be permanently posted to inform and warn the visiting public.”

Zoological parks should be safe environments. In the context of *Law 31/2003*, safety is not limited solely to the obligation of keeping animals in conditions that avoid risk of injury or disease for the public and staff. Damage to the environment must also be avoided. For this, zoological parks must take proactive steps to prevent the escape of any of the specimens in their collections (particularly those of potentially invasive species), and prevent the potential spreading of pests and parasites outside the confines of the zoo. These safety requirements are mandatory for every zoological group housed in the park, regardless of the type of enclosure in which they are housed. For example, while the escape of an exotic species of butterfly does not constitute a threat to public health, it could lead to the propagation of pathogens and parasites in local Lepidoptera populations, or to the colonization of natural habitats or crops. These are events that could ultimately cause immeasurable ecological and economic damage.

Although it is impossible to enumerate every single measure that a zoological park can adopt to comply with the previously mentioned security measures, there are some basic measures that should be adopted by every zoological park. The first and most obvious of these is the existence of a physical barrier around the perimeter of the zoological park that impedes, to a reasonable extent, the escape of the specimens in its collection (including via drainage pipes or other water lines). Second, there should be a waste water treatment system that keeps effluents containing pathogens, parasites, and any other potentially hazardous biological material (seeds, larvae, fragments of aquatic plants, etc.) from reaching the exterior. In this regard, all zoological parks with aquaria, particularly those located near the coast, must observe strict safety precautions. Third, zoological parks should have an emergency reaction plan in place for the escape of potentially dangerous animals. The plan should specify the protocols and actions to be taken in case of escape (animal capture, public protection, perimeter lock-down, police notification, etc.) and the chain of responsibilities for these. Easily accessible and clearly marked first aid equipment is also needed, along with any appropriate antidotes. One last general rule is that none of the zoo animals, including domesticated species, should ever be allowed to roam freely within the perimeter for any reason – including reasons of programmed entertainment.

What makes a safe enclosure?

The construction criteria followed for enclosures to house a zoological collection may vary greatly. Regardless of the design and construction materials chosen, asking the following three basic questions can be highly useful in evaluating the safety of an enclosure:

Is there a complete physical barrier, sufficient to prevent escape of the animals housed in the enclosure (including through waste water drainage systems, water filtration systems, and generally any orifice, opening or valve forming part of the overall structure)? When designing

barriers, the physical strength, behaviour, and cognitive abilities of the animals housed must be taken into account. For example, digging animals could escape from enclosures with soft soil and shallow barrier foundations. Likewise, uncontrolled vegetation growth in the enclosure could pose an escape route for climbing animals. Enclosures housing flying (e.g., insects, birds, chiropters), climbing (e.g., primates) or especially dangerous species (e.g., large carnivores) that allow entry by the public (whether pedestrian or closed vehicle drive-through) should be double-gated to prevent accidental escape. The space between the gates should be sufficient to allow complete closure –front and rear— during the entry of persons or vehicles. For enclosures housing other types of animals, if the public is allowed to enter, these must have at least one entrance and one exit, each under the constant supervision of qualified staff. Accidents that could damage or partially destroy enclosure barriers are to be avoided (e.g., falling of unstable trees in the proximity, collapse of walls in poor state of repair, etc.).

Could the public come into direct physical contact with the animals, either through the protective barrier or inside the enclosure? The outer

facade of the enclosure should have stand-back barriers or other protection systems to prevent physical contact between animals and the public (including head and extremities). The design of barriers or fencing should be appropriate for public containment, with no gaps that could enable entrance by zoological park visitors, particularly children. Drive-through enclosures holding dangerous animals (e.g., large felines) should apply the following safety regulations: posting of clearly visible and legible signage listing visitor safety rules (these must at least instruct visitors to remain in the vehicle at all times and keep windows closed); rescue vehicles manned by zoo staff prepared for immediate intervention; towers and other observation points from which security staff monitor vehicle movement inside the enclosure; double gated entrance and exit; one-way only vehicle routes to prevent accidents. The enclosures housing dangerous animals should be posted with clear, legible warning signs to inform the public.

Could the animals in the enclosure be set free by the public? Animals can be released either directly

(e.g., capture and removal from the enclosure) or indirectly (e.g., opening of unlocked doors or windows not under the direct uninterrupted supervision of zoological park staff; dismantling of mesh, fencing, or other contention systems; etc.). The staff should keep the visiting public under direct and continuous supervision at all times.

Task planning

Article 4. Programs.

Zoological parks are obligated to design, develop and implement the following programs, as well as any programs established by the autonomous communities:

a) “*Ex situ*” conservation programs of wild fauna species.

These take place outside the natural habitat, due to which the focus should be on contributions to the conservation of biodiversity, and include one or more of the following activities: (1) participation in a scientific research program from which conservation benefits accrue to the species; (2) training in species conservation techniques; (3) exchange of information relating to species conservation with zoos and public or private bodies involved in species conservation; (4) participation, when appropriate, in captive breeding programs for the repopulation or reintroduction of species into the wild, or for species conservation.

b) Educational programs to raise public awareness relating to biodiversity conservation, that includes the following activities: (1) information on the species exhibited and their natural habitats, particularly denoting the degree of threat ; (2) education of the public on the conservation of wild fauna and of biodiversity in general; (3) collaboration, where appropriate, with other public and private entities in specific education and awareness actions on wild fauna conservation.

c) An advanced veterinary care program that includes:

(1) implementation of measures to prevent or reduce exposure by zoo animals to pathogens and parasites, reinforce their immune systems, and prevent injury or intoxication; (2) medical attention for sick animals, using appropriate veterinary and surgical treatments, and routine veterinarian examinations of healthy animals; (3) an adequate animal nutrition plan.”

For effective performance of the tasks required of zoological parks, zoological park management must start with clearly planned objectives and, from these, define the actions that should be implemented.

Under *Law 31/2003*, zoological parks in Spain are now required to have an *ex situ* conservation program for wild fauna, a program to educate and raise public awareness on biodiversity conservation, and an advanced program of veterinary care. The design, development and implementation of these three programs is mandatory for all zoological parks, regardless of their size or individual characteristics.

While the Law contains a list of the type of activities to be included in each of these programs, it does not provide a standardized format to serve as guidance in their design. This allows zoological park management a certain amount of freedom to adopt the format best suited to the interests and needs of their zoological park, provided it is approved by the competent authorities in their Autonomous Community. Regardless of the format chosen for the programs (without prejudice to autonomous community legislation), there are two basic recommendations that every zoological park should bear in mind during program design. The first is to start with a clear and concise definition of general and specific program objectives, which should reflect, as closely as possible, both the spirit and the letter of *Law 31/2003*. The second, which is equally important, is that programs should specify the use they will make of the zoo’s collection, the schedule for performance of the actions, and the human and material resources to be used.

Once established, the conservation, educational, and veterinary care programs become powerful internal and external evaluation tools. On an internal level they guide the allocation of budget items, the planning of the zoological collection, the organization of the material and human resources available, the improvement of enclosures and the handling

techniques employed, etc. On an external level, they facilitate the licensing and inspection processes that must be done by the Autonomous Communities (since they enable an evaluation of the interest of the objectives proposed, and aid in estimating the level of compliance with these) and they also improve the zoological park's relations with society (due to the greater clarity and transparency of objectives).

Key aspects for the development of conservation and education programs

Prior to the enactment of *Law 31/2003*, the legislation passed on wild fauna in zoological parks had dealt almost exclusively with health-related requirements, and, more recently, with animal welfare. It should therefore come as no surprise that many of Spain's zoological parks already have veterinary care plans and programs (cleaning and disinfection of enclosures, routine examination of animals, nutrition, vaccination, parasite and pest control, etc.) that more or less meet the requirements of the new Law. However, the same cannot be said of the tasks involved in conservation and education programs. Unlike the veterinary care programs, the conservation and education requirements are entirely new, and have undoubtedly obligated many Spanish zoological parks to refocus their activities in these areas. A brief discussion follows of some of the questions to be considered in the planning of these two programs.

One of the greatest virtues of the Law is its intent to foster, for the first time in Spain, the active involvement of zoological parks in biodiversity conservation. It also stimulates the need for zoological parks to set down in

writing their intended terms of participation (the conservation and education programs) and to make a commitment to compliance. The activities performed by a given zoological park can be highly diverse: captive breeding programs, educational projects and scientific research, fundraising for *in situ* conservation projects, sheltering animals confiscated by authorities, guided tours of the zoo, courses and seminars, conference series, talks in elementary and middle schools, collaboration on radio and television programs, informational books and brochures, etc. A zoological park can become involved in these activities by providing infrastructure and personnel, permitting the use of its zoological collection, or by helping to defray the expense incurred.

A review of the activities in which a zoological park is involved provides valuable information on its degree of commitment to the educational and conservation objectives established by the Law. In this sense, it would seem reasonable to expect a quantitatively greater contribution by zoological parks with the largest collections (as measured by number of species and specimens), a reasoning that should serve to discourage zoological parks that simply "collect" animals. Similarly, the greater the conservation interest of a zoological collection (regardless of size), the greater the need for that zoological park to be involved in activities directly aiding in its conservation (such as captive breeding programs, scientific research, etc.). Bearing this in mind, zoos must be capable of demonstrating to society (and of course to the competent public authorities) that they are making effective and efficient contributions to such activities, in keeping with the spirit and letter of the Law. For these reasons, it is advisable for zoological parks to keep a detailed and current record of the activities in which they participate.

A modern zoological park cannot perform its activity without a broad network of contacts with other scientific, conservation, educational and professional institutions. These contacts can be useful sources of specialized technical consultation (taxonomic determinations, veterinary procedures, etc.), information exchange with similar institutions (captive breeding programs), coordination of educational activities (school visits, university internships, etc.), and related activities. To the extent possible, the network contacts established by a zoological park should be formalized in signed collaboration agreements, whether these are for open-ended collaboration, or for specific short-term actions. The advantage of setting down the contacts established in a written document is that it leads to a more precise definition of the objectives pursued in the collaboration, and of the contribution expected of each of the signatories.

What are captive breeding programs and what purpose do they serve?

Despite the undisputed need for policies on the protection and sustainable use of natural ecosystems, these are not always sufficient to ensure the survival of species of wild fauna in danger of extinction. This is particularly true for the wild populations whose size has diminished, since they are more vulnerable to extinction due to problems such as the loss of genetic diversity, the breakdown of social structures, and random demographic and environmental impacts. In such cases, direct intervention on the size and dynamic of the wild populations is needed. For this, two different strategies can be followed. The first, which is known as *reinforcement*, consists of supplying a population with new individuals in order to increase its size. The second, which is

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1. The educational role of an AIZA zoological park or aquarium should be clearly specified in its mission statement.
2. Every AIZA zoo and aquarium must have a written education policy for the general public, and a program of specific extra-curricular and complementary activities adapted to school curricula, including content on Biology, Sustainability and Conservation.
3. Every AIZA zoological park and aquarium must have the space, equipment and bibliographic materials to suitably conduct its educational activity.
4. At least one staff member within the institution should be responsible (ideally, on a full time basis) for the professional implementation of the education policy.
5. All animals should be clearly and correctly identified, and reasonably representative signage provided on flora. Signage should indicate the status, threats and conservation measures, breeding programs, and sustainable development measures.
6. The Education Department should set the content guidelines for any public demonstrations using zoo animals, which must always contain a conservation message and respect the identity and integrity of the animals.
7. For education and interpretation programs to be successful, zoological parks and aquariums must exhibit animals in the best of conditions, in enclosures that enable them to live as naturally as possible and to exhibit behaviours typical to their species.
8. Interpretation and education should be an integral part of AIZA zoological park and aquarium exhibits. Educators should be involved in the exhibit and collection planning processes, and in the training of all personnel working directly with the public.
9. There should be a commitment to active participation in the campaigns and actions proposed by AIZA to all zoological park and aquarium members, assumed in the number and intensity possible for each case. For this, all members will have the institutional support of the Association.
10. The education project should include specific materials for both formal and non-formal education. A reference library should be maintained and made available to all staff members, and when possible, to the public.

known as *reintroduction*, involves establishing a new population in an area where the species had previously existed, but from which it has since disappeared. Although in both cases the animals translocated might have been taken from other wild populations, they have usually been bred in captivity, a task in which zoological parks should be directly involved.

The basic philosophy of captive breeding for conservation is to attempt to establish a self-sufficient population that retains at least 90% of original genetic diversity over one hundred years or more, while also attempting to control the causal factors of the risk of extinction. The captive population, which may be distributed among several breeding centres (comprised of one overall *ex situ* population, or grouped by regional populations), should be viewed as an integral component of the *metapopulation* for which conservation in the wild is sought (**Figure 10**). For this reason, captive wild populations should be managed interactively, so as to maximize the span of existence. Given the above, zoological parks cannot, and should not, undertake the task of developing a conservation-based captive breeding program on their own. Just the opposite is true, since their work will only be truly effective when conducted within the framework of the strategies established by competent biodiversity conservation bodies, (such as the International Union for Conservation of Nature - IUCN), and national and autonomous community conservation policies.

If one of the main functions of captive breeding for conservation is the attempt to establish self-sufficient populations for their eventual use in reinforcing endangered wild populations, obviously, one of the priorities of zoological park management should be not only to maintain the

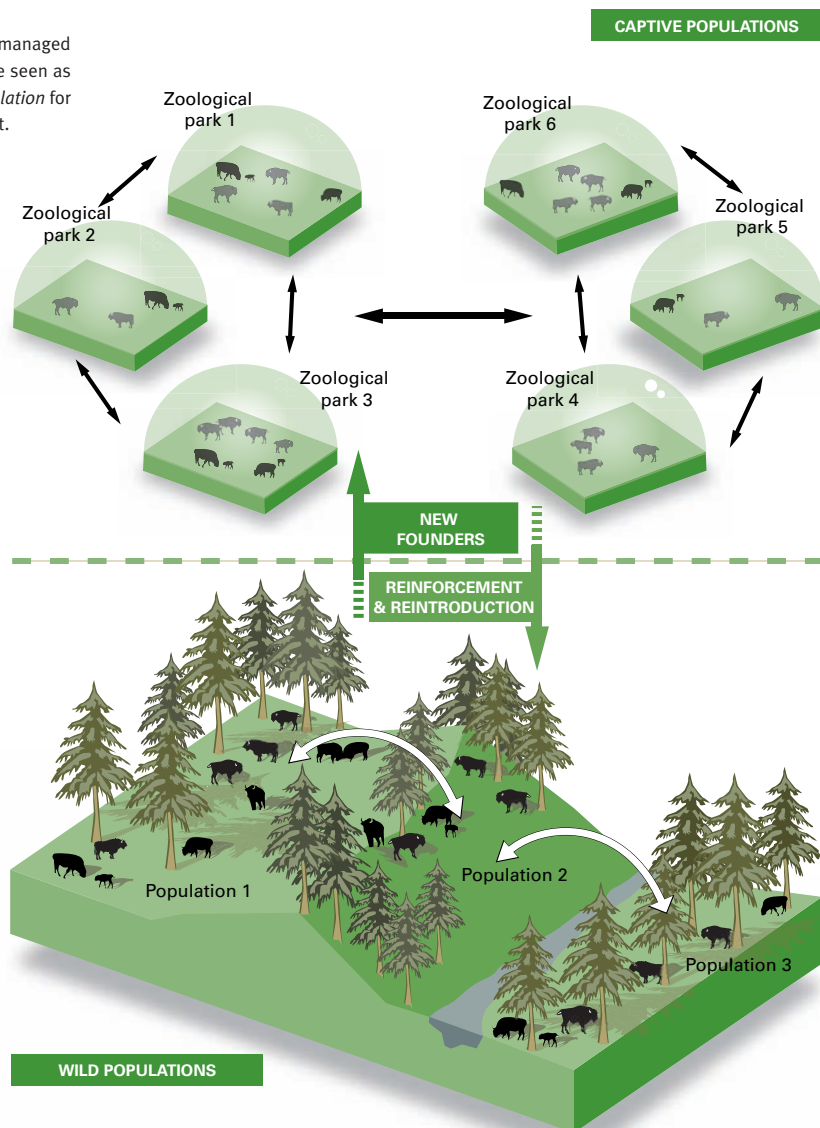
genetic diversity of the animals they house, but also to foster the development of their *behavioural competence*. The concept of *taxon* includes all of the behavioural aspects of an animal that, in one way or another, are important for its survival and reproduction in the wild. These include the ability to detect, recognize and flee from predators (and any other potential danger), efficiently exploit the trophic resources of its environment, breed and provide appropriate parental care, successfully manage social conflicts arising within groups, and a general capacity to exhibit, in appropriate situations, the species-specific behaviours that help maintain the effective functioning of the individual. Promoting behavioural competence in captive populations provides another benefit not to be disdained: observing the diverse and complex behavioural repertoires of animals exhibited in well designed enclosures is more attractive to the public, and so facilitates the task of knowledge dissemination.

While captive breeding as a tool for conservation is not without its controversies, the fact remains that animals kept in zoological parks (and in other conservation breeding centres) constitute our only hope of recovering a species whose wild populations have, or are about to, disappear from the wild. This has major implications for the choices made by zoological parks in the selection of zoological collections and reproduction management. First, zoological parks should make efforts to invest their material and human resources principally in individuals belonging to the wild fauna species of greatest local and global conservation interest. Good guidance in determining such interest can be found in the IUCN Red List, the Spanish Catalogue of Endangered Species, and the Regional Catalogues of Endangered Species established by the different Autonomous Communities, among other sources.

Barring a substantial reason for non-participation, the specimens of a zoological park collection should form part of one of the official captive breeding programs (i.e., programs promoted and supported by public administrations and by recognized conservation entities) that may exist for their *taxon* on autonomous community, national and international levels (e.g., European Endangered Species Programmes – EEP, wild fauna

recovery plans promoted by public administrations, etc.). Whether or not they participate in captive breeding programs for conservation, all zoological parks should avoid becoming what some term “animal menageries”, (i.e., an accumulation of animal species for the sole purpose of exhibition and commercial exploitation). They should also renounce the indiscriminate breeding of wild animals, and *taxon* hybridization.

Figure 10. The wild fauna populations managed in captive breeding programs should be seen as an integral component of the *metapopulation* for which conservation in the wild is sought.



Human and material resources

Article 5. Qualified personnel and material means .

“Zoological parks shall have the qualified personnel and appropriate material means necessary to apply the welfare, prophylactic, environmental and safety measures described in Article 3, and also those required for development and compliance with the programs described in Article 4 of this law. The staff and material means shall be those appropriate to serve the needs of the animal collections of the individual zoological park. Continuous training provided to the keeper staff shall be based on the evaluation of staff knowledge of the wild animals, their conservation, and particularly their welfare. “

For proper performance of the education and conservation tasks assigned, modern zoological parks are increasingly dependant upon a growing number of specialized materials and means. Some of these are essential and should be found in every zoological park (e.g., proper facilities for the storage and preparation of animal food, information panels on the species exhibited, etc.). Others are optional, and their presence or absence will depend as much on the type of work that a zoological park decides to engage in, as on its size and technical characteristics.

In addition to proper materials and equipment, zoological parks must have the right human resources for their needs. Regardless of the organizational structure adopted for personnel, zoological parks must have a competent *technical staff* that is capable of taking charge of both the care of the zoological collection, and of the performance of the activities planned in the respective conservation, education and veterinary care programs. A zoo’s technical staff needs the constant support of an equally competent *auxiliary staff*, in order to properly perform its duties. Auxiliary staff includes the keepers (whose jobs include animal feeding and enclosure cleaning), veterinary assistants, education monitors and any other staff member performing tasks in support of the technical team. And finally, a zoological park also needs *administrative and service personnel* to take care of daily operations (office, ticket booth, security, cleaning and gardening, health services for the public, etc.) Whatever the job category, a zoological park should be staffed by well qualified professionals, of sufficient number. Ideally, a well qualified employee should hold an academic qualification (provided such exists) related to the job performed, have additional training in the specific tasks associated with the job description, and have prior experience in that or a similar position. In any case, zoological parks should place special emphasis on the continuous training of their employees. For this, they should encourage employee participation in further training, either by granting permission for course attendance during working hours, or by paying for training.

What is the ideal technical staff profile of a zoological park?

Rising in tandem with the complexity of the work performed in modern zoological parks is the demand for qualified professionals to take charge of the planning, implementation, and evaluation of the conservation,

education, and veterinary programs. Regardless of the zoo's chosen organizational structure for technical staff, there are four categories of specialists that should be given consideration:

Technical director for planning, implementation and evaluation of the zoo's wild fauna *ex situ* species conservation program. Due to the technical nature of the duties involved, the professionals hired for this position should possess advanced knowledge of taxonomy and systematics, zoological nomenclature, evolutionary theory, population genetics, ecology, biodiversity conservation (*in situ* and *ex situ*), environmental legislation, and other. For this reason, it is recommended that they hold an academic degree in Biology (Zoology major preferred), and have post-graduate training in conservation biology.

Technical director for planning, implementation and evaluation of the zoo's education program. Due to the technical nature of the duties involved, the professionals hired for this position should possess advanced knowledge of group motivation and dynamics, learning techniques, cognitive processes (attention, perception, motivation, etc.), science teaching skills, and others. They should also possess a basic knowledge of zoology, ecology and biological conservation. Given the above, it is recommended that this person hold an academic degree in Teaching, Education, Psychology or similar, and have post-graduate teacher's training in zoology, ecology and conservation biology. Another equally recommendable alternative is that they hold an academic degree in Biology, Environmental Sciences, Veterinary Medicine, or similar, and have post-graduate training in Psychology and Education in the

sciences (and, where applicable, also in zoology, ecology and conservation biology).

Technical director for planning, implementation and evaluation of the zoo's environmental enrichment program. Due to the technical nature of the duties involved, the professionals hired for this position should have advanced knowledge of animal behaviour and welfare, environmental enrichment techniques, zoology, scientific methodology, and other. For this reason, in order to perform their duties, it is recommended that they hold an academic degree in Biology, Psychology or Veterinary Medicine, and have post-graduate training in basic and applied Ethology.

Technical director for planning, implementation and evaluation of the zoo's advanced veterinary care program. Due to the technical nature of the duties involved, the professionals hired for this position should have advanced knowledge of parasitology, preventive medicine, pathology, surgical and clinical medicine, propedeutics and nutrition, among others. For this reason, in order to perform their duties, it is recommended that they hold an academic degree in Veterinary Medicine and have post-graduate training in wildlife medicine and surgery. When the zoological collection contains invertebrates, fish, or any other zoological group not included in the curricula of university veterinary degree programs, persons with an undergraduate degree in Biology and post-graduate training and experience in the health care of the specific zoological group could also perform this job (Zoology major preferred).

When a zoo's size or technical characteristics make it unfeasible to hire specialized professionals for any of the four positions described, outside services should be used to guarantee the proper implementation of the

conservation, education and veterinary care programs required of every zoological park. These services may be covered through outsourcing contracts, or collaboration agreements.

Educational, veterinary and services equipment

Modern zoological parks rely on a growing number of specialized materials and means in order to do their work. The following are suggestions for some of the educational, veterinary and service resources recommended for every zoological park.

Species labels. While there is no standardized format for species labels, they should contain at least the following information: scientific and common name; natural habitat; geographical distribution; conservation status (including classification by the categories used in the IUCN Red List, the Spanish Catalogue of Endangered Species and regional catalogues of endangered species); additional information on any notable biological traits (e.g., mating, other behaviours, etc.). Each species should have at least one label. One exception to this rule is the labelling of groups housed together in complex enclosures (e.g., combined exhibits of fish species, aquatic invertebrates, butterflies, etc.). Label information should be correct, current, and visible to the public. Zoo managers should see to it that deteriorated and outdated labels are replaced.

Auditorium. A space for public events such as seminars, conferences, projection of documentaries, and other activities organized as part of the education program.

Library. A space for the consultation of reference materials, books, journals, videos,

and other technical and educational materials. The library should be open to zoo staff, and whenever possible, open to the public.

Web page. Regardless of the design chosen, a zoo's web page should always contain information on the following: current information on biological diversity conservation issues and the role assigned to modern zoological parks in the global conservation strategy; the specific objectives pursued by the zoological park within this strategy; basic biological information on the species in the zoological collection.

Bibliographic and audiovisual materials with additional information on the species in the zoological collection (e.g., information brochures, headphones and audio guides, etc.). These materials should be made available to the public at the entrance and at information points located within the grounds.

Interpretation points. These are information points located along visitor routes that provide additional information on interesting biological, and other, aspects of the species in the zoological park's collection. They include interactive monitors, information panels (not to be confused with species labels), etc.

Guided visits program. Regardless of duration, all guided visits should be part of the zoo's scheduled program of educational activities and conducted by a member of the education staff.

Examination and treatment rooms. The size and technical characteristics should be commensurate with the basic needs of the zoological park and the species in its collection. As a general rule, they should be set away from other zoological park facilities,

and located in buildings designed and equipped to suit to the purpose. All should have an examination and work table, hot and cold running water, heating, ventilation, lighting, and where needed, washable floors and walls, and an efficient drainage system.

Isolation facilities separate from exhibit enclosures. Animals may require isolation for a variety of reasons (e.g., examination and adaptation of new arrivals, provision of care during illness or injury, quarantine, etc.). The number, size, and technical characteristics of these facilities should be commensurate with the basic needs of the zoological park and with those of the species comprising its zoological collection.

Post-mortem facilities, (hygienic) cadaver storage/ disposal, and disposal of medical waste. Storage facilities should be equipped with (at least) a refrigerator and/or freezer used exclusively for cadavers, and standard sealable clinical waste containers. The resources allocated should be sufficient to meet the basic needs of the zoological park and ensure compliance with waste disposal laws. When possible, zoological parks should employ the services of a licensed waste disposal company authorized for the removal of animal carcasses and biological waste. If there is a necropsy room (i.e., a surgically clean room used only for post-mortem examination and sample processing), it should be physically isolated from other facilities (fish and invertebrate necropsies may be performed in the habitual examination and treatment rooms, provided that the requisite hygienic conditions are met). Zoological parks lacking a necropsy room should set aside sufficient resources to ensure that post-mortem examinations are performed by a qualified centre or institution.

Resources for chemical and physical immobilization of animals (e.g., dart rifles, blowpipes, transport cages, approach shields, etc.) These resources should be sufficient and appropriate for the species of the zoological collection.

Storage facilities for potentially dangerous or hazardous substances (e.g., drugs, antidotes, disinfectants, cleaning products, etc.). The physical space reserved for the veterinary medical supplies (e.g., room, cabinet, etc.) should be kept locked, and access restricted to authorized personnel.

Animal food storage and preparation facilities. **Except where justified** (e.g., insectaria) these facilities should be physically separate from those used for other purposes (e.g., veterinary facilities, etc.). Food stocks should generally be stored in a separate, dry environment to protect against spoilage, mould, and contamination by pests and other animals (e.g., insects, rodents, birds, etc.).

Facilities and resources for water quality testing, analysis, and maintenance of zoological park tanks and water systems. Among the water quality testing and analysis methods that can be used are digital monitors, colorimetric testing, selective ion analysis, and spectrophotometry.

Record keeping on the zoological collection

The maintenance of a complete and consistently updated registry of the individuals housed in the zoological collection is increasingly important for the management of modern zoological park. A good registry system is useful because it enables more efficient execution of the conservation, education and veterinary care programs, facilitates information exchange with other zoological park, and ultimately guarantees administrative monitoring and control of the animals in the zoological park collection (**Figure 11**).

Zoological parks should keep an open and consistently updated record on each individual in the collection, regardless of provenance (born at the zoological parks, transferred from another zoological parks, received from a public administration, private donation, etc.). Record keeping on adult and juvenile tetrapods, larger fish, and invertebrates is fairly easy, but for other taxonomic groups (e.g., small invertebrate species and teleost fish), it may be more difficult to determine the exact number of specimens in the collection at any given time. In these cases, a single file can be opened for the group rather than for its individual specimens. For asexually reproducing invertebrates, each pod should be counted as one specimen.

Article 6. Species and specimens registry.

- “1. Zoological parks shall maintain a current registry of all animals in their collections, adequate to the species and subspecies to which they belong. The registry shall include, at least, the entry and exit dates of animals, deaths and cause of death, births, origin and destination of animals, and the information required for animal identification and localization.
2. The identification systems employed shall be appropriate for the species identified, and if specific legislation exists, shall be the system prescribed by law. If individual identification is not possible due to the physical characteristics or behaviours of the species, the species shall be identified by group.
3. Registry data shall be readily available at all times to the competent autonomous community authority.”

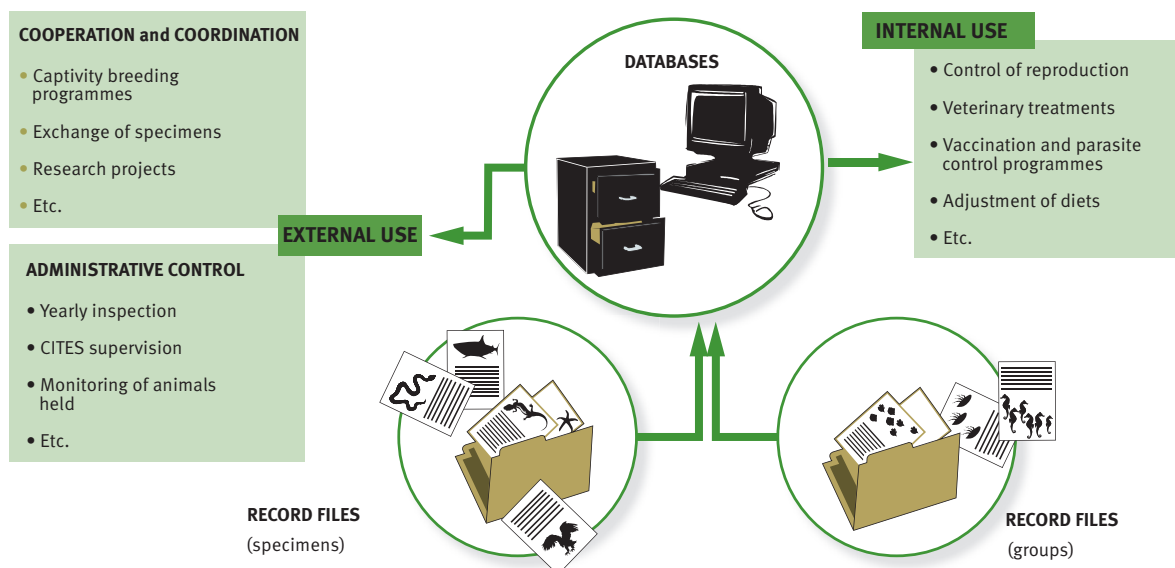


Figure 11. The proper identification and registration of the specimens in a zoological collection facilitates zoological park performance of programmed tasks, information exchange, and ensures correct administrative management of the animals.

Both individual and group record files should be stored in physical or electronic formats that enable rapid data access. The use of standardized software packages is recommended (such as the ISIS Animal Records Keeping System, or the more recent Zoological Information Management System). The zoological park should compile an annual year-end summary of the changes in size and composition of its collection. This summary may be a list of species that includes the following

data: scientific and common name, number of specimens in the zoological park's collection on the first and last day of the year, number of specimen births and deaths for the year, and the number of specimens received from and ceded to other centres. In all cases the number of males, females and individuals of unknown sex must be specified. The annual summary should be made consistently available to the competent authorities, thus contributing to closer administrative control of the animals.

Zoological parks SHOULD ...

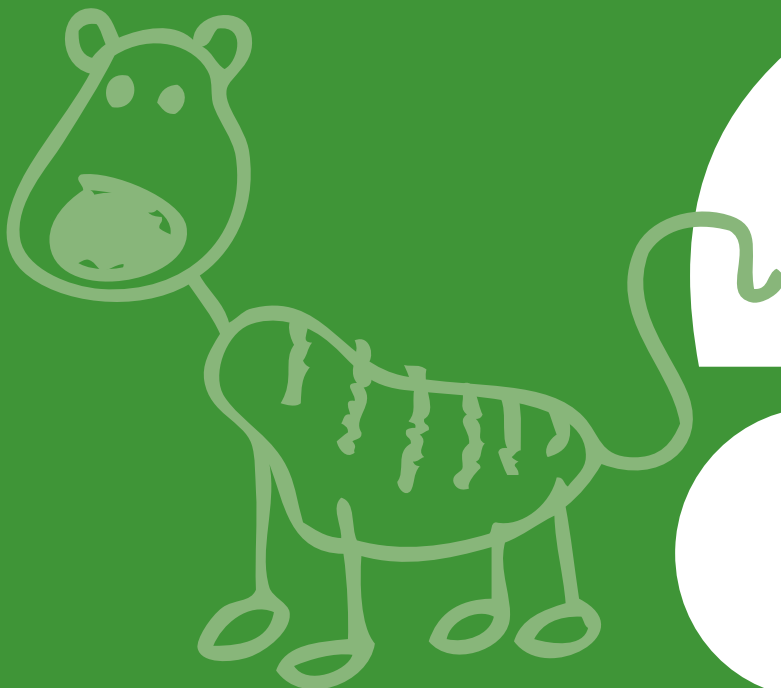
- Clearly define the general and specific objectives pursued in their activities (which should faithfully reflect the spirit and letter of *Law 31/2003*). They should also specify the use they wish to make of their zoological collections, the schedule foreseen for these actions, and information on the human and material resources to be employed.
- Strive to ensure the welfare of the animals housed in their facilities, regardless of species, provenance or destination.
- Actively prevent the escape of specimens from their collections (particularly those of potentially invasive species), as well as the potential transmission of pests and parasites to the exterior. They should also keep animals and their enclosures in conditions that prevent risks of injury or illness to the public or to zoological parks personnel.
- Maintain complete and current records on the specimens of the zoological collection.
- Have a sufficient number of well qualified staff. Promote continuous training and further staff qualification.
- Have the appropriate material means necessary to apply the welfare, prophylactic, environmental, and safety measures described in Article 3 of this law, and also those required for the implementation of, and compliance with, the programs described in Article 4.
- Make efforts to participate in *ex situ* and *in situ* conservation programs, and in educational and research projects that benefit biodiversity conservation.
- Have current records on all activities performed (e.g., participation in projects, training courses, etc.) This information should be made consistently available to the inspection services of the competent public administrations.

Zoological parks SHOULD NOT...

- Become “animal menageries”, (e.g., accumulate species of animals, merely for their exhibition and commercial exploitation).
- Allow the hybridization of the *taxa* they house, or allow the “indiscriminate” reproduction (i.e., that serving no conservation purpose) of the specimens in their zoological collections.
- Consent to the use of their animals in entertainment or other activities that are clearly distanced from the educational tasks specified in *Law 31/2003* (e.g., photographs with the public, circus-like exhibitions, etc.).

Who

is involved



The role of public administrations

The Autonomous Communities - exercise of competences

Council Directive 1999/22/EC foresees that the Member States will designate the competent authorities for application of the provisions of the Directive. In compliance with this, and with the distribution of competences conferred under the Spanish constitution, Article 7.1 of *Law 31/2003 on the conservation of wild fauna in zoos* states that the inspection and licensing of zoological parks will be performed by the competent bodies of the Autonomous Communities. In accordance with the general principle of self-organization of public administrations, each Autonomous Community freely determines its own administrative structure, and the competences to be assumed, on a given subject matter, by each of its departments.

The inspection and licensing of zoological parks with regard to their consideration as zoological nuclei has generally been performed by the Autonomous Community departments holding competences in matters of livestock health. The reason for this was that prior to the passage of *Law 31/2003*, the legislation affecting zoological parks was primarily health and hygiene oriented. However, given the new conservation requirements for zoological parks, consideration should be given to involving departments with environmental competences, when evaluating zoo compliance with the measures and objectives of wild fauna protection and biodiversity conservation.

Under **Articles 148 and 149 of the Spanish Constitution**, within the framework of basic national legislation, the Autonomous Communities hold exclusive competences in matters of livestock health, in accordance with general economic planning, and environmental protection management.

In fact, *Law 31/2003* is a clear example of the **cross-cutting nature of environmental matters**, since, although it is a basic law of an environmental nature, it includes requirements encompassing health, education, public safety, and other areas, all of which must be evaluated from the perspective of the conservation objectives. Furthermore, when determining the principal competent body and applying the provisions of the national law, consideration must be given to the following: “... when a single provision encompasses various matters, by virtue of the principle of specificity, it should

Article 7. Licensing.

- “1. The opening to the public of zoological parks and any substantial modification or enlargement of facilities are subject to licensing by the competent body of the autonomous community where the zoo is located. This license does not exempt the zoological park from compliance with the other zoo licensing requirements applicable under law.
2. Prior to granting the license to the applicant, the competent authority will ascertain compliance by that zoological park with the requirements of Articles 3, 5, and 6, and with the programs prescribed in Article 4.
3. The license issued will set the specific conditions applicable to that zoological park, to ensure compliance with the terms prescribed under this law and those of the autonomous community legislation.
4. If the applicant receives no notification from the competent authorities within six months of reception by these latter of the license application, it is understood that the license has been denied.

Article 8. Inspection.

- “1. The competent authorities of the autonomous community shall conduct inspections of zoological parks to verify compliance with the conservation measures included under Chapter II of this Law, applicable autonomous community legislation, and the conditions specific to individual licenses. The competent authority of the autonomous community shall perform at least one annual inspection of each zoo within its jurisdiction, without prejudice to unscheduled inspections conducted in the normal performance of duty, or in response to complaints.
2. Zoo owners and employees shall enable the access of accredited inspectors to zoo facilities, and provide the information and assistance required for the inspection.”

identify the area of competence prevailing due to direct and immediate linkage, [such identification should be] based on a categorization of the material content of each individual precept, [and performed by] applying both objective and philosophical criteria, while in no case voiding the competences of other bodies.” *Legal Doctrine, Decision 102/1995 of the Constitutional Court*. In other words, it is the principal subject matter of the law regulating the activities of zoological parks that serves to determine the principal area of competence, and leads to the designation of the competent body in charge of license issuance, without prejudice to the competences of other departments in matters also affected by the legislation,

The **principal subject matter** of *Law 31/2003* is clearly defined in its stated purpose: the protection of wild fauna and the conservation of biodiversity, and therefore, **protection of the environment**. Consequently, it is deemed appropriate that the main competence be assigned to environmental departments, as the bodies charged with application of *Law 31/2003*, albeit without prejudice to the participation and collaboration of other departments with competences in other matters affected: animal health, animal welfare, public safety, education, scientific training and research, etc.

This was the procedure followed in the majority of the Autonomous Communities. Most have designated departments with environmental responsibilities as the bodies competent in matters of zoological park requirements, inspection and licensing, while foreseeing the participation of other departments, generally those with competences in animal health and public safety, which will issue

binding reports on matters falling within their respective areas of management. In a few cases, the designated body is a department with competences in matters of animal health.

The new licensing and inspection system

Chapter III of *Law 31/2003* describes the new licensing and inspection system, under which new requirements are made of zoological parks regarding not only their opening to the public, but also any substantial modification or enlargement of their facilities. **Licensing is mandatory**, which means that a zoological park may not open to the public or operate without a valid license, regardless of any other license or permit that it may hold in compliance with other legal requirements.

Once a zoological park has submitted a license application, **the competent authority is obligated to issue a decision** expressly indicating license approval or denial, and to notify the applicant of the decision. Upon granting a license, the authority must denote the specific conditions required for compliance; upon denying a license, the reasons for denial must be cited in the decision.

Before granting a license, the competent autonomous body should conduct a **Prior inspection** of the zoological park to ascertain due compliance with the “conservation measures” described in Chapter II. At least one **annual inspection** of zoological parks should be conducted to ensure continued compliance with the terms specified in the license.

AN EVALUATION INSTRUMENT FOR INSPECTIONS

The new licensing and inspection system required under *Law 31/2003* raises the question of the advisability of establishing standardized protocols that guarantee the efficiency and objectivity of inspections. If *Law 31/2003* is to effect a true transformation of Spanish zoological parks in the direction marked by *Directive 1999/22/EC*, the requirements it embodies must be well and concisely defined. For this, the protocol applied should include an evaluation instrument that facilitates the work of the Autonomous Community inspectors. In addition to facilitating the work of zoological park owners with establishments in more than one Autonomous Community, the adoption of an evaluation instrument using similar criteria would facilitate cross-coordination in the measurement of target achievement and compliance with national and EU legislation, (*Law 31/2003* and *EU Directive 1999/22/EC*, respectively).

Regardless of the format selected for performance of the inspections, and without prejudice to the provisions established in this regard by the individual Autonomous Communities, certain basic recommendations should be kept in mind when designing the evaluation tool proposed here. The first has to do with the advisability of basing the tool on objective and quantifiable evaluation indicators that are directly related to the requirements of the Law. Ideally, each of the requirements should be referenced to at least one indicator, and each indicator should be accompanied by its corresponding quality standard (established by the competent authority, to determine what is acceptable and what is not). To make its use feasible, the set of indicators contained in the evaluation tool should be designed in a way that facilitates the rapid and reliable application by qualified, trained inspectors.

In addition to making it possible to evaluate whether a given zoological park is in compliance with the requirements of *Law 31/2003* (highly useful when granting or denying the corresponding license), the use of an evaluation tool based on quantifiable indicators helps to pinpoint the variables where the problematic areas of an establishment are concentrated, and consequently, to propose adequate and specific remediation measures (something that is particularly useful for the periodical inspections required under the Law).

One last point to bear in mind is that the development of an evaluation tool of the kind proposed here could also prove beneficial to zoological parks, since it would enable them to perform self-evaluations, and with it understand their situation as regards the inspection process.

Spain's Ministry of Environment, Rural and Marine Affairs and the Universidad Cardenal Herrera (Valencia, Spain) collaborated in a study of the situation of zoological parks. In the study, a tool was designed to assess zoological park compliance with legal requirements, and was then made available to Autonomous Communities to serve as a consensus based tool that would serve as a common reference for their inspection work¹. Some Autonomous communities drew up their own inspection protocols using isolated aspects of the State's proposal, but there is not yet a consensus between the Autonomous Communities and the national government administration on a common tool or procedure for use in inspections.

(1) Guillén-Salazar, F. (2003). *Instrumento de evaluación para el estudio de la situación actual de los parques zoológicos en España*. Valencia: Ministerio de Medio Ambiente y Universidad Cardenal Herrera.

Article 9. Zoological park registries.

- “1. Autonomous communities shall maintain a registry of the zoological parks licensed in their respective territories, with current information on the animal collections housed in each.
2. For statistical purposes, the autonomous communities shall forward the data from their respective registries to the Ministry of Environment, particularly data regarding the animal collections kept by zoos.”

Article 10. National inventory of zoological parks.

“A National Inventory of Zoological Parks, reporting to the Ministry of Environment, is hereby established. This inventory will have an informative purpose and in it will be included the data provided by the competent authorities of the autonomous communities in fulfilment of their obligations under paragraph 2, article 9 of this Law.”

The zoological park registry

The first Official Registry of Zoological Nuclei was established in 1980, as a means of compiling and cataloguing information on the different animal groupings existing throughout Spain, including those of zoological parks. As mentioned earlier, this registry is now less than operational. It has become obsolete, and is currently pending updating, particularly since the establishment of the General Registry of Livestock Operations (REGA) in 2004. REGA is a national public registry, and registration is required of any zoological park housing animals listed in REGA Annex I under “production species”. In compliance with national animal health laws, each Autonomous Community is obligated to provide REGA with information on the livestock operations located and registered within its territory. The individual Autonomous Community registries of zoological nuclei have not ceased to exist, but in many cases, they have been incorporated into the new registries on livestock operations, in order to maintain a single registry on zoo sanitary matters.

For its part, *Law 31/2003* mandates that Autonomous Communities keep an updated registry of all of the zoological parks that have been licensed in their respective territories (Article 9.1). As mentioned above, when zoological parks keep animals included in the category of “production species”, they must also register as a livestock operation. To avoid the duplication of registration and administrative procedures, one option would have been for the registry of zoological parks to reflect their status as both a zoological nucleus and/or livestock operation, in which case one administrative procedure would suffice to check compliance with the legislation on zoological parks, zoological nuclei and/or livestock operations. However, most of the Autonomous Communities still keep three working registries: livestock operations, zoological nuclei and zoological parks. In the national framework, the Official Registry of Zoological Nuclei, REGA, and the Spanish Zoological Park Inventory remain in force and are more or less operational. Of these three, due to REGA’s greater relevance within the European Union zoo sanitary framework, and to its plans to include a new section for the registration of non-livestock operations, it appears that REGA will become the national statistical database of reference for zoological groupings, in the broadest sense. But these ideas foreseeing the establishment of a unified national registry, which also require excellent national and autonomous community coordination, have yet to be put into practice.

The majority of the Autonomous Community registries of zoological parks have now been created. As required under articles 9 and 10 of *Law 31/2003*, their data must be forwarded to the Ministry of Environment, Rural and Marine Affairs, for inclusion in the Spanish Zoological Park Inventory, to which the latest available data is being incorporated.

The three areas of competence to be exercised by the Autonomous Communities in application of *Law 31/2003* are:

- **Legislative:** Regulation of licensing and inspection procedure, development of licensing requirements and creation of a zoological park registry.
- **Organizational:** Provision of the administrative structure and organization for enforcement of the Law. This includes, *inter alia*: designation of the competent licensing and inspection body; organization of the zoological park registry; provision of the resources required for inspections; and, when a zoo closure is ordered, provision of measures for the care and conservation of the animals it housed.
- **Informational:** Maintenance of a current zoological park registry, transmission of pertinent information to the Spanish Zoological Park Inventory, and of information on applicable legislation to the zoological parks within their territories

AUTONOMOUS COMMUNITY LEGISLATION PASSED IN DEVELOPMENT AND APPLICATION OF

- Andalusia: **Law 8/2003 on wild flora and fauna in Andalusia** (BOJA No. 218/2003 of 12 November) applies the definition of zoological parks given in Law 31/2003. In Article 11, it designates the Department of Environment as the competent regional body to authorize the opening of zoological parks meeting regulatory conditions. For development of the Law, a decree is in the planning to regulate the conservation and the sustainable use of wild flora and fauna and their habitats that will include provisions regarding the legal regime of zoological parks in accordance with Law 31/2003.

- Navarre: **Foral Decree 108/2004, of 1 March, designates the Department of Environmental, Territorial Planning and Housing Affairs as the competent body of Navarre for application of the provisions of Law 31/2003 of 27 October on the conservation of wild fauna in zoological parks in Navarre** (published in BON No. 4, of 19 April 2004). In addition to designating the Department of the Environment as the competent licensing and inspection body, the decree calls for the establishment of a “Technical Advisory Committee”, chaired by Navarre’s Department of Environment, with the participation of the departments of Animal Health, Safety, and Public Entertainment. This inter-departmental technical committee works in an advisory capacity, and is consulted on legal compliance with requirements prior to granting licenses to zoological parks. It is further empowered to provide technical advice on inspection and monitoring tasks, and on the rigorous compliance of zoological parks with the conditions included in the licenses granted. Joint committee work of this kind is highly useful and effective in cases such as this, in which, due to the different matters affected by a single provision (conservation, safety, health, welfare), performance of the administrative function

necessarily spans different areas of competence, and requires the participation of other departments.

- The Basque Country: **Decree 81/2006, of 11 April, on zoological nuclei in the Basque Country** (published in BOPV No. 78, of 25 April 2006) designates its Foral Bodies as the competent licensing authorities for zoological nuclei, among which are zoological parks. Prior to granting a license to a zoological nucleus, the Foral Bodies must ascertain that it complies with the requirements of national Law 31/2003 and with those of the Foral Decree on zoological nuclei. In addition to the animal health and welfare requirements that must be met by all zoological nuclei, and the safety measures applicable for potentially dangerous animals, Annex IV of the Decree establishes specific welfare requirements to be met by establishments housing wild fauna, as regards attention to their ethological, biological and environmental needs. Furthermore, Article 4.2 of the Decree establishes that, when activities involve the conservation and breeding of wild fauna, and/or educational or training programs on these species of animals, a licensed veterinarian and a prophylactic care program are required. In development of this Decree, on 16 January 2008 the regional authority on Agriculture, Fishing and Food of the Basque Country (BOPV No. 48, of 7 March 2008) regulates itinerant animal exhibits, and adds a new Annex with animal welfare requirements that are applicable to zoological nuclei housing wild fauna, which establishes the minimum size of enclosures for these animals, among other requirements.

- Community of Valencia: **Consell Decree 83/2007 of 15 June, amending the Consell Decree 158/1996, of 13 August, for implementation of Law 4/1994, of 8 July on the Protection of Companion Animals in the Community of Valencia** (DOCA No. 5537, of 19

LAW 31/2003 ON THE CONSERVATION OF WILD FAUNA IN ZOOLOGICAL PARKS

June 2007). Chapter VII of the Decree elaborates on the specific functioning of zoological parks within the framework of the authorization procedure for zoological nuclei, and also incorporates the requirements of *Law 31/2003*. But, in addition to the said requirements, and those established under the Decree for all zoological nuclei, Article 27.1 of *Decree 158/1996*, which was modified by this former, adds a specific condition regarding the keeping of endangered indigenous and exotic fauna: the participation by the zoological park in an *in situ* species conservation project for the species, or for one the species affected. The Decree designates the *Consellería* with competences in matters of animal health and welfare as the competent licensing and inspection body for zoological parks, without prejudice to reports issued by other *Consellerías* involved due to their competences in matters involving public safety and environmental affairs. Furthermore, Article 12 of the Decree calls for the creation of an “Autonomous Community Commission on Animal Welfare in Zoological Parks”, which, reporting to the *Consellería* holding competences in matters of animal welfare, and with the participation of the three *Consellerías* involved, as well as that of other academic, professional and social institutions, will inform on applications, and advise zoological parks and other zoological centres.

- Canary Islands: ***Decree 5/2009, of 27 January, amending Decree 20/2004, of 2 March, which approves Organic Regulation of the Department of Environment and Territorial Planning of the Canary Islands*** (BOC No. 22, of 3 February 2009), designates the Regional Ministry of the Environment and Territorial Planning as the competent body for the licensing and registration for zoological parks, while it assigns competence regarding inspection and sanctions to the Agency for the Protection of Urban and Natural Settings. Well

underway in the procedural process is a proposed Decree to regulate the licensing and inspection of the activity of zoological parks and to create the Zoological Park Registry of the Canary Islands,.

- Extremadura: ***Decree 11/2010 of 29 January, regulating zoological parks in Extremadura*** (published in DOE No. 22, of 3 February 2010) is the most recently issued. Within the framework of basic national legislation, it regulates the licensing conditions for zoological parks in Extremadura, establishing conservation measures for these, so as to ensure the welfare of the species housed. The 33 Articles of the Decree establish and specify the conditions and requirements to be met by zoological parks, the administrative procedure for licensing and inspection, and the creation of the zoological park registry under the Regional Ministry holding competences in environmental affairs. The Regional Ministry holds competence for license issue, but the intervention of other departments with competences in the conservation of biodiversity and animal health is required to evaluate and check compliance with the conditions involved in these matters.

Of the series of decrees still being drafted by the Autonomous Communities for the development and application of *Law 31/2003*, some, such as those of the Autonomous Communities of Aragón, the Balearic Islands and the Canary Islands, are in advanced procedural stages, while others, such as those of Cantabria and Murcia, are in the final drafting stages. Given that *Law 31/2003* is basic legislation subject to further Autonomous Community legislation for its implementation, it is advisable to count on the developmental regulations passed by each Autonomous Community, so as to facilitate the work of the public agents responsible, and enhance the legal certainty of constituents.

National government coordination

For the achievement of the objectives of *Law 31/2003* and its enforcement, Spain's General State Administration also has responsibilities. The Ministry of Environment, Rural and Marine Affairs, which led the transposition process of *Directive 1999/22/EC*, is in charge of organizing, and maintaining current, the **Spanish Zoological Park Inventory** in which the zoological parks authorized to operate by the Autonomous Communities are required to register, and to supply (at least) basic data on their animal collections. *Law 42/2007 on Natural Heritage and Biodiversity* incorporates the **Spanish Zoological Park Inventory** as part of the **Spanish Inventory of Natural Heritage and Biodiversity**, which is currently being compiled.

In addition to fostering the general climate of cooperation and collaboration expected to prevail across public administrations, the coordination provided by the state administrative body with competences in environment can be a valuable tool for greater harmonization and momentum in the process of application of *Law 31/2003*, contributing to Spain's compliance with the objectives of *Directive 1999/22/EC*. To this end, the Ministry of Environment, Rural and Marine Affairs, coordinates a working group for the application of *Law 31/2003*, comprised of representatives from the competent departments of the Autonomous Communities. The working group shares information, analyses problems, fosters actions for training, dissemination and awareness, and promotes the coordinated compilation of the Autonomous Community registries and the **Spanish Zoological Park Inventory**.

Further coordination efforts are found in the web page of the Ministry of Environment, Rural and Marine Affairs, which has a section devoted to the conservation of wild fauna in zoological parks¹ that contains basic information on the subject, along with links to related documents and legislation, and periodically updated administrative data of interest.

On another front, without prejudice to the establishment by the Autonomous Communities of supplementary legislation for its enforcement, *Law 31/2003* foresees that, within its framework of competence on basic environmental legislation, the national government [may] issue the developmental regulations required for application of the law, a process in which the collaboration and participation of the Autonomous Communities will prove invaluable.

(1) http://www.mma.es/portal/secciones/biodiversidad/especies_amenazadas/conservacion_parques_zoologicos/index.htm

Regulation of the CITES species rescue centres

Additional provision 3 of *Law 31/2003 on the conservation of wild fauna in zoological parks* foresees the subsequent passage of regulatory legislation on rescue centres within the framework of the *Convention on International Trade in Endangered Species of Wild Fauna and Flora (hereafter, CITES)* and of *Council Regulation (EC) No. 338/97 on the protection of species of wild fauna and flora by regulating trade*. The purpose is to provide appropriate means for dealing with the live specimens confiscated during the enforcement of these regulations by the principal administrative authority, customs officials, law enforcement bodies and police, as well as the SEPRONA¹ unit of Spain's Civil Guard, and to minimize the all too habitual resort of leaving animals in deposit with the violator.

Specifically, CITES Resolution 10.7 states that the disposal of live species confiscated by authorities due to illicit trade should be dealt with in a manner that procures conservation, without risk to animal health, discourages illegal trade and leads to an appropriate solution, whether this is captivity, reintroduction into the wild, or euthanasia. This provision should preferably be fulfilled at rescue centres that are expressly designated to accommodate the species in question. However, fulfilment may also be effected in other sites deemed appropriate by the national administrative authority, provided that care for the welfare of the species confiscated is guaranteed. The community legislation includes similar provisions.

In compliance with these provisions, Spain issued *Royal Decree 1333/2006, regulating the destination assigned to confiscated specimens of species of endangered wild fauna and flora protected by restricted trade*. It is foreseen that CITES Rescue Centres be designated by the administrative authority's principal management body for the Convention in Spain (currently Spain's General Secretariat of Foreign Trade, of the Ministry of Industry, Tourism and Trade), after consultation with the CITES scientific authority (currently the General Directorate of Nature and Forestry Policy, under the

Ministry of Environment, Rural and Marine Affairs). Among the designated rescue centres are zoological parks that offer to accommodate certain species under conditions agreed with the authorities. This task is deemed compatible with the activity of zoological parks, as a service contributing to the conservation of the specimens and, at times, of the wild species themselves. Nevertheless, should the number of centres be insufficient, the administrative authority itself is entitled to manage or establish centres.

However, this does not imply that all live specimens should be housed in CITES rescue centres. Generally, the live animals requiring removal by competent authorities due to the closure of the zoological park where they were housed should be accommodated in facilities meeting the requirements of appropriate design, function, and personnel to care for them. The specimens of species that are not protected under CITES or Community legislation on trade in wild species, or that are removed by authorities for infringements other than those foreseen in legislation on illicit traffic, are not admitted in CITES rescue centres. However, these animals, whether of wild or domestic species, must be dealt with observing the standards and good practices required under animal welfare protection, and health and safety laws. Thus, it is the duty of Autonomous Communities and local administrations to create or promote the rescue and recovery centres needed to provide appropriate accommodation for these living beings until the time of their death (whether by natural or induced causes). This, without prejudice to the fact that the violators of the CITES and zoological park regulations should be held responsible for their actions.

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(1) SEPRONA is the Spanish acronym for the Civil Guard unit: Service for the Protection of Nature.

Who can collaborate?

Given that we all want to live in a healthy environment, we should also all actively participate in its care, from individual citizens upward through national governments and international bodies. Each of us, whether in the private, public, local, regional, global, political or social sphere, bears a responsibility for environmental protection. However, coordinated efforts and the establishment of collaborative ties will be essential strategies for achieving objectives.

Legislation can also be an effective tool in this undertaking, as the formalization of agreements and social commitments that contribute to the peaceful coexistence of citizens, and, of these, with the environment. There is a direct relationship between the effectiveness of legislation and a social and political consensus on its need, the general interests of its aims, and the collaboration of society in general. Furthermore, the best combination for success is the full commitment of the agents involved, stakeholder participation, and the collaboration of society as a whole. Societal awareness serves little purpose in the absence of supporting legislation, but it makes even less sense to pass a law that cannot be enforced due to a lack of interest and political and social support.

These considerations are particularly applicable to compliance with *Law 31/2003*. It is a national law that affects zoological parks located within Spanish territory, whose owners, whether private individuals or public entities, are directly obligated to comply with the terms of the law. For their part, the competent bodies designated by the individual Autonomous Communities are responsible for monitoring and enforcement. However, achievement of the purpose of the Law, which is to protect wild fauna and

contribute to the conservation of biodiversity in zoological parks, is better guaranteed if, in addition to the directly obligated individuals and entities, there is active participation and collaboration by other agents engaged through their respective activities in related areas. Educational institutions, public administrators, research centres, professional organizations, and other social groups, including zoo visitors, can and should be active agents in developing the measures foreseen in the Law (**Figure 12**). With the help of coordinated strategies and plans, this collaboration will prove beneficial to all parties, while also serving an important general interest of society: protection of the environment and the conservation of biodiversity.

The World Zoo and Aquarium Conservation Strategy says:

“No zoo or aquarium is an island, it cannot alone carry out everything needed for biodiversity conservation. Thus these institutions need partnerships with each other and with other institutions. (...) In particular, zoos and aquariums should not work independently on reintroduction and translocation programs, but in partnership with other institutions and always with the appropriate government authorities: The World Conservation Union specialist groups and other governmental and non-governmental conservation agencies. Forming alliances will strengthen global cooperation and help all zoological parks and other conservation organizations to achieve their conservation goals. Zoos should try to form alliances with other zoos and aquariums (local, regional and international), with national and regional zoo associations, join the WAZA network (World Zoo and Aquarium Association), with natural parks and protected areas, environmental agencies, governmental departments, ministries, and wildlife protection agencies (e.g. environment, education, agriculture, tourism, etc.), with academic, professional, cultural and commercial organizations (e.g. research institutions, colleges, universities, training institutes, museums, zoological associations, botanic gardens), with community organizations (civic organizations, schools, libraries) and other governmental and non-governmental conservation and animal welfare organizations.”

A SEAL OF QUALITY FOR ZOOLOGICAL PARKS

Whatever mechanisms are adopted by the Autonomous Communities for zoological park licensing and inspection, the collaboration of society is needed to transform zoological parks into true conservation centres. Many non-governmental, civil and professional organizations feel that there is a need to encourage the creation of quality evaluation processes for zoological parks ranging beyond the scope of strictly official licensing procedures. Following the example of initiatives in other economic sectors of Spain, one of the most interesting and promising ideas is to create a seal of quality for establishments that, after voluntarily submitting to an independent evaluation process, are deemed to have met optimum quality standards.

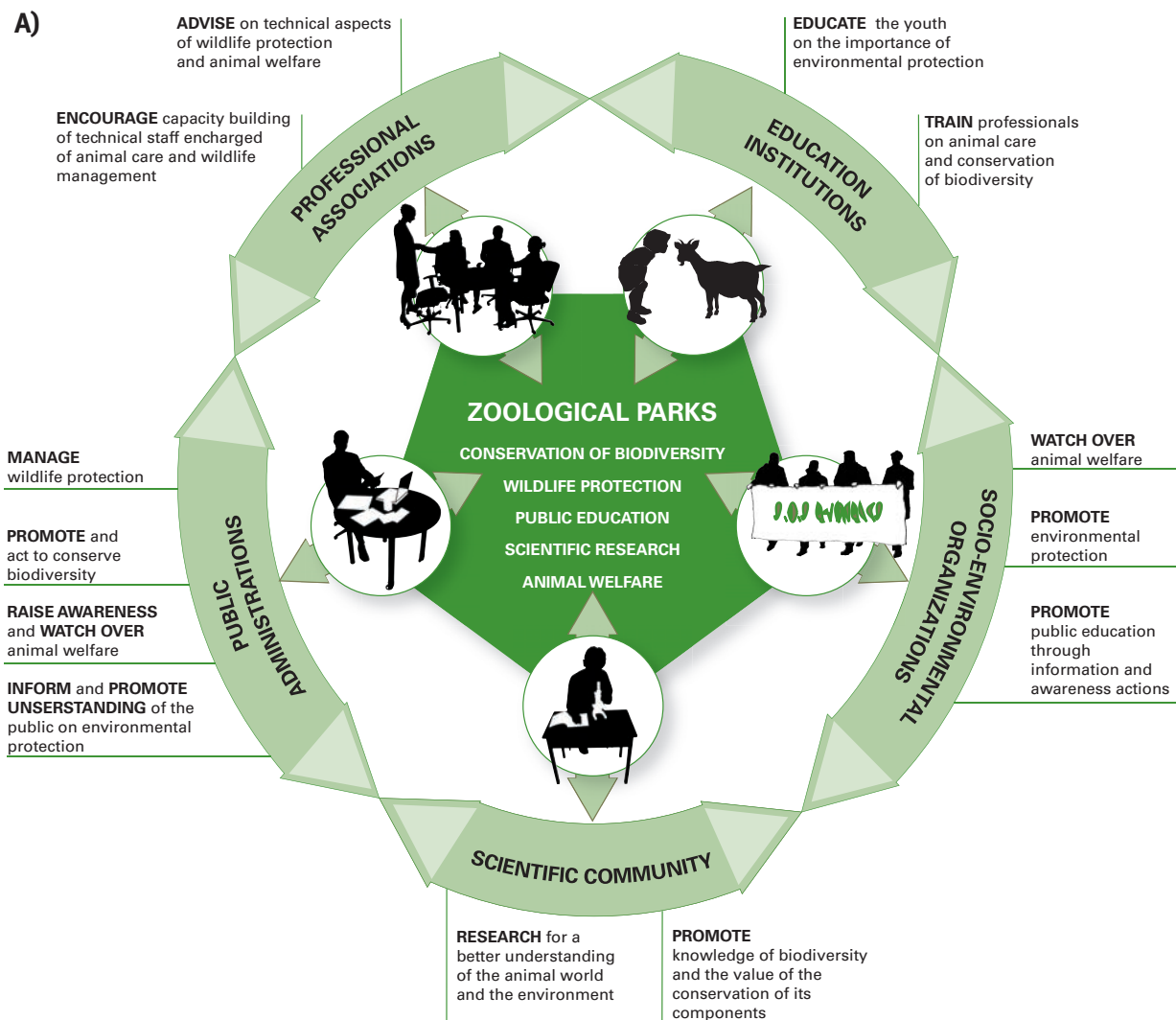
The seal of quality should only be granted to truly exemplary zoological parks, whose conditions significantly exceed each of the requirements of *Law 31/2003*. Concession and renewal of the seal should be monitored by an independent evaluation committee. To guarantee the credibility of the seal, and the transparency of the selection process, the committee should have the backing and oversight of the competent public administrations. Furthermore, there should be broad consensus on the quality criteria applied for determining which zoological parks are deserving of this distinction. These criteria should be clear, and available to any interested party.

Once granted, the seal of quality should be posted where visible to zoological park visitors. The public should be further informed of its significance, and of the implications that its concession has regarding quality of the zoological park they are visiting. This will enable the public to distinguish which zoological parks have made a serious and ongoing effort to exceed the minimum quality requirements of the Law. In summary, a quality seal of this kind would provide additional information to the public on the quality of the zoological park it wishes to visit, and on the zoological park's degree of commitment to the conservation of biodiversity. It would foster the implementation of good practices, and would also compensate the accredited zoological parks for their greater commitment to conservation (since this recognition would most probably translate into a higher number of visitors). This indirect compensation system would undoubtedly motivate participation by other zoological parks.

Figure 12:

(A) *Law 31/2003* requires zoological parks to perform different activities that can be conducted in cooperation with other institutions and organizations, in mutually beneficial partnerships that enhance potential for the achievement of shared goals.

(B) These are some of the activities that can be performed by each.





ZOOLOGICAL PARKS

- comply with applicable legislation
- contribute to the conservation of biodiversity
- tend to the welfare of their animals
- participate in research and conservation projects
- raise awareness and educate the public on environmental protection
- promote continued training for their staff
- form part of collaboration networks open to other institutions
- disseminate their activities and communicate the importance of biodiversity
- be examples of sustainability
- collaborate with public institutions, education centres and research and conservation institutions
- etc.



ZOOLOGICAL ASSOCIATIONS

- elaborate strategies for conservation at zoological parks
- promote the functioning of national and international networks
- collaborate and participate with other entities
- promote and collaborate in research projects
- elaborate and use quality management and continued evaluation tools
- promote and establish the quality certification and audits
- promote and update quality standards on the different aspects
- serve as communication channels with other entities and with the public
- facilitate international support
- use support networks to strengthen local efforts
- disseminate messages through local, regional and international media
- build mutually beneficial relationships with government entities
- improve and facilitate academic and research interactions
- etc.



PROFESSIONAL ASSOCIATIONS

- collaborate with zoological parks and other related entities
- promote and collaborate on technical studies
- advise on technical questions related to the sector
- collaborate on the establishment of quality standards
- encourage capacity building and qualification of technical staff
- etc.



RESEARCH CENTRES

- develop research projects on wildlife conservation
- share the advancements and results of their research
- collaborate on the establishment of quality standards
- collaborate with zoological parks on the development of research projects
- promote the dissemination of scientific and technical knowledge
- etc.



EDUCATION CENTRES

- participate and collaborate with zoological parks in educational projects directed to wildlife conservation
- promote student and teacher training on biodiversity conservation in collaboration with zoological parks
- promote education on the caring and welfare of animals
- promote dissemination on environmental issues involving zoological parks
- etc.



PUBLIC ADMINISTRATIONS

- train public agents on the application of specific regulation
- demand, guarantee and collaborate on regulation compliance
- inform and raise awareness of society in general and of the sectors involved in particular
- promote and facilitate participation of zoological parks and other entities in conservation, research and education projects
- promote creation and support implementation of quality certifications
- maintain communication and collaboration channels with the private sector
- encourage and participate in *ex-situ* and *in-situ* conservation projects
- watch over the adequate compliance of the authorisations
- sanction in case of non-compliance
- take adequate responsibility over abandoned or seized animals
- etc.



NGOs FOCUSED ON ANIMAL PROTECTION AND ENVIRONMENTAL CONSERVATION

- act as communication and information channels towards the public
- represent public demands on environmental issues
- promote constant quality improvements on such issues
- participate in education, conservation and research projects
- denounce regulation infractions as external control instruments for zoological parks
- etc.



VISITING PUBLIC AND ALL CITIZENS

- comply with conduct guidelines at zoological parks
- be adequately informed of the requirements which zoological parks must comply with
- participate in the educational activities of zoological parks
- collaborate in studies and quality surveys of the establishments
- denounce regulation infractions
- etc.

When

is the deadline for compliance



Implementation of *Directive 1999/22/EC* in the European Union

Traditionally, NGOs have maintained a critical attitude toward zoological parks due to the primarily commercial nature of their management. The National Association for the Defence of Animals (ANDA) believes that zoological parks should keep smaller collections, housed in appropriate enclosures that allow the animals to develop the natural behaviours of their species. Research and *ex situ* conservation should take precedence over animal breeding, which should be kept to a minimum, and these programs should also include monitoring and follow-up plans. ‘Menageries’ should be clearly discouraged; animals should be portrayed realistically, and entertainment, shows, and photography sessions with animals should be eliminated.

The NGOs working for animal protection take action by reporting the facilities that are furthest from observing these premises, informing the public of their points of view, and by calling for authorities to pass legislation that regulates the activities of zoological parks. The absence of specific legislation was also a source of concern to the scientific community, and even to the sector itself. The response to this common demand came in the form of *Directive 1999/22/EC relating to the keeping of wild animals in zoos*, which was transposed into Spanish legislation as *Law 31/2003 on the conservation of wild fauna in zoological parks*.

While NGOs felt that *Directive 1999/22/EC* was insufficiently ambitious regarding the issues of animal welfare, animal entertainment spectacles, and its definitions of conservation and education programs, recognition is due of the progress and improvements that have been made since the Directive went into force. Today we have a much better understanding of the status of zoological parks in Spain; administrative licensing and inspection processes are underway, and training initiatives are arising, albeit timidly. Some zoological parks that were clearly unviable have been closed, and today we have better equipped and better managed establishments. However, much remains to be done on both national and regional levels.

The application of *Law 31/2003* has varied widely across the Autonomous Communities. Generally, a great effort has been made by the technical teams, but this has not always been accompanied by the necessary political support. There is a need to streamline and coordinate the work of the different departments involved by clarifying responsibilities and functions. The application of the Law cannot be a mere,

superficial, administrative exercise, and for this reason, the responsible technical personnel should be properly trained on the content of the Law and its requirements. The Autonomous Community administrations should provide their technical teams with sufficient economic, human, and legal resources to perform their functions, validate their reports and recommendations, and require compliance with same. Likewise, the Autonomous Communities should collaborate in the creation of the Spanish Zoological Park Inventory based on data from the Autonomous Community registries, which also must be updated regularly.

For its part, it is extremely important that the national administration make every effort to procure the homogeneous application of *Law 31/2003* throughout Spanish territory. Fundamental aspects are: the evaluation criteria for zoological parks, the application of precautionary measures, and the sanctions regime. The State Administration should create mechanisms that contribute to the correct and uniform interpretation of the Law. Still pending is the compilation of an updated version of the Spanish Zoological Park Inventory that reflects the collections of the species of each Autonomous Community.

On the other hand, it should not be forgotten that the principal agent of change to overcome these problems is the zoological park sector itself, which, in addition to compliance with the legal requirements, should incorporate the spirit and principles of *Law 31/2003* into its daily work.

Directive 1999/22/EC and *Law 31/2003* have great potential for guaranteeing economically viable zoological parks that respect animal conservation and welfare. However, to realize this potential, we cannot limit ourselves to the merely administrative aspects of the legislation. Its application cannot be a one-time effort, but rather should be a progressive process of continuous adaptation that admits interpretational changes.

ANDA is a non-profit organization that has been working for animal welfare since 1989, particularly in the field of legislation. ANDA is a member of Eurogroup for Animals, an organization based in Brussels, whose members are comprised of the principal European animal protection associations.

ANDA/EUROGROUP FOR ANIMALS
(www.eurogroupforanimals.org)

Adaptation of zoological parks to Law 31/2003

Directive 1999/22/EC established certain deadlines for adaptation to the new conditions: zoological parks created after it went into force should obtain a license prior to opening, while zoological parks already in existence were allowed a period of up to four years to obtain the corresponding license, that is, until April 2003. For its part, the Spanish law resulting from the transposition of the Directive established an adequate transitional period that would allow the time needed for obliged entities to adapt to the new obligations, and for the public authorities to develop the procedures for evaluation of compliance.

Because the transposition of *Directive 1999/22/EC* into national law was delayed until 2003, the adaptation period foreseen in the community law proved to be insufficient, and the deadline passed unmet in Spain, just as it did in other European Union countries. A reasonable transitional period was needed in order to enable adaptation by the zoological parks in operation prior to the passage of Law 31/2003. This law granted zoological parks a period of one year after its entry in force to request a new license, that is, until October 2004, over one year more than the period granted by the Community law.

Article 7.1.

“The opening to the public of zoological parks and any substantial modification or enlargement of facilities are subject to licensing by the competent body of the autonomous community where the zoo is located (...).”.

Sole Transitional Provision.

Adaptation period for existing zoological parks .

“Zoological parks currently operating and open to the public shall be allowed a one year period to effect the adjustments required for compliance and to submit the requisite license application. The one year adjustment period commences on the day this law goes into force.

If the applicant receives no notification from the competent authorities within six months of reception by these latter of the license application, it is understood that the license has been approved.

Any zoological park failing to submit a license application by the prescribed deadline is subject to the measures described under Article 16, and shall close its facilities to the public. “

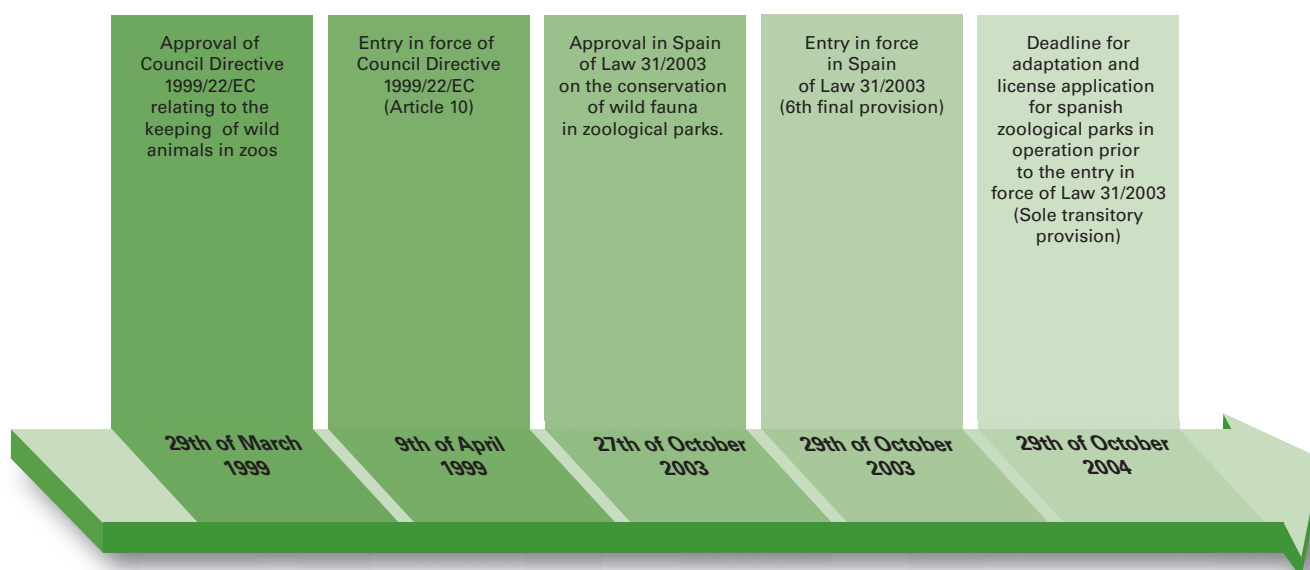


Figure 13. Dates of implementation of *Directive 1999/22/EC* in the European Union and of *Law 31/2003* in Spain.

For their part, the Autonomous Communities have established their own adaptation deadlines upon drafting their regulations for development and application of the law (some still in the approval process), and establishing the licensing procedures for their zoological parks. This would have meant further delays, if not for the fact that national *Law 31/2003* is directly applicable, thus eliminating the need to await the approval of the Autonomous Community regulations.

On the other hand, prior to opening to the public, new zoological parks must request a license, for which they must supply the competent authority with all of the information required, and facilitate the inspection work performed in their installations. In the inspections conducted, the competent authority should check the aspects necessary to determine if the conditions and resources of the zoo are appropriate for the keeping, and exhibition of wild fauna to the public, in accordance with *Law 31/2003*.

Administrative silence in *Law 31/2003*

If, within six months of submitting its application for license, a zoological park has received no express notification of a decision from the competent authority:

- in the case of the **zoological parks in existence** upon the entry in force of *Law 31/2003*, that is, those open to the public prior to 29 October 2003, the effect of **administrative silence is positive**, and it is understood that the license has been granted, without prejudice to the fact that the competent body may conduct a check, at any time, to determine if the conditions of the license are being met. If non-compliance is detected, immediate closure of the infringing zoo may be ordered.

(Sole transitional provision of *Law 31/2003*)¹

- in the case of **new zoological parks** that request a license to open to the public after the entry in force of *Law 31/2003*, that is, on or after 29 October 2003, the effect of **administrative silence is negative**, that is, it is understood that the license has been denied, and the interested party is entitled to file an administrative appeal.

The competent authority may adopt an express decision after the deadline has expired, which is unbound by the inferred meaning of *administrative silence* (Article 43 of *Law 4/1999 on public administration and common administrative law*).

(Article 7.4 of *Law 31/2003*)

(1) Since previously existing zoological parks were granted a one year period after entry in force of the Law in which to request the new license, the positive administrative silence contemplated under this provision was applicable only up to 29 October 2004. Furthermore, the existing zoological parks that obtained a license in this way, that is, without undergoing prior inspection, were required to be inspected in subsequent years in order to check their continued compliance with the conditions established in the Law.

The consequences of non-compliance: infringement and sanctions

Article 8 of *Directive 1999/22/EC* requires that the Member States determine the breaches of the national provisions adopted, and establish proportionate, dissuasive, and effective penalties for the said infringements.

In Spain's *Law 31/2003*, the system of liability for non-compliance with its provisions, the types of infringement, and the applicable penalties, are defined in Chapter V. This general regime is applicable throughout national territory, without prejudice to whether the Autonomous Communities establish additional infringements and accessory or more rigorous sanctions.

Under the principle of proportionality of *Article 131 of Law 30/1992 of 26 November on the legal system of public administrations and common administrative law*, the administrative sanctions ordered must, on the one hand, foresee that the penalty for infringement outweighs any benefit that could be gained by incurring in the infringement defined, and, on the other hand, maintain a proper balance between the severity of the action constituting infringement, and the sanction applied.

The administrative sanctions foreseen under *Law 31/2003* are fines, and the closure of the zoological park. Furthermore, the Autonomous Communities may impose additional sanctions and require violators to adopt the corrective, safety and monitoring measures deemed necessary to curtail violation and to avoid their continuing to cause any kind of harm.

In 2006, due to a complaint filed with the European Commission against twelve of the Autonomous Communities and two Autonomous Cities for failure to meet the compliance deadline of *Directive 1999/22/EC*, the Kingdom of Spain found itself involved in a procedure for infringement of Community law. The European Union Commission decision, which was issued in 2008, established a lack of proper compliance by the said Autonomous Communities, and called for these to make a greater effort toward application of *Law 31/2003*. After the deadline established for proof of compliance had passed, in August of 2009, the European Commission filed a complaint with the European Court, against the Autonomous Communities of Aragón, Asturias, the Balearic Islands, the Canary Islands, Cantabria, Castile-León,

Article 11. Liability.

- “1. Failure to comply with the provisions of this Law will be sanctioned, as described in this chapter, and pursuant to Title IX of Law 30/1992 of 26 November on Public Administration and Common Administrative Law.
2. For infringements involving more than one actor, in which the degree of individual involvement cannot be determined, liability shall be joint and several.
3. For any infringement committed by zoological park staff and service personnel, the legal owner of the zoological park holds vicarious liability.
4. The administrative liability for the infringements referred to in this Law shall not exonerate the infringer from any claims that may arise for civil liability, criminal liability, or other.”

the Community of Valencia, Extremadura and Galicia, even though all were making decisive progress toward compliance with the Law.

All of the Autonomous Communities cited in the complaint have reported on the state of progress toward finalization of their inspection and licensing procedures for zoological parks.

The Office of the Attorney General of Spain's Ministry of Foreign Affairs and Cooperation recently submitted a document to the European Court of Justice, in which it supplied the information contained in the reports, and proof of veracity of same. At the date of publication of this second edition, this parties still await a ruling of dismissal from the High Court.

Law 31/2003 - Infringements

Article 13 defines the severity of infringements, based on the importance of the provision violated and the risk posed to achievement of its objectives:

Minor infringement

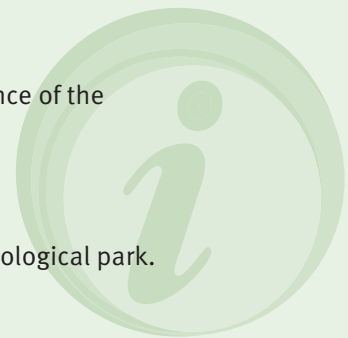
- Deficient functioning of the species and specimens registry of the zoological park.
- Insufficient personnel and material resources

Serious infringement

- Non-compliance with specific licensing conditions
- Lack of specialized human and/or material resources
- Non-compliance with measures of animal welfare, prophylaxis, environmental or public safety
- Unauthorized release/liberty of zoological park animals
- Falsification, suppression or omission of data or documents required by the administration
- Non-compliance with conservation, education, or veterinary programs
- Failure to collaborate during inspections

Grave infringement

- Unlicensed opening to the public
- Unauthorized release of potentially dangerous animals
- Intentional death caused to zoological park animals, and/or disposal of their remains without justified cause
- Mistreatment, abandonment or harm caused to zoological park animals, whether intentional or due to neglect



Fines applicable under *Law 31/2003*¹

Article 14 establishes the fines to be imposed, scaled by severity of infringement:

- minor infringement 300 - 600 €
- serious infringement 601 - 60.100 €
- grave infringement 60.101 - 300.500 €



Closure of the zoological park

In addition to the fines imposed for each infringement, in certain cases of infringement of the conditions required, the competent body of the Autonomous Community may sanction the violator by ordering the total or partial closure of the zoological park:

Closure as sanction (Article 15). If infringement is confirmed during the corresponding sanction procedure, the levying of fines will be accompanied by the temporary or permanent closure of the zoological park in the following cases:

- in cases of unauthorized opening to the public, substantial modification or enlargement of the zoological park, the competent authority should order closure of the zoological park.
- in the remaining cases of serious and grave infringement, the competent authority shall evaluate the advisability of ordering closure, based on the values at risk.

Precautionary closure (Article 12). The competent authorities may order the temporary closure to the public of unlicensed zoological parks as a reasonably motivated provisional and precautionary measure to safeguard the conservation of zoo animals for the duration of sanction procedures. If this occurs prior to commencement of sanction procedures, the closure order must be confirmed, amended or lifted, within the following fifteen days, in the inquiry initiation agreement.

Voluntary closure (Sole Transitional Provision). Any zoological park existing prior to the entry in force of the law that has failed to submit its application for license within the one year period prescribed, that is, prior to 29 October 2004, shall close its doors to the public and apply the closure measures established in Article 16.

Conservation measures in case of closure (Article 16). In all of the cases in which a zoological park should proceed to close its facilities, measures will be determined and issued by the competent body of the Autonomous Community for the handling, conservation and transfer of the animals affected, so as to safeguard the welfare of the animals, and curtail and remediate the situation caused by the non-compliance. A deadline will be established, by which the persons or entities responsible must implement the said measures; if they fail to do so, the competent authority will take the pertinent actions, and may assign the cost of these to the obliged individual or entity.

(1) As amended by Article 77 of *Law 42/2007 on Natural Heritage and Biodiversity*.

Where
to find more information



Legislation

International

Convention on International Trade in Endangered Species of Wild Fauna and Flora, 1973 (CITES):
<http://www.cites.org>

The United Nations Convention on Biological Diversity, 1992 (CBD):
<http://www.biodiv.org>

European Union

Treaty of the European Union:
<http://eur-lex.europa.eu/JOHtml.do?uri=OJ:C:2010:083:SOM:ES:HTML>

Council Directive 79/409/EEC, the Birds Directive:
http://europa.eu/legislation_summaries/environment/nature_and_biodiversity/l28046_es.htm

Council Directive 92/43/EEC, the Habitats Directive:
http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade:
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997R0338:ES:HTML>

Council Directive 1999/22/EC relating to the keeping of wild animals in zoos:
 • Official Journal of the European Union (original English):
http://eurlex.europa.eu/LexUriServ/site/en/oj/1999/l_094/l_09419990409en00240026.pdf

• Diario Oficial de las Comunidades Europeas (translation to the Spanish):
http://eurlex.europa.eu/LexUriServ/site/es/oj/1999/l_094/l_09419990409es00240026.pdf

Spain

General legislation

Constitución Española [The Spanish Constitution]:
<http://www.congreso.es/consti/constitucion/indice/index.htm>

Ley 30/1992, de régimen jurídico de las administraciones públicas y del procedimiento administrativo común [Law 30/1992 on the legal system of public administrations and common administrative procedure]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=1992/26318

Conservation of wild fauna and habitats

Ley 42/2007 del patrimonio natural y de la biodiversidad [Law 42/2007 on natural heritage and biodiversity]:
<http://www.boe.es/boe/dias/2007/12/14/pdfs/A51275-51327.pdf>

Ley 31/2003 de conservación de la fauna silvestre en los parques zoológicos [Law 31/2003 on the conservation of wild fauna in zoological parks]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=2003/19800

Real Decreto 1333/2006 que regula el destino de los especímenes decomisados de las especies amenazadas de fauna y flora silvestres [Royal Decree 1333/2006 regulating the destination of confiscated specimens of endangered wild fauna and flora]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=2006/20847

Zoological nuclei and animal health

Decreto 1119/1975 sobre autorización y registro de núcleos zoológicos, establecimientos para la práctica de la equitación, centros para el fomento

y cuidado de animales de compañía y similares [Decree 1119/1975 on the licensing and registration of zoological nuclei, equestrian stables, pet breeding and care facilities, and similar establishments]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=1992/26318

Orden de 28 de Julio de 1980 por la que se dan normas sobre núcleos zoológicos [Order of 28 July 1980 issuing regulations regarding zoological nuclei]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=1980/19645&codmap

Ley 8/2003 de sanidad animal [Law 8/2003 on animal health]:
<http://www.boe.es/boe/dias/2003/04/25/pdfs/A16006-16031.pdf>

Real Decreto 479/2004 por el que se establece y regula el registro general de explotaciones ganaderas [Royal Decree 479/2004 establishing and regulating the general livestock operations registry]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=2004/06426

Public safety at entertainment events

Real Decreto 2816/1982 por el que se aprueba el reglamento general de espectáculos públicos y actividades recreativas [Royal Decree 2816/1982 approving the general regulation on public events and recreational activities]:
http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=1982/28915

Ley 50/1999 sobre el Régimen Jurídico de la Tenencia de Animales Potencialmente Peligrosos [Law 50/1999 on the legal regime for the keeping of potentially dangerous animals]:
<http://www.boe.es/boe/dias/1999/12/24/pdfs/A45306-45310.pdf>

Legislation

Autonomous Communities

Ley 2/1991 de protección de fauna y flora silvestres de la Comunidad de Madrid [Law 2/1991 on the protection of wild fauna and flora, Autonomous Community of Madrid]: http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=1991/1_0363

Ley 3/1992 de protección de animales de Cantabria [Law 3/1992 on animal protection, Cantabria]: http://www.parlamento-cantabria.es/UserFiles/File/leyes/III%20Legislatura/LEY3_92.pdf

Orden de 10 de marzo de 1992 de creación del registro de núcleos zoológicos de Castilla-La Mancha [Order of 10 March 1992 for the establishment of a registry of zoological nuclei, Castile-La Mancha]: <http://www.jccm.es/cgi-bin/edocm.php3?CARPETA=17062>

Ley 4/1994 de protección de animales de compañía de la Comunidad Valenciana [Law 4/1994 on the protection of companion animals, Community of Valencia]: http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=1994/18881

Decreto 117/1995 por el que se aprueba el Reglamento de la Ley 8/1991 de Protección de los Animales y se desarrollan otros aspectos relacionados con los mismos, de Canarias [Decree 117/1995, approving Regulation of Law 8/1991 on animal protection, and matters related, the Canary Islands]: <http://www.gobcan.es/boc/1995/062/001.html>

Decreto 73/1998 por el que se regula la actividad de los núcleos zoológicos en el Principado de Asturias [Decree 73/1998 regulating the activity of zoological nuclei, Asturias]: <http://www.asturias.es/bopa/disposiciones/repositorio/LEGISLACION/13/66/2/14EA520D34414D3BADCC1BCC8D7F715AB.pdf>

Ley 2/2000 de modificación de la Ley 5/1995 de protección de los animales de La Rioja [Law 2/2000 amending Law 5/1995 on animal protection, La Rioja]: http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=2000/12062

Ley 145/2000 que regula la tenencia de

animales peligrosos de la Comunidad valenciana [Law 145/2000 regulating the keeping of dangerous animals, The Valencian Community]: http://www.cvcv.org/pagina_principal/archivos/dc145.2000.pdf

Ley 8/2003 de la flora y la fauna silvestres de Andalucía [Law 8/2003 on wild flora and fauna, Andalucía]: http://www.juntadeandalucia.es/medioambiente/legislacion/l8_03.rtf

Ley 11/2003 de protección animal en la Comunidad Autónoma de Aragón [Law 11/2003 on animal protection, Autonomous Community of Aragón]: http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=2003/08225

Ley 22/2003 de protección de los animales de la Generalitat de Cataluña [Ley 22/2003 on animal protection, Regional Government of Catalonia]: http://mediambient.gencat.net/Images/43_13649.pdf

Decreto foral 108/2004 por el que se designa al Departamento de Medio Ambiente, Ordenación del Territorio y Vivienda como órgano competente a efectos de lo dispuesto en la Ley 31/2003, de 27 de octubre, de Conservación de la Fauna Silvestre en los parques zoológicos, del Gobierno de Navarra [Foral Decree 108/2004 designating the Department of Environmental, Territorial Planning and Housing Affairs as the competent body for application of the provisions of Law 31/2003 of 27 October on the conservation of wild fauna in zoological parks, Navarre Regional Government]: http://www.navarra.es/home_es/Actualidad/BON/Boletines/2004/34/Anuncio-o/

Ley 7/2005 de modificación de la Ley 5/2002, de protección de los animales en Extremadura [Law 7/2005, amending Law 5/2002 on animal protection in Extremadura]: http://www.boe.es/g/es/bases_datos/doc.php?coleccion=iberlex&id=2006/02676

Decreto 81/2006 de núcleos zoológicos del País Vasco [Decree 81/2006 on zoological nuclei of the Basque Country]: http://www.euskadi.net/cgi-bin_k54/bopv_20?c&f=20060425&a=200602136
Decreto 83/2007 de modificación del Decreto 158/1996 por el que se desarrolla la

Scientific and Technical Journals

Ambienta:

http://www.mma.es/portal/secciones/biblioteca_publicacion/publicaciones/revista_ambienta/index.htm

Animal Keeper's Forum:

<http://www.aazk.org/animalKeepersForum>

Animal Welfare:

<http://www.ufaw.org.uk/animal.php>

Conservation Breeding Specialist Group News:

<http://www.cbsg.org/cbsg/newsletters>

International Zoo News:

<http://www.zoonews.co.uk/IZN>

International Zoo Yearbook

<http://www.blackwellpublishing.com/journal.asp?ref=0074-9664&site=1>

Journal of the International Zoo

Educators Association
<http://www.izea.net/education/publications.htm>

Journal of Zoo and Wildlife Medicine

<http://www.bioone.org/perlserv/?request=get-archive&issn=1042-7260>

The Shape of Enrichment

<http://www.enrichment.org>

Zoo Biology:

<http://www3.interscience.wiley.com/cgi-bin/jhome/35728?CRETRY=1&SRETRY=0>

Public Institutions

Europe

European Commission on the Environment:

http://ec.europa.eu/environment/index_es.htm

European Environment Agency:

<http://local.es.eea.europa.eu/>

Wildlife trade in the EU:

<http://www.eu-wildlifetrade.org/>

European Community and Trade in Wild Fauna and Flora:

http://ec.europa.eu/environment/cites/home_en.htm

National - Spain

Ministerio de Agricultura, Alimentación y Medio Ambiente [Ministry of Agriculture, Food and the Environment]:

<http://www.magrama.gob.es>

Secretaría de Estado de Comercio del Ministerio de Economía y Competitividad [State Secretariat of Foreign Trade, Ministry of Economy and Competitiveness]:

<http://www.comercio.gob.es/es-ES/Paginas/default.aspx>

Ministerio de Interior (seguridad de espectáculos) [Ministry of Interior Affairs (safety of public events)] :

<http://www.mir.es/SGACAVT/juegosyespec/espectaculos/>

Other Institutions

European Association of Zoo and Wildlife Veterinarians:

<http://www.eazwv.org>

European Association of Zoos and Aquaria:

<http://www.eaza.net>

The European Association for Aquatic Mammals:

<http://www.eaam.org>

Asociación Ibérica de Cuidadores de Animales salvajes [Iberian Association of Wild Animal Keepers]:

<http://www.aicas.org>

Asociación Ibérica de Zoos y Acuarios [Iberian Association of Zoos and Aquariums]:

<http://www.aiza.org.es>

International Zoo Educators Association:

<http://www.izea.net>

World Association of Zoos and Aquariums:

<http://www.waza.org>

Eurogroup for Animals:

<http://www.eurogroupforanimals.org>

The World Wildlife Fund:

<http://www.wwf.es>

Fundación Biodiversidad:

<http://www.fundacion-biodiversidad.es>

The European Union of Aquarium Curators:

<http://www.euac.org>

International Union for the Conservation of Nature:

<http://www.iucn.org>

Autonomous Community bodies with competences for the licensing of zoological parks

Andalusia

Consejería de Medio Ambiente
Dirección General de Gestión del Medio Natural
Avenida Manuel Siurot, 50
41071 Sevilla
<http://www.juntadeandalucia.es/medioambiente>

Aragón*

Departamento de Medio Ambiente
Paseo María Agustín, 36
50071 Zaragoza
<http://www.aragon.es>

Asturias*

Consejería de Medio Ambiente,
Ordenación del Territorio e
Infraestructuras
Dirección General de Biodiversidad y Paisaje
C/Coronel Aranda, s/n 3ª planta
33005 Oviedo
<http://www.asturias.es>

Balearic Islands*

Conselleria de Medi Ambient i Mobilitat
Direcció General de Biodiversitat
C/ Gremi de Corredors 10, 1º
Polígon de Son Rossinyol
07009 Palma
<http://www.caib.es>

Canary Islands*

Consejería de Medio Ambiente y Ordenación Territorial
Dirección General del Medio Natural
C/ José Zárate Penichet
Edificio Arco Iris, 5, planta baja
38001 S/C de Tenerife
<http://www.gobiernodecanarias.org>

Cantabria*

Consejería de Desarrollo Rural,
Ganadería, Pesca y Biodiversidad
Edificio Europa
C/ Gutiérrez Solana s/n
39071 Santander
<http://www.gobcantabria.es>

Castile and León*

Delegaciones Territoriales Provinciales
Consejerías de Medio Ambiente y de Agricultura
C/Rigoberto Cortejoso, 14
47014 Valladolid
<http://www.jcyl.es>

Castile-La Mancha*

Consejería de Agricultura y Desarrollo Rural
Dirección General de Producción Agropecuaria
C/Pintor Matías Moreno, 4
45071 Toledo
<http://www.jccm.es>

Catalonia*

Departament de Medi Ambient i Habitatge
Direcció General del Medi Natural
C/ Doctor Roux, 80
08017 Barcelona
<http://mediambient.gencat.cat>

Extremadura

Consejería de Industria, Energía y Medio Ambiente
Dirección General de Medio Natural
Paseo de Roma, s/n
06800 Mérida (Badajoz)
<http://www.extremambiente.es>

Galicia*

Consellería do Medio Rural
Dirección General de Conservación da Natureza
C/ San Lázaro s/n
15781 Santiago de Compostela
<http://mediorural.xunta.es>

Community of Madrid*

Consejería de Medio Ambiente, Vivienda y Ordenación del Territorio
Dirección General de Medio Ambiente
Ronda de Atocha 17
28012 Madrid
<http://www.madrid.org>

Region of Murcia*

Consejería de Agricultura y Agua
Dirección General de Patrimonio Natural y Biodiversidad
C/Catedrático Eugenio Úbeda, 3
30071 Murcia
<http://www.murcianatural.carm.es>

Navarre

Departamento de Desarrollo Rural y Medio Ambiente
Dirección General de Medio Ambiente y Agua
Avenida del Ejército, 2
31002 Pamplona
<http://www.navarra.es>

The Basque Country

Departamento de Medio Ambiente, Planificación Territorial, Agricultura y Pesca
Diputaciones Forales de Álava, Vizcaya y Guipúzcoa
Donosti-San Sebastián, 1
01010 Vitoria-Gasteiz (Alava)
<http://www.ingurumena.ejgv.euskadi.net/r49-home/es/>

(*) Acting bodies

La Rioja*

Consejería de Turismo, Medio Ambiente y Política Territorial
Dirección General de Medio Natural
C/Prado Viejo, 62
26071 Logroño
<http://www.larioja.org>

The Valencian Community

Conselleria de Agricultura, Pesca y Alimentación
Dirección General de Producción Agraria
C/ Amadeo de Saboya, 2
46010 Valencia
<http://www.gva.es>

Ceuta

Consejería de Medio Ambiente y Servicios Urbanos
Plaza de África s/n, 3ª planta
Ceuta
<http://www.ceuta.es>

Melilla

Consejería de Medio Ambiente
Plaza de España s/n, 1ª planta
Melilla
<http://www.melilla.es>

Documents of interest

Data base on environmental enrichment:
<http://www.enrichmentonline.org/browse/index.asp>

Data base on environmental enrichment for primates:
<http://labanimals.awionline.org/SearchResultsSite/enrich.aspx>

UN World Charter for Nature:
<http://www.un.org/documents/ga/res/37/a37r007.htm>

Catálogo Español de Especies Amenazadas [Spanish Catalogue of Endangered Species]:
http://www.mma.es/portal/secciones/biodiversidad/especies_amenazadas/catalogo_especies/catalogo_especies.htm

EAZA Guidelines for the Accommodation and Care of Animals in Zoos:
<http://www.eaza.net/about/Pages/Key%20Documents.aspx>

IUCN Guidelines on the management of *ex situ* populations for conservation:
<http://www.eaza.net/about/Pages/Key%20Documents.aspx>

The European Community Biodiversity Strategy:
http://europa.eu/legislation_summaries/environment/nature_and_biodiversity/l28183_es.htm

Estrategia española para la conservación y el uso sostenible de la diversidad biológica [Spanish strategy for the conservation and sustainable use of biological diversity]:
www.mma.es/portal/secciones/biodiversidad/banco_datos/base_cartografica/descargas_es.htm

World Zoo and Aquarium Conservation Strategy:
http://www.waza.org/conservation/wzacs_spanish.htm

Global Aquarium Strategy for Conservation and Sustainability, 2009:
<http://www.waza.org/files/webcontent/documents/cug/docs/AquariumStrategy.pdf>

Estudio de la revista Consumer sobre la situación de los parques zoológicos en España [Consumer Magazine study on zoological parks in Spain]:
http://revista.consumer.es/web/es/20000601/actualidad/tema_de_portada

IUCN Red List of Threatened Species:
<http://www.iucnredlist.org>

United Nations Environment Programme:
<http://www.unep.org/themes/biodiversity/>

Captive breeding programs sponsored by the European Association of Zoos and Aquaria:
<http://www.eaza.net/ACTIVITIES/CP/Pages/EEPs.aspx>

Captive breeding programs sponsored by the World Association of Zoos and Aquariums:
<http://www.waza.org/en/site/conservation/conservation-breeding-programmes>

Red Natura 2000:
<http://www.mma.es/portal/secciones/biodiversidad/rednatura2000/>

American Association of Zoos and Aquariums Certification and Accreditation System:
<http://www.aza.org/Accreditation>

The zoo inspection and licensing system in the United Kingdom:
<http://www.defra.gov.uk/wildlife-countryside/gwd/zoo.htm>

International Species Information System (ISIS)
<http://www.isis.org>

Appendices

Law 31/2003

Council Directive 1999/22/EC

Law 31/2003

*of 27 October,
on the conservation of
wild fauna
in zoological parks*

I. General Provisions

OFFICE OF THE HEAD OF STATE

19800

LAW 31/2003, of 27 October, on the conservation of wild fauna in zoological parks

JUAN CARLOS I
King of Spain

To all who may read these letters:
know that Parliament has approved, and I sanction, the following Law:

STATEMENT OF PURPOSE

Whereas on 29 March 1999, the Council of the European Union adopted Council Directive 1999/22/EC relating to the keeping of wild animals in zoos, in order to establish a common basis for Member States that propitiates the proper application of Community legislation regarding the conservation of wild fauna, and that also serves to ensure the performance by zoological parks of their important role in public education, scientific research, and the conservation of species; Whereas to this end, the directive calls for the establishment of a licensing and inspection system for zoological parks that guarantees compliance with the basic conditions of health, welfare, and safety, necessary for the maintenance, in a good state of physical and psychological health, of the wild animals living in the said zoological parks.

Whereas the legal prescriptions of the aforementioned directive are consistent with the obligations imposed by Council Regulation (EC) No. 338/97 on the protection of species of wild fauna and flora by regulating trade, which obligates Member States to ensure that adequate facilities are available for the accommodation and care of live specimens for cases involving the importation of large numbers of species; whereas that Regulation prohibits the display to the public for commercial purposes of specimens of species listed in Annex A

thereof, barring specific and justified exceptions for purposes of education, research, or breeding. And, whereas these are also consistent with the provisions of Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, and with those of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, both of which prohibit the capture, keeping, and commercial trade of a large number of species, while allowing certain specific exceptions for purposes of research, education, breeding, repopulation and reintroduction of species.

Whereas the Convention on Biological Diversity, done in Rio de Janeiro on 5 June 1992, is the first international legal instrument to include the terms “in situ” and “ex situ” conservation” as mechanisms for the protection of biological and genetic resources. In this regard, the Convention defines “in situ” conservation measures as “the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings” while also determining the important complementary function of “ex situ” measures, oriented toward the establishment of facilities for the conservation of, and research on, plants, animals and micro-organisms; the adoption of measures for the recovery, rehabilitation and reintroduction

of endangered species in their natural habitats; the management of the collection of the biological resources of natural habitats, and financial, scientific, and technical cooperation in “ex situ” conservation, all of these being actions in which zoological parks can and should be highly valuable and active participants.

Whereas, zoological parks should, in all certainty, be a source of scientific knowledge, that is made available to institutions dedicated to research, and to organizations committed to the conservation of nature, for the purpose of enabling these to make contributions, not only to the “ex situ” conservation of wild species, but also to their “in situ” conservation, as their natural habitats are gradually diminished, and their geographical distribution becomes more fragmented.

Whereas there is a legal vacuum in Spain on the protection of captive wild fauna, given that, although Law 4/1989 of 27 March on the Conservation of Natural Spaces and of Wild Flora and Fauna does contemplate conservation measures outside the natural habitat of individual species (“ex situ” conservation), it does so timidly, as criteria for actions to be taken by public authorities favouring the preservation of genetic diversity. Furthermore, Spanish legislation on zoological groupings in general, fundamentally establishes only sanitary-health related requirements, and also some regulations on the licensing and registration of zoological nuclei, equestrian stables, centres for the care of domestic animals, and similar.

Affirming that the function of zoological parks should be to promote public education and awareness regarding the conservation of biodiversity.

For these reasons, the obligatory transposition of European legislation into national law, and the international commitment undertaken as signatory of conventions on environmental protection and conservation, and the aforementioned legal vacuum, make this law necessary. As basic environmental legislation on the protection of wild fauna in zoological parks, its intent is to guarantee the protection of wild fauna in zoological parks, and the contribution of these latter to the conservation of biodiversity. To this end, the law establishes a new licensing and inspection system of the said zoological parks, sets the requirements for obtaining the aforementioned license, and defines the infringements and administrative sanctions for non-compliance with its prescriptions.

CHAPTER II

General Provisions

Article 1. *Aim*

The purpose of this law is to ensure the protection of wild fauna in zoological parks, and the contribution of these latter to the conservation of biodiversity.

Article 2. *Scope of Application*

1. This law is applicable to zoological parks, which are defined as follows: any continuously operating public or private facility keeping live animals of wild species for purposes of their exhibition to the public, regardless of the days the facility is open to the public.
2. This law is not applicable to circuses or pet shops.

CHAPTER II

Conservation Measures

Article 3. *Prophylactic and environmental animal welfare measures*

Zoological parks are obligated to comply with the following prophylactic and environmental animal welfare measures, and with any that may be established by the Autonomous Communities.

- a) Accommodate animals under conditions which aim to satisfy their biological and conservation requirements.
- b) Provide species specific environmental enrichment in the facilities and enclosures where they are housed in order to diversify the interactive behaviours of the animals with their environment, thus enhancing animal welfare and survival and reproductive capabilities.
- c) Prevent the transmission to zoo animals of outside pests and vermin, and by zoo animals to species outside the zoo.
- d) Prevent the escape of animals, particularly of potentially invasive species, in order to prevent potential environmental threats to, and the genetic alteration of, indigenous species, subspecies and populations, habitats, and ecosystems.

Article 4. *Programs*

Zoological parks are obligated to design, develop and implement the following programs, as well as any programs established by the Autonomous Communities.

- a) “ex situ” conservation programs of wild fauna species. These take place outside the natural habitat, due to which the focus should be on contributions to the conservation of biodiversity, and include one or more of the following activities:
 1. Participation in a scientific research program from which conservation benefits accrue to the species.
 2. Training in species conservation techniques.

3. Exchange of information relating to species conservation with zoological parks and public or private bodies involved in species conservation.

4. Participation, where appropriate, in captive breeding programs for the repopulation or reintroduction of species into the wild, or for species conservation.

b) Educational programs to raise public awareness relating to biodiversity conservation, that include the following activities:

1. Information on the species exhibited and their natural habitats, particularly denoting the degree of threat.

2. Education of the public on the conservation of wild fauna and of biodiversity in general.

3. Collaboration, where appropriate, with other public and private entities in specific education and awareness actions on wild fauna conservation.

c) An advanced veterinary care program that includes:

1. Implementation of measures to prevent or reduce exposure by zoo animals to pathogens and parasites, reinforce their immune systems, and prevent injury or intoxication.

2. Medical attention for sick animals, using appropriate veterinary and surgical treatments, and the routine veterinary examination of healthy animals.

3. An appropriate animal nutrition plan.

Article 5. *Qualified personnel and material means*

Zoological parks shall have the qualified personnel and appropriate material means necessary to apply the welfare, prophylactic, environmental and safety measures described in Article 3, and also those required for development and compliance with the programs described in Article 4 of this law.

The staff and material means shall be those appropriate to serve the needs of the animal collections of the individual zoological park. Continuous training provided to the keeper staff shall be based on the evaluation of staff knowledge of the wild animals, their conservation and particularly their welfare.

Article 6. *Species and specimens registry*

1. Zoological parks shall maintain a current registry of all animals in their collections, appropriate to the species and subspecies to which they belong. The registry shall include, at least, the entry and exit dates of animals, deaths and cause of death, births, origin and destination of animals, and the information required for animal identification and localization.

2. The identification systems employed shall be appropriate for the species identified, and if specific legislation exists, shall be the system prescribed by law. If individual identification is not possible due to the physical characteristics or behaviours of the species, the species shall be identified by group.

3. Registry data shall be readily available at all times to the competent Autonomous Community authority.

CHAPTER III Licensing and Inspection

Article 7. *Licensing*

1. The opening to the public of zoological parks and any substantial modification or enlargement of facilities are subject to licensing by the competent body of the Autonomous Community where the zoo is located. This license does not exempt the zoological park from compliance with the other zoo licensing requirements applicable under law.

2. Prior to granting the license to the applicant, the competent authority will ascertain compliance by that zoological park with the requirements of Articles 3, 5, and 6, and with the programs prescribed in Article 4.

3. The license issued will set the specific conditions applicable to that zoological park, to ensure compliance with the terms prescribed under this law and with those of the Autonomous Community legislation.

4. If the applicant receives no notification from the competent authorities within six months of reception by these latter of the license application, it is understood that the license has been denied.

Article 8. *Inspection*

1. The competent authorities of the Autonomous Community shall conduct inspections of zoological parks to verify compliance with the conservation measures included under Chapter II of this Law, applicable Autonomous Community legislation, and the conditions specific to individual licenses. The competent authority of the Autonomous Community shall perform at least one annual inspection of each of the zoological parks in its jurisdiction, without prejudice to any unscheduled inspections conducted as additional performance of duty, or in response to complaints.

2. Zoo owners and employees shall enable the access of accredited inspectors to zoo facilities, and provide the information and assistance required for the inspection.

CHAPTER IV

Zoological Park Registries

Article 9. *Zoological park registries*

1. Autonomous Communities shall maintain a registry of the zoological parks licensed in their respective territories, with current information on the animal collections housed in each.

2. For statistical purposes, the Autonomous Communities shall forward the data from their respective registries to the Ministry of Environment, particularly data regarding the animal collections kept by zoological parks.

Article 10. *National inventory of zoological parks*

A National Inventory of zoological parks, reporting to the Ministry of Environment, is hereby established. This inventory will have an informative purpose, and in it will be included the data provided by the competent authorities of the Autonomous Communities in fulfilment of their obligations under paragraph 2, Article 9 of this law.

CHAPTER V

Infringement and Sanctions

Article 11. *Liability*

1. Failure to comply with the provisions of this law will be sanctioned, as described in this Chapter V, and pursuant to Title IX of Law 30/1992 of 26 November on public administration and common administrative law.

2. For any infringement involving more than one actor in which the degree of individual involvement cannot be determined, liability shall be joint and several.

3. For any infringement committed by zoological park staff and service personnel, the legal owner of the zoological park holds vicarious liability.

4. The administrative liability for the infringements referred to in this law shall not exonerate the infringer from any claims that may arise for civil liability, criminal liability, or other.

Article 12. *Precautionary closure*

If cause is found by the competent authority of the Autonomous Community or by the examining magistrate of a sanctions proceeding already underway, either of these may issue a temporary precautionary closure order for any zoo found to be in violation of the Article 7 license requirements on the opening to the public, substantial modification, or enlargement of zoo facilities. Orders may be for partial or full closure, and shall be issued in the interest of conservation of the animals housed in the zoo.

Any closure ordered prior to commencement of sanctions proceedings must be confirmed, amended or lifted in the accord for commencement of proceedings, which must be entered within 15 days of the closure.

Article 13. *Infringement*

1. The infringements described in this article are categorized as minor, serious and grave, without prejudice to any infringements that may be defined by the Autonomous Communities.

2. For purposes of this law the following infringements shall be considered minor:

a) Deficient functioning of the registry of species and specimens collections.

b) Insufficiency of the personnel and material means required under this law.

3. For purposes of this law the following infringements shall be considered serious:

a) Non-compliance with the specific conditions established in the license to open to the public.

b) Lack of the specialized personnel or of the material means required under this law.

c) Non-compliance with the prophylactic, welfare, environmental and *public safety measures* established in this law.

d) Unauthorized, negligent or intentional release of zoo animals.

e) The falsification, withholding or omission of data in documents submitted to the corresponding administrative authority.

f) Non-compliance with the activities established for the design, development and implementation of the conservation, education and veterinary care programs included under Article 4 of this law.

g) Non-compliance with the duty of cooperation with inspection authorities.

4. For purposes of this law the following infringements shall be considered grave:

a) Opening to the public or substantial modification or enlargement of the zoological park without a license issued by the competent authority.

d) Unauthorized, negligent or intentional release of potentially invasive species of animals of the zoological park.

c) Intentional cause of the death of zoological park animals or intentional disposal of their remains without justifiable cause.

d) Intentional or negligent abuse, abandonment or deterioration of the animals of the zoological park.

Article 14. *Sanctions*

Prior to commencement of the sanctions proceedings, the competent authority of the Autonomous Community shall impose the following fines on violators:

a) 300 - 600 euro for minor infringements

b) 601 - 60.100 euro for serious infringements

c) 60.101 - 300.500 euro for grave infringements

Article 15. *Other sanctions*

1. The competent authority of the Autonomous Community shall order the temporary or permanent, total or partial, closure of the zoological park when the acts constitute infringement of Article 13.4.a).

2. The competent authority of the Autonomous Community may impose the following additional penalties:

a) Adoption of the corrective, safety and control measures required in each case to stop the events or act of infringement and prevent continued damage, indicating the time periods for such measures.

b) The temporary or permanent, total or partial, closure of the zoological park when the acts constitute any of the infringements defined under section 3, paragraphs b), c) or d) of Article 13.

Article 16. *Closure measures*

1. Whenever the temporary or permanent, total or partial, closure of a zoological park is ordered, the competent authority of the corresponding Autonomous Community shall determine the measures for the treatment, conservation and transfer of the animals affected, and the time limit for performance of these.

2. In cases of non-compliance with the provision of the above section within the period of time prescribed, the competent authority shall proceed to subsidiary performance of these, the cost of which shall be passed on to the obligated party.

Additional Provision One. *Public safety measures*

1. Without prejudice to any other applicable legislation, in order to prevent health and safety risks to the visiting public and park personnel and to prevent animal escape, zoological parks shall establish specific safety measures for the general facility and for each animal enclosure, with these latter being determined based on the characteristics of the species housed.

2. For particularly dangerous animals, a permanent monitoring and control system supervised by qualified zoo personnel shall be implemented. Clear and legible signs shall be permanently posted to inform and warn the visiting public.

Additional Provision Two. *Conservation measures for non-wild animals*

The conservation measures laid down in Article 3 of this law that are applicable to wild fauna living in zoological parks are also applicable to any non-wild captive fauna living in zoological parks.

Additional Provision Three. *Rescue centres*

As soon as possible after passage of this law, the national government will remit to the Council of Ministers the proposed legislation on Rescue Centres and specimens destinations, pursuant to the framework of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Convention) and to Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade.

Sole Transitional Provision. *Adaptation period for existing zoological parks*

Zoological parks currently operating and open to the public shall be allowed a one year period to effect the adjustments required for compliance and to submit the requisite license application. The one year adjustment period commences on the day this law goes into force.

If the applicant receives no notification from the competent authorities within six months of reception by

these latter of the license application, it is understood that the license has been approved.

Any zoological park failing to submit a license application by the prescribed deadline is subject to the measures described under Article 16, and shall close its facilities to the public.

Final Provision One. *Type of legislation*

This law is basic legislation, passed in accordance with Article 149.1.23 of the Constitution.

Final Provision Two. *Application of other legislation*

Compliance with the terms of this law does not exempt zoological parks from compliance with legislation on animal health, the policing of public entertainment and recreational activities, or any other applicable legislation.

Final Provision Three. *Modification of requirements*

The national government may amend the measures and programs established under Articles 3 and 4, provided that such amendment is required under, and effected in keeping with, European Union legislation.

Final Provision Four. *Updating of fines*

The fines set under Article 14 may undergo annual variations based on the Consumer Price Index. The national government is empowered to order adjustment of the amount of the fines by means of a royal decree.

Final Provision Five. *Further implementation*

The national government shall determine the rules for further implementation of this law falling within its scope of competences.

Final Provision Six. *Entry into force*

This law shall go into force one day after publication in the Official State Journal.

Therefore,

It is my order that all Spaniards, private individuals and public authorities, observe and encourage observance of this law.

Madrid, 27 October 2003

JUAN CARLOS R.

The President of Spain
JOSÉ MARÍA AZNAR LÓPEZ

Council Directive 1999/22/EC
of 29 March 1999,
relating to the keeping of
wild animals in zoos

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

THE COUNCIL OF THE EUROPEAN UNION,

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

Having regard to the proposal from the Commission,

Having regard to the opinion of the Economic and Social Committee ⁽¹⁾,

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

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

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

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

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

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

HAS ADOPTED THIS DIRECTIVE:

Article 1

Aim

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

Article 2

Definition

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

Article 3

Requirements applicable to zoos

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

⁽¹⁾ OJ C 204, 15.7.1996, p. 63.

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

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

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

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

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

Article 4

Licensing and inspection

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

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

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

Article 5

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

Article 6

Closure of zoos

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

Article 7

Competent authorities

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

Article 8

Penalties

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

*Article 9***Implementation**

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

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

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

*Article 10***Entry in force**

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

Article 11

This Directive is addressed to the Member States.

Done at Brussels, 29 March 1999.

For the Council

The President

F. MÜNTEFERING



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With the collaboration of:

