

Zoo Health

The legal status and performance of zoos in the Canary Islands
in accordance to Spanish law 31/2003, relating to the keeping
of wild animals in zoos.



A report by InfoZoos 2008



CONTENTS:

1. Introduction	
2. Method of assessment	
3. Results	
4. Conclusions	
5. Recommendations	
6. Bibliography	
7. Annexes	
- Annex I	Act 31/2003 of 27 October 2003, specific to the keeping of wild animals in zoos (esp)
- Annex II	Council Directive 1999/22/EC of 29 March 1999, relating to the keeping of wild animals in zoos
- Annex III	Zoo assessment form
- Annex IV	List of potentially dangerous animals as recognised by EAZA: <i>EAZA Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria</i> (April 2006)
- Annex V	Implementation of Act 31/2003 in the 17 Autonomous Communities and the two Autonomous Cities (in North Africa) (esp)

INTRODUCTION

In 2006, Infozoos (a coalition of ANDA, Born Free Foundation and DEPANA) carried out a pilot study to investigate the degree of compliance by zoos in Spain with the Spanish **Act 31/2003**, on the keeping of wild animals in zoos (Annex I) and the **European Council Directive 1999/22/EC** (Annex II), on which the Spanish Act is based. The pilot study evaluated eight selected zoological collections in six different regions of Spain (autonomous communities). The results revealed that the zoos were not complying with the law and that varying degrees of infringements were detected.

An official complaint was made to the European Commission in October 2006, which included the InfoZoos findings, and provided evidence that the authorities in Spain had failed to correctly implement and enforce the EC Directive. The European Commission responded in March 2007 by requesting Spain, through an *infractio procedure*, to fully comply with the Directive and ensure that all zoos are licensed, inspected and meet the specific requirements in animal care and actively commit to education and the conservation of biodiversity. If Spain fails to achieve this within two years, further legal proceedings by the Commission may be taken.

In order to achieve a greater understanding of the situation across Spain, InfoZoos continues to visit zoos and assess their status and performance. Moreover, further enquiries to the authorities have revealed that some regional governments are doing little to ensure the requirements of the law are met. Many zoo animals remain confined in conditions that fail to meet even the minimal requirements¹ and few zoos appear to have implemented programmes dedicated to conservation and education. It is more important than ever that InfoZoos maintains its evaluation programme, to pressurise the authorities into implementing change and to ensure the European Commission remain informed with any developments.

Zoos in the Region of the Canary Islands (that includes the islands of Tenerife, Lanzarote, Gran Canaria, Fuerteventura and La Palma), thought to represent 14% of Spain's total number of zoos, remain unlicensed and reportedly few inspections have been undertaken. Despite some efforts made by both the Ministry of the Environment and the Ministry of Agriculture in the Region, no single department appears to take responsibility for addressing the situation. InfoZoos' work in the Canary Islands seeks to resolve the deadlock and ensure zoos throughout the Region are correctly licensed and inspected and, should zoos fail to meet the requirements, the establishments should close and animals suitably rehomed.

¹ EC Directive 1999/22/EC

METHOD OF ASSESSMENT

Study

Zoo visits were made over a two-and-a-half-month period from 2nd February to 16th May 2007, during which **thirteen zoological collections** in the Canary Islands were visited and assessed (**Table 1**).

The aim of the study was to assess the degree of implementation of the Spanish **Act 31/2003** in the autonomous community.

Table 1: Zoos* visited

	Zoos	Member of EAZA¹⁾	Member of AIZA²⁾	Date of visit
La Palma	Maroparque	No	No	01/04/2007
	Jardín de las Aves	No	No	02/04/2007
Gran Canaria	Palmitos Park	No	Yes	04/04/2007
	Cocodrilo Park	No	No	05/04/2007
Fuerteventura	Zoo Stella Canaris	No	No	06/04/2007
	La Lajita	No	Yes	07/04/2007
	Baku	No	No	09/04/2007
Lanzarote	Guinate tropical Park	No	No	11/04/2007
	Rancho de Texas	No	No	12/04/2007
Tenerife	Aguilas	No	No	10-11-12/05/2007
	Oasis del Valle	No	No	02/02/2007
	Monkey Park	No	No	16/04/2007
	Loro Parque	Yes	Yes	16/05/2007

¹⁾ **EAZA**: European Association of Zoos and Aquaria

²⁾ **AIZA**: Iberian Association of Zoos y Aquaria

* The EC Directive states that a 'zoo' is a "permanent establishment 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..".

The evaluation method

Zoo evaluation consisted of an on-site visit to each zoo, where photographic and film evidence was collected of all animal enclosures and public areas. Further to this, information was collected about the zoos' conservation programmes, their education strategy, veterinary assessment protocol and animal record-keeping, through a telephone conversation with the zoo management, using a questionnaire. This information was given voluntarily by the zoo and they had no obligation to do so.

Zoo visits were not announced and therefore did not have the cooperation of the zoo management; instead, a researcher visited the zoo as a member of the public, remaining only in the areas of the zoo open to the public. It was therefore not possible to visit and assess the animals' off-show accommodation, or other areas dedicated to veterinary care, education or food preparation and storage.

The form used in the evaluation of the zoos (**Annex III**) is based on the requirements of Act 31/2003, covering general aspects of the zoo, their conservation programmes and adopted public safety measures. Assessment of the standards of animal welfare and the conditions under which the animals are kept used the standards for the accommodation and care of animals in zoos established by the European Association of Zoos and Aquaria (EAZA), in addition to those of the Iberian Association of Zoos and Aquaria (AIZA).

The evaluation form (**Annex III**) is divided into **four parts**:

- A. **General information.** The first part covers three aspects: the establishment's official details, the preventative measures taken to limit the transmission of diseases, pests and parasites, and safety within the zoo. This can only be completed with the zoo's cooperation, either by phone or during the visit.

Once informed of the study on zoos, the zoo management was asked for details about the zoo. This included: their conservation, education, veterinary (including nutrition), and environmental enrichment programmes, together with the animal record-keeping and the zoo's cooperation with public or private bodies.

This is the only part of the evaluation form that requires the zoo's cooperation.

If the zoo management refused to provide additional information about the establishment in the questionnaire, this was noted. It is acknowledged that with this information a more accurate assessment of the zoos' level of compliance with the Act would be achieved.

B. **Conservation:** The following points were taken into account when assessing the zoo's level of cooperation with participation in conservation:

1) The zoo's participation in **co-operative captive breeding programmes** coordinated by EAZA (European Association of Zoos and Aquaria) which include *European Endangered Species Programmes* (EEP) and *European Studbook* (ESB) (see www.eaza.net/frames/0intro.html). If the zoo was not willing to divulge this information via the questionnaire, its level of participation in these programmes was evaluated by consulting the publicity material of the zoo, information boards within the zoo and from the zoo's website.

Only the above mentioned official captive breeding programmes have been taken into account for inclusion in this study. Understanding that EAZA aims, through co-operative breeding programmes, to conserve a self-sufficient captive population that will maintain at least 90% of its original genetic variability for one hundred years or more, the captive population is managed as a whole (despite being dispersed) under the supervision of EAZA. EAZA claims that this is the only way of preventing inbreeding and ensuring the existence of healthy populations (at least from a genetic viewpoint) for future reintroduction programmes.

Those species or individuals that do not participate in EEPs or ESBs, perhaps due to a lack of commitment to conservation by the zoo, or that do not comply with the requirements of EEP, were not included.

Controlled breeding (through the EEPs/ESBs) should in theory prevent: surplus animals; the presence of hybrids that hold no conservation value; and the illegal trade in species.

2) The **risk of extinction of each species** exhibited in the zoological collection according to the IUCN Red List (see <http://www.iucnredlist.org/>) to determine the conservation value of the species.

The high cost of keeping wild animals in captivity and the lack of available resources means zoos should ideally commit to the conservation of the most endangered species and thus seek to only keep those animal species threatened with extinction. For this reason, the IUCN Red List criteria of threatened species has been used as the measure for determining the conservation commitment of the zoos visited. All the species included in the first five Red List categories are considered to be of conservation significance: EX (extinct), EW (extinct in the wild), CR (critically endangered), EN (endangered) and VU (vulnerable). Note: the

categories 'Conservation Dependent' and "Near Threatened" have not been included.

3) **Participation in reintroduction programmes** and cooperation in ***in situ* conservation programmes**. Information was collected on each zoo's involvement in co-operative breeding and reintroduction programmes.

C. **Education:** This included the assessment of guided tours, educational talks, information boards, the existence, or not, of a classroom, and shows involving wild animals.

D. **Evaluation of animal enclosures:** In order to ensure consistency between the zoos visited and to allow detailed evaluation of the enclosures, a maximum of 30 enclosures per zoo was evaluated. A video camera was used to record the enclosure, its location, the interior, the animals, if seen, and any information boards present.

Clauses 3 and 4 and the first Provision of the Act 31/2003 refers to the required housing conditions.

Despite all zoos being requested to give details about their environmental enrichment programme (aimed at providing each species with improved accommodation and allowing them to express natural behaviour) the information was not always volunteered. For this reason, assessment of the environmental enrichment programmes carried out in the zoos has not been included in this study. It is hoped that future zoo assessments will allow analysis of environmental enrichment in the animals' enclosures.

In addition to assessing the suitability of the captive environment in each of the 30 selected enclosures, the hazardous animal categorisation of the species was also noted. EAZA's *Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria* (**Annex IV**), which includes a list of potentially hazardous animals, was used.

In each zoo, up to a maximum of thirty enclosures were selected according to the following criteria:

- a. If the zoo has **under thirty** enclosures: all enclosures in the zoo were assessed.
- b. **Between 30 and 59** enclosures: the first thirty enclosures to be seen on the video film was analysed.
- c. **60 or over:** every n^{th} enclosure was selected, where 'n' is the result of dividing the total number of enclosures by 30.

When assessing the sample enclosures, three aspects were analysed a) environmental quality, b) safety, and c) information about the species on the sign. There are further explained below:

a.- Environmental quality

Using the Five Freedoms, developed by the UK's *Farm Animal Welfare Council*, UK (1992), the welfare of the animals contained in the selected enclosure was assessed. The Five Freedoms:

1. Freedom from Hunger and Thirst
2. Freedom from Discomfort
3. Freedom from Pain, Injury or Disease
4. Freedom to Express Normal Behaviour
5. Freedom from Fear and Distress

The ten questions below are aimed at assessing the degree to which these basic and essential biological needs are satisfied and therefore providing an indication of the animals' level of well-being.

1.- *Do the animals have **clean water**?*

The following criteria were used to evaluate this requirement:

- "0" when the enclosure has no clean water, when the water is discoloured, or when stagnant, or contains other substances that could cause harm to the animal.
- "1" when the animals have clean water in their enclosure.
- This question was not taken into account in the study if it could not be seen whether the animal had clean water (e.g. the enclosure is not visible in its entirety or due to the characteristics of the place where the water is located).

2.- *Do **temperature/humidity, ventilation and lighting** levels guarantee the comfort and well-being of the species?*

The following criteria were used to evaluate this requirement:

- "0" when conditions in the enclosure do not allow the animals to control their body temperature (e.g. lack of heat sources, lack of shade and/or sunlit areas; paying special attention to nocturnal species, etc.).
- "0.5" when the enclosure has limited areas for such control or when they are insufficient (e.g. they are not sufficient for all the individuals, or not sufficient for the inhabiting species, etc.).
- "1" when the conditions in the enclosure allow the animals to control their body temperature.

3.- *Is the environment, space and structure sufficient for the animals to **exercise** properly for their well-being?*

The following criteria were used to evaluate this requirement:

- “0” when the enclosure does not allow the animals to move around freely because they are tethered or disabled (e.g. broken wing bones, clipped wings, etc.).
- “0.5” when the animals can barely move around freely (e.g. if movement is permitted but restricted).
- “1” when the enclosure allows the animals to move freely.

4.- *Are the environment, space, structure and materials used sufficient for the animals to **rest** properly?*

The following criteria were used to evaluate this requirement:

- “0” when the rest areas (platforms, shelters, burrows, etc.) are wholly inappropriate for the animals’ needs or absent.
- “0.5” when the rest areas are insufficient (e.g. rest areas cannot accommodate all the inhabitants of the enclosure, or are inappropriate for the species, etc.).
- “1” when the rest areas are appropriate and sufficient for the species and all individual animals in the enclosure.

5.- *Does the composition of the **group** satisfy the social needs of the species?*

The following criteria were used to evaluate this requirement:

- “0” when the group composition is not representative of that species in the wild.
- “1” when the composition of the group is similar to that found in the wild.

6.- *Does **interaction** with animals in adjacent or nearby enclosures produce excessive stress? (Particularly between predator and prey)*

The following criteria were used to evaluate this requirement:

- “0” when the enclosure does not prevent stress between adjacent animals (e.g. no visual barriers, distance does not reduce noise, smells and/or sounds, etc.).
- “1” when the enclosure prevents stressful situations between adjacent animals.

7.- *Is **interaction** with the public unduly stressful?*

The following criteria were used to evaluate this requirement:

- “0” when the enclosure does not prevent stress to the animal from the public (e.g. no visual barriers, distance does not reduce noise, smells and/or sounds, etc.).
- “1” when the enclosure prevents stress to the animal from the public.

8.- *Does the enclosure prevent physical **contact** between public and animals?*

The following criteria were used to evaluate this requirement:

- “0” when physical contact between animals and public is possible, due to deficiencies in the enclosure or lack of supervision by zoo staff.
- “1” when no physical contact between animals and public is possible.

N.B: The EAZA standards state, “*Any direct physical contact between animals and the visiting public only to be under control of zoo staff and for periods of time and under conditions consistent with the animals’ welfare and not leading to their discomfort.*” Due to the difficulty of determining under what conditions and for how long there may be physical contact with any one species without causing it discomfort, it is considered that all physical contact with zoo animals is harmful, and should therefore be avoided. At the same time, it should be acknowledged there is often a risk of zoonoses (animal diseases or infections that can be transmitted between vertebrate animals and humans).

9.- *Does the condition in which the enclosure is kept pose a **risk** to the **health** and/or **well-being** of the animal?*

The following criteria were used to evaluate this requirement:

- “0” when there is a risk to the animals’ health (e.g. defects in the enclosure structure that could cause injury to the animal, poisonous plants within their reach, exposure to badly protected electrical apparatus or power points, vegetation that could fall and cause harm, excessive noise, etc.).
- “1” when there is no risk to the animals’ health inside the enclosure.

10.- *Is the level of **hygiene** in the enclosure sufficient?*

The following criteria were used to evaluate this requirement:

- “0” when the level of hygiene is insufficient (e.g. rotting food, stagnant water, build up of faeces, rubbish, etc.).
- “1” when the level of hygiene in the enclosure is sufficient.

b.- Safety and security in the enclosure:

There are two types of enclosure to be found: those that are observed from the outside, and those that can be entered on foot or in a closed vehicle. Bearing this in mind, the following questions to assess the level of safety and security in both situations (which ever is relevant).

b.1.- Observed from the outside

1.- *Is there an especially dangerous animal in the enclosure?*

1. a.- *If there is a 'hazardous' animal, are there easily visible signs warning the public that the animal is **especially dangerous**?*

The following criteria were used to evaluate this requirement:

- "0" when there is **no sign** warning the public of the fact that the animal is especially dangerous.
- "1" when there is a sign indicating the animal is especially dangerous.
- This question will not be taken into account when the animal is not considered hazardous (in EAZA guidance).

1. b.- *If a 'hazardous' animal is present, is there permanent supervision by a trained member of the zoo staff?*

The following criteria were used to evaluate this requirement:

- "0" when there is no supervision by the zoo staff.
- "1" when the enclosure is supervised by the zoo staff.
- This question will not be taken into account when the animal is not considered hazardous (in EAZA guidance).

2.- *Could the animals **escape** from the enclosure?*

The following criteria were used to evaluate this requirement:

- "0" when the animals kept in the enclosure can escape because the enclosure barrier is in poor condition or the public can release them.
- "1" when the animals kept in the enclosure cannot escape.

3.- *Can the public come into **direct contact** with the animals?*

The following criteria were used to evaluate this requirement:

- "0" when the public can touch the animals.
- "1" when the public cannot touch the animals.

b.2.- Public has access to the enclosure (on foot or in a vehicle).

1.- *If the visit is made in a vehicle, are there double gates when entering the enclosures?*

The following criteria were used to evaluate this requirement:

- "0" when there are **no double gates** in the enclosure perimeter.
- "1" when there are double gates in the enclosure perimeter.

2.- *Was a rescue vehicle observed in the zoo to evacuate visitors should the need arise?*

The following criteria were used to evaluate this requirement:

- "0" when there is **no rescue vehicle** in the zoo to evacuate visitors should the need arise.
- "1" when there is a rescue vehicle in the zoo to evacuate visitors should the need arise.

3.- *Is there an observation point from which people can be watched whilst in the enclosure?*

The following criteria were used to evaluate this requirement:

- “0” when there is **no place** from which to observe the public entering the enclosure (e.g. watch tower).
- “1” when there is a place from which to observe the public entering the enclosure (e.g. watch tower).

4.- *If there is a ‘hazardous’ animal, are there easily visible signs warning the public that the animal is **especially dangerous**?*

The following criteria were used to evaluate this requirement:

- “0” when there is **no sign** warning the public of the fact that the animal is especially dangerous.
- “1” when there is a sign indicating the animal is especially dangerous.
- This question will not be taken into account when the animal is not considered hazardous (in EAZA guidance).

5.- *Are there easily visible signs to instruct people in the enclosures (e.g. “Don’t get out of the car”; “Don’t open the windows”; “Don’t feed the animals”; etc.)?*

The following criteria were used to evaluate this requirement:

- “0” when there are **no warning signs** with the prohibitions.
- “1” when there are warning signs with the prohibitions.

6.- *Could the animals **escape** from the enclosure?*

The following criteria were used to evaluate this requirement:

- “0” when the animals kept in the enclosure can escape because the enclosure barrier is in poor condition or the public can release them.
- “1” when the animals kept in the enclosure cannot escape.

7.- *Can the public come into **direct contact** with the animals?*

The following criteria were used to evaluate this requirement:

- “0” when the public can touch the animals.
- “1” when the public cannot touch the animals.

c.- Animal information signs

This section assesses the species’ biological and ecological data on the species information signs.

1.- *Is there a sign for each of the species in the enclosure?*

The following criteria were used to evaluate this requirement:

- “0” when there is **no information sign** for one or more of the animal species kept in the enclosure.
- When there is a sign, the information on it will be assessed with the following questions:

a.- *Is it in **good condition**?*

The following criteria were used to evaluate this requirement:

- “0” when the animal information sign is in poor condition or illegible.
- “1” when the animal information sign is in good condition and legible.

b.- *Are the **scientific and common names** of the species included?*

The following criteria were used to evaluate this requirement:

- “0” when the scientific and common names do not appear on the sign.
- “1” when the sign includes both the scientific and common names of the species.

c.- *Is **biological data** on the species included on the sign?*

The following criteria were used to evaluate this requirement:

- “0” when no biological data on the species is included on the sign.
- “1” when the sign includes biological data on the species (e.g. diet, nutrition, activity, reproduction, social structure, behaviour, etc.).

d.- *Is there any information on the species’ **natural habitat**?*

The following criteria were used to evaluate this requirement:

- “0” when there is no information on the species’ natural habitat on the sign.
- “1” when the sign includes information on the species’ natural habitat.

e.- *Is there any mention of the **distribution area** of the species?*

The following criteria were used to evaluate this requirement:

- “0” when there is no mention of the distribution area of the species on the sign.
- “1” when the sign includes the distribution area of the species.

7.- *Does the species’ **conservation status** appear?*

The following criteria were used to evaluate this requirement:

- “0” when the species’ conservation status is not included on the sign.
- “1” when the sign includes the species’ conservation status.

8.- *If the animal is of a species included in an EEP or ESB, does the sign indicate whether the animals are part of an **EEP** or **ESB programme**?*

The following criteria were used to evaluate this requirement:

- “0” when there is no information as to whether the animals are part of an EEP or ESB captive breeding programme.

- “1” when the sign includes information as to whether the animals are part of an EEP or ESB captive breeding programme.

The results obtained for each individual zoo are presented in the Spanish report “**La salud de los zoos en las Islas Canarias**” and are expressed as a mean average percentage for each of the different aspects. Each mean lies between 0% and 100%. The lower it is, the less the zoo complies with the Act; whereas the higher the percentage, the better the zoo complies with the Act.

It is must be noted, however, that under no circumstances must it be assumed that a zoo’s conditions are ideal if the mean reaches 100%; this merely indicates that it satisfies the minimal requirements of the Act 31/2003 and EAZA Standards.

RESULTS AND CONCLUSIONS

Results for the individual zoos are available in the original, full Spanish report. Below provides the overall results of the status and performance of all thirteen zoos visited – giving a clearer indication as to whether the legal requirements of the law have been met by zoos in the Canary Islands:

1. Conservation

“Zoos are required to draw up, develop and implement ex situ conservation programmes for wild animals, which, since they are removed from their natural habitat, must be aimed at helping to conserve biodiversity”. Act 31/2003

- a) Only four of the thirteen zoos assessed (30.77%) participate in **official European captive breeding programmes** (EEP and ESB) run by EAZA (European Association of Zoos and Aquaria). **27.62%** of the species assessed in the zoos have corresponding official captive breeding programmes in which they could participate (but do not participate). But of these species, only **29.31%** are actively involved in an EEP or ESB.
- b) Overall the **proportion of threatened species** in the zoos is very low. Only **24.76%** of the species assessed are found in the IUCN Red List.
- c) Upon requesting information about the zoos' **in situ conservation programmes**, only *Loro Parque* in Tenerife provided details of their conservation programme. If zoos failed to provide such information as part of the zoo questionnaire, it was decided (for the purposes of this study) that those zoos **do not participate** in reintroduction programmes or *in situ* conservation projects.

2. Education

“Zoos are required to draft, develop and implement education programmes aimed at making the public aware of the need for conserving biodiversity”. Act 31/2003

- a) Only six of the thirteen zoos (**46.15%**) provide **guided visits** - for school groups only.
- b) Only six of the thirteen zoos (**46.15%**) gave **educational talks** during the day to inform the visiting public about the species exhibited.
- c) Only four zoos (**30.77%**) had **interpretation panels** with information on biodiversity and conservation.
- d) Only three zoos (**23.07%**) had a **classroom** to accommodate visiting school groups.

3. Assessment of the facilities

“Zoos are required (...) to keep animals in conditions which satisfy their biological and conservational needs”. Act 31/2003

a) Environmental quality: The average value for the environmental quality of the assessed enclosures in the zoos is 62.76%. Acknowledging that 100% merely indicates that it satisfies the minimal requirements of the Act 31/2003 and EAZA Standards, this figure shows that the zoos do not appear to provide their animals with their basic biological needs.

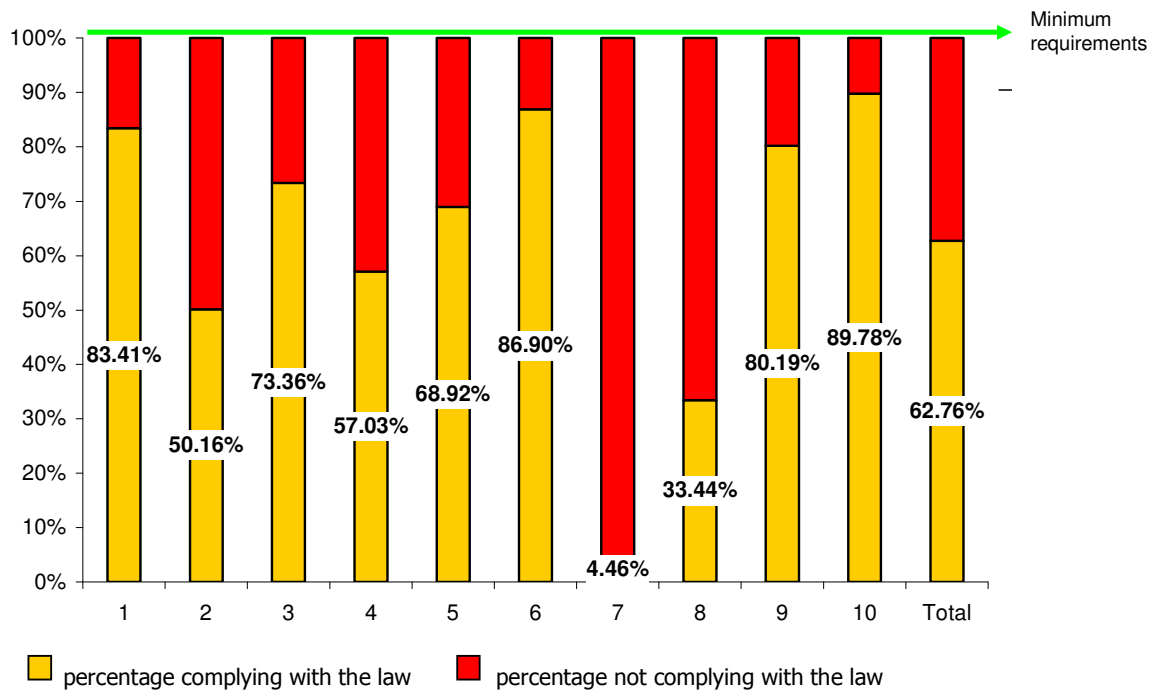


FIGURE 25: Estimated averages for environmental quality in 314 enclosures in the twelve zoos of the zoos visited. It must be mentioned that the first parameter covers 230; the second, 310 enclosures; the third, 244; the fourth, sixth, ninth and tenth, 313 enclosures; and in the fifth, 296 enclosures. (1: Enclosures with clean water; 2: Enclosures with sufficient levels of temperature/humidity, ventilation and lighting to guarantee the species' comfort and well-being; 3: Enclosures with sufficient environment, space and structure for the animals to exercise properly for their well-being; 4: Enclosures with sufficient environment, space, structure and materials to allow the animals to rest properly; 5: Enclosures where the composition of the group satisfies the needs of the species; 6: Enclosures where the interaction with animals in adjacent or nearby enclosures do not produce excessive stress; 7: Enclosures where the presence of the public does not produce excessive stress; 8: Enclosures that prevent physical contact between public and animals; 9: The condition in which the enclosure is kept does not imply a risk to the animals' health and/or well-being; 10: Enclosures with an acceptable level of hygiene.)

(NB. The assessment of environmental quality within enclosures was carried out at twelve of the thirteen zoos visited. This excludes Baku Zoo, in Fuerteventura.)

In many circumstances, the public have the ability to touch the animals. This not only raises concern over the distress caused to the animals by such contact, but this also raises concern about the risks to the health and safety of the visiting public. Health risks were further evidenced by many of the enclosures assessed, which lacked suitable levels of hygiene, which may result in a build up of pathogens. This would be further exacerbated by the insufficient ventilation and humidity shown in the results.

Despite a requirement for animals to be kept in a captive environment that offers the animals mental and physical stimulation, allowing them to express natural behaviour, many of the enclosures assessed lacked sufficient or suitable environmental enrichment. Without such stimulation, animals can develop abnormal behaviours, obesity and other mental or physical health problems, which are generally not seen within wild populations.

b) Safety and security: The average value for safety and security measures in the assessed enclosures is 77.63%. Unsupervised, direct contact between the public and the animals is possible in 64.17% of the enclosures assessed.

This raises concern over the possible risk implications including zoonosis (transmission of disease) and the possibility of being attacked by an animal.

Security measures within enclosures, protecting both the animals and the public

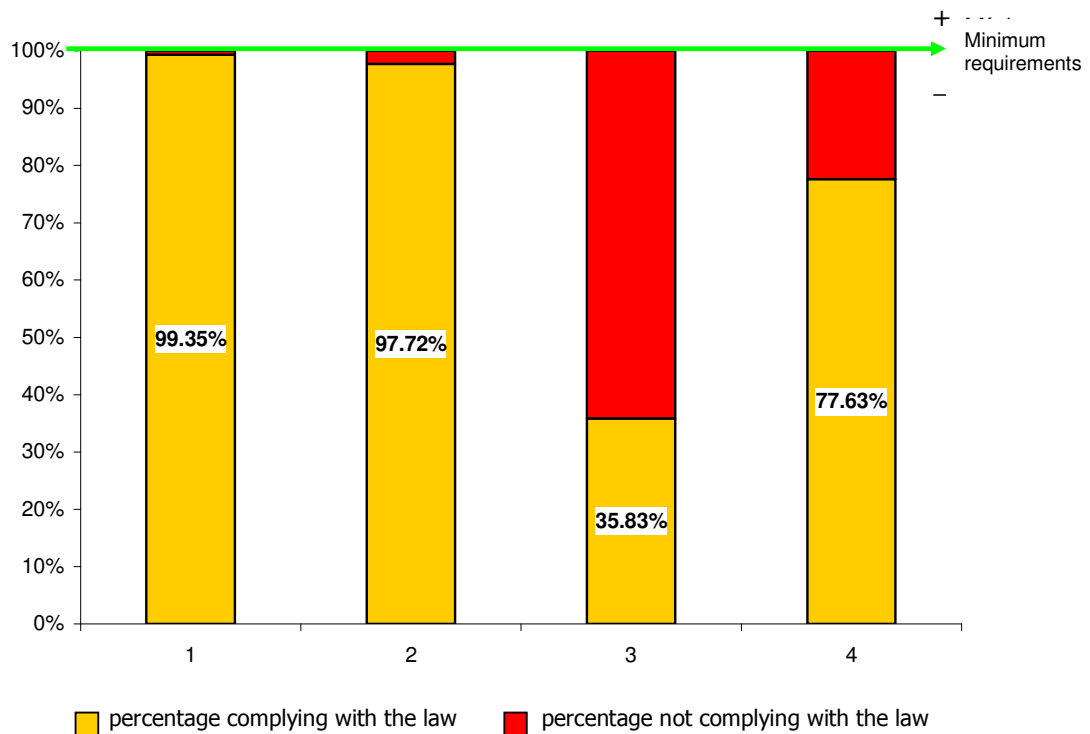


FIGURE 26: Estimated averages for the assessment of security measures in 314 enclosures (in the twelve zoos assessed). (Can the animals escape from the enclosure? Either because: **1**: the enclosure barrier is in poor condition; or **2**: the public can release them.

3: Can the public come into direct contact with the animals?). **4:** the mean average compliance.

NB. 100% merely indicates that it satisfies the minimal requirements of the Act 31/2003 and EAZA Standards.

In many instances during the investigation, it was noted that the public had the ability to have direct, unsupervised contact with the animals. This was mainly due to the fact that many of the enclosures failed to have stand-off barriers, which distance the visiting public from the main fencing of the animals' enclosures. Furthermore, there were circumstances where the public could access the enclosures: when fencing was broken; when an adult hand could easily fit between the bars of the enclosure; or when the enclosure was unlocked. In one instance, an enclosure containing a crocodile was unlocked, which allowed easy access to the public, or the escape of the animal.

c) Percentage of enclosures with an animal information sign:
73.25% of the enclosures assessed had animal information signs about the species kept there.

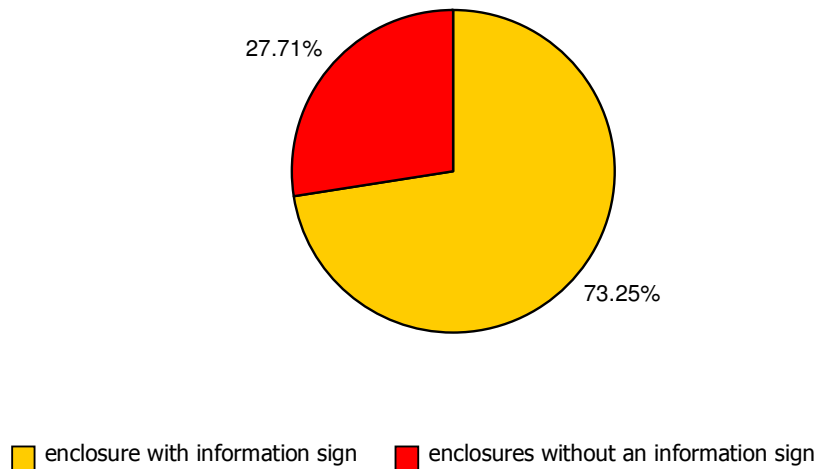


FIGURE 27: Percentage of enclosures with an information sign providing biological data on the species kept there and its conservation significance.

d) Animal information signs: None of the zoos had animal information signs for every species exhibited. In four of the thirteen zoos assessed, more than half the species had no information sign.

Existence of animal information signage

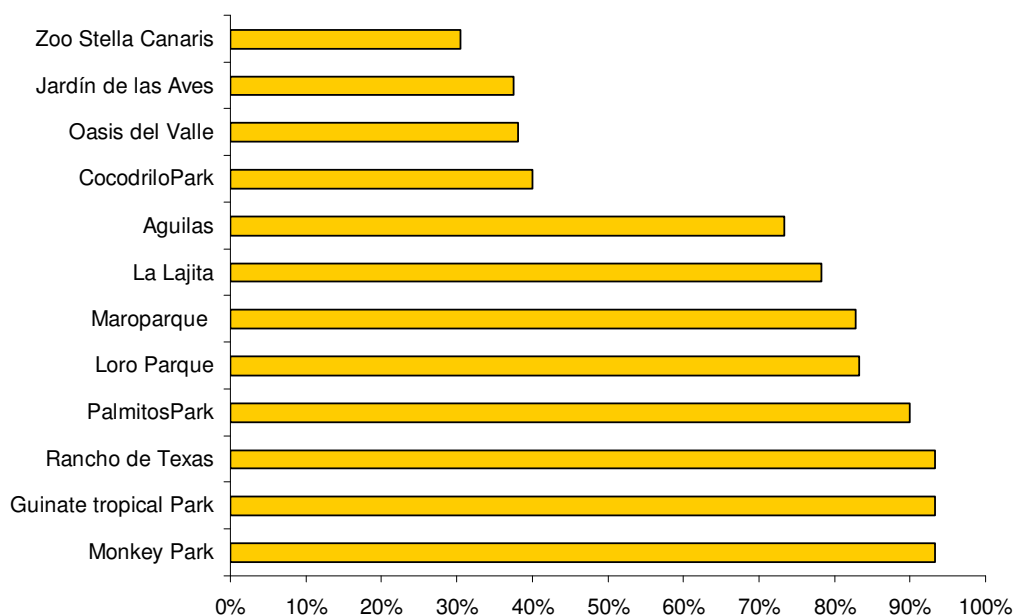


FIGURE 28: Percentage of zoo enclosures with animal information signs.

Quality of animal information signage

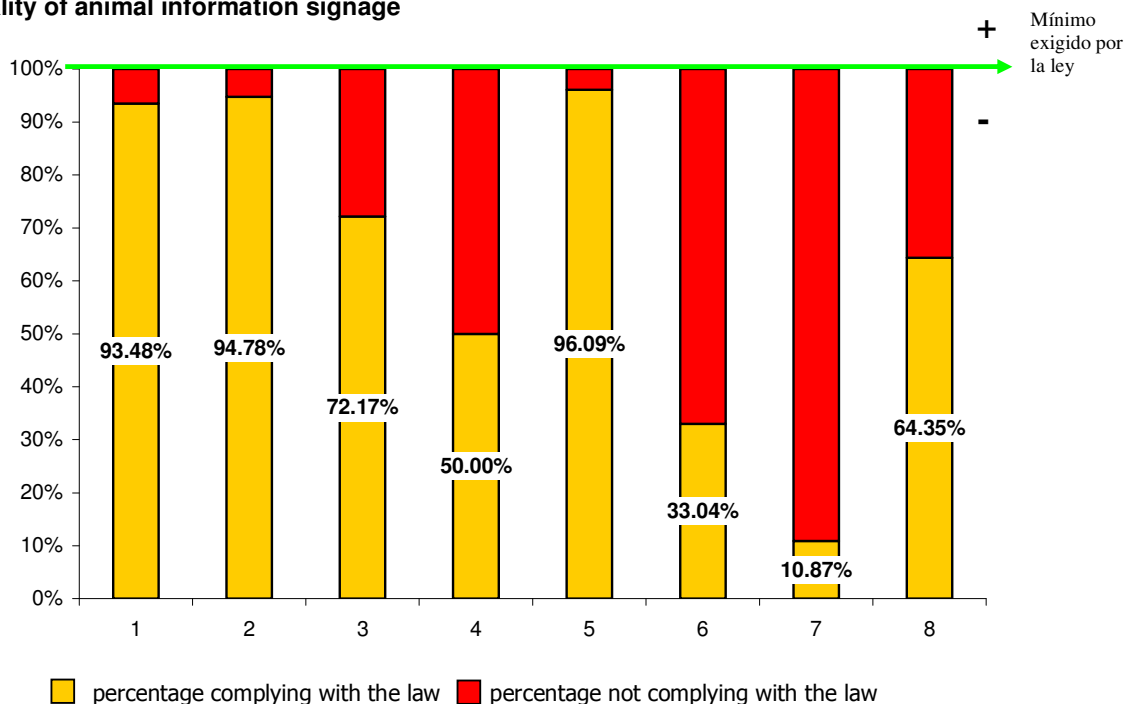


FIGURE 29: Estimated averages of the data on the animal information signs for the 314 enclosures in the twelve zoos assessed. (1: The sign is in good condition; 2: The scientific and common names of the species are included; 3: Biological data on the species are included on the sign; 4: It gives information on the species' natural habitat; 5: It includes the distribution area of the species; 6: The species' conservation status appears on the sign; 7: The sign indicates whether the animals are part of an EEP or ESB captive breeding programme?); 8: mean average.

NB. 100% merely indicates that it satisfies the minimal requirements of the Act 31/2003 and EAZA Standards.

Analysis on the available information about the animals held in the assessed enclosures revealed that only in a few instances was all the information legally required, available: the conservation status of the animal species; biological data; and the natural habitat of the species. Furthermore, very few signs provided information about official captive breeding programmes.

The availability of such information is vital and should form an integral part of the zoo's education programme. Failing to provide such detailed information at each enclosure, for each animal species contained, would appear to fail to comply with the law.

e) Percentage of the enclosures housing dangerous animals that have a clearly visible notice to the effect: The percentage of enclosures housing potentially dangerous animals that have a clearly visible sign to that effect is very low (7.69%) - despite the fact that it is required by law.

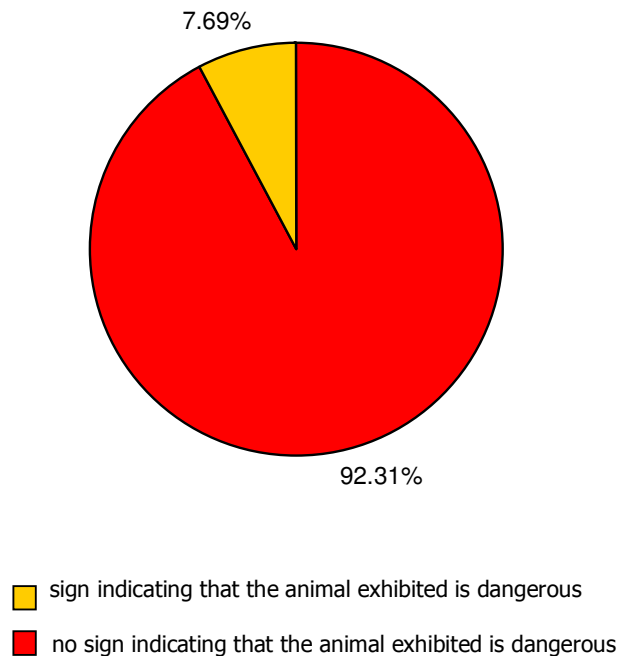


FIGURE 30: Percentage of the 91 enclosures that house especially dangerous animals that had clearly visible signs warning the public to the danger.

4. Shows with wild animals

Although not qualitatively assessed in this study, all shows were viewed and recorded, and observations noted about the content of the shows and the behaviour of the animals.

Nine of the thirteen zoos assessed (69.23%) had animal shows which included the handling of wild animals.

Few shows included information about the biology of the species, and in no case was the conservation status of the animal species mentioned or how the animals were trained for the show.

The educational value of the animal shows was assessed by noting the show content, including: whether additional information was provided about the animal(s) (e.g. biological data, conservation significance, etc.); and whether the animal performed natural or abnormal behaviour.

All the shows recorded during the zoos visits were entertainment based, and whilst some provided additional information about the animal(s) involved, the animal(s) performed 'stunts' and abnormal behaviours that were often accompanied by loud music. This could cause the animal(s) distress, coupled with the applause and exclamations of the public.

A further observation was that the facilities where the shows were performed often lacked sufficient space and environmental enrichment to enable the animal(s) to sufficiently exercise and express natural behaviour. It was questionable whether such facilities met with the housing requirements of the Spanish law and indeed, the basic biological needs of the animals.

Direct contact between the animals and the public was often encouraged by the zoo personnel. Risk from injury and transmission of disease was often plausible, but not quantifiable. In many cases, dangerous animals (as indicated by EAZA's hazardous animals categorisation (Annex IV) were coming into direct contact with the visiting public.

5. Transmission of pests and parasites

"Zoos are required to (...) prevent the transmission of pests and parasites from the exterior to the animals in the zoo, and from the exhibits to the species outside the facilities". Act 31/2003

It is commonly recognised that wild animals may pose a significant health risk, resulting from the transmission of diverse and serious disease to humans and other animals. Fish, amphibians, reptiles, birds and mammals are known to carry zoonotic diseases that can be transmitted when in contact with humans and other vertebrate animals. Possible contamination of wild indigenous animals outside the perimeter of the zoo from zoo animals is a very real risk.

During this investigation, instances where zoo animals could come into contact with indigenous animals were recorded. This included: when zoos

permitted the free-ranging of zoo animals inside the zoo grounds (which was evident in one of the thirteen zoos visited (**7.69%**)); instances where contact between zoo and indigenous animals would be possible (which appeared to be possible in **100%** of the zoos assessed; and when direct contact between the public and the zoo animals was observed. Ten of the thirteen facilities (**76.92%**) promoted direct contact with zoo animals to the public but, none of the zoos assessed warned the visiting public about the disease risk.

6. Adequacy of the perimeter fence

“Prevent the escape of animals from the zoo, especially those species that are potentially invasive, with the aim of avoiding possible threats to the environment and genetic changes in the species, subspecies and indigenous populations, as well as the habitats and ecosystems”. Act 31/2003

The perimeter fence was considered inadequate to retain the zoo animals in **76.92%** of the zoos assessed. It was observed that in many instances the perimeter fence was of insufficient height and often poorly maintained.

In conclusion

In the opinion of the authors and based on the analysis of the data gathered for this report, the results illustrate the following **infringements** of Act 31/2003:

The infringements by the assessed zoos (as a whole) have been categorised on their severity: *minor*, *serious*, and *very serious*:

MINOR:

- Apparent lack of zoo staff and availability of educational material, as outlined in Article 5 and Article 4 b) of the Spanish Law.

SERIOUS

- Apparent lack of the specialist trained zoo staff or the availability of educational material, as outlined in Article 5 and Article 4 b) respectively.
- Apparent non-compliance with the animal welfare, environmental and public safety measures required by the Act, as outlined by Articles 3 and 4 of the Law.
- Apparent failure to establish, develop and implement programmes in conservation, education and veterinary procedure as outlined in Article 4 of the Act.

VERY SERIOUS

- In some of the zoos visited, the conditions of the animals and the environments in which they were kept, failed to meet even the animals' minimal requirements, as outlined by Article 3 of the Law.
- Furthermore, there were many instances where the public was put at risk of disease transmission and/or injury due the direct contact with dangerous wild animals, whether supervised or unsupervised, and the fact that some enclosures were unlocked, lacked adequate security and visible signage.

Collectively all zoos in the Canary Islands are currently failing to comply with the requirements of the Directive 1999/22/EC and the Spanish Act 31/2003. Whereas some of the assessed zoos comply more than others, no one zoo is fully compliant.

Recommendations

The failure of zoos in the Canary Islands to meet the requirements of the Spanish zoo law (and subsequently the EC Directive 1999/22/EC) appears to be as a direct result of the Regional Government neglecting to implement the law. Therefore, the Regional Government should urgently:

- Request the Environment and Agriculture Departments to identify who has direct responsibility for the implementation and enforcement of the law,
- Draft regional legislation that transposes the zoo law and defines responsibilities and competences between Departments,
- Establish a working group, with representation from the different competencies – including: veterinary practice; animal health; animal welfare; animal husbandry; security; public safety; and conservation, to establish the inspection protocol and assessment criteria,
- Ensure the regular inspection of all establishments that are identified as zoos (as defined) and to authorize those that meet the legal requirements,
- Establish a protocol for the improvement of those zoos that with assistance are able to meet the legal requirements and to timetable a further inspection to ensure the requirements are met and
- To close those zoos that are not likely to meet the legal requirements and, through joint efforts between the relevant authorities and licensed zoos, decide what humane action is to be taken to safeguard the welfare of the animals in question.

All the above points should be adopted to ensure that zoos in the Canary Islands are correctly licensed, inspected and comply with requirements of the law 21/2003.