



SPECIFIC GUIDANCE MANUAL

Animals in Captive Environments

Welcome to the online version of this Best Practice Handbook. Use the interactive navigation to guide your way through the manual.

Introduction

Animal attractions and experiences are now a common part of holiday destinations and are generally very popular with holiday makers. Customer surveys have shown many of the travelling public aspire to see or interact with animals. Yet research and experience also demonstrate that customers want to be assured of good animal welfare standards (YouGov 2012).

This guidance manual outlines the minimum requirements that travel providers working with these manuals expect to see in place from captive animal attractions. Additionally, it provides best practice recommendations that captive animal attractions should strive to achieve.

As the number of enterprises has grown, so too has our understanding of the animals featured and the potential impacts of human/animal interaction. Strong relationships exist between travel providers and suppliers; it is important that all stakeholders work collectively to enable enterprises to offer meaningful, rewarding experiences to customers whilst at the same time, safeguarding the welfare of the animals and public health and safety. This approach can achieve longer-term business success, raise welfare standards across the industry and strengthen the partnerships that exist between travel providers and animal related attractions.

This document is one of a series and should be read in conjunction with the *Global Welfare Guidance for Animals in Tourism*.

Authorship

This manual and the supporting six guidance manuals have been developed by ABTA working in partnership with our consultative partner, the Born Free Foundation and have been further developed through a multi-stakeholder consultation process involving industry experts, scientists, zoologist organisations, associations and non-governmental organisations (NGOs) from around the world. A list of stakeholders is included in Appendix 4. It is important to point out that the content of these manuals does not necessarily reflect the exact views of the listed individuals or organisations. All stakeholders have, however, seen merit in these guidance manuals and provided invaluable input during the consultation. ABTA extends its appreciation to all the stakeholders for their contributions.

Licensing and certification

Animal attractions should be operating legally and in accordance with their country's own legal requirements. If appropriate to the country of operation, the animal attraction should have a valid operating licence issued by a recognised certification agency or relevant local authority.

Intended use of this guidance

This guidance manual is one of a series of seven manuals intended to be a practical guide for the suppliers of animal experiences and attractions offered within the tourism industry. All seven guidance manuals aim to encourage good practice in animal protection and welfare by providing businesses with knowledge and guidance.

The manuals include a benchmark for best practice in animal welfare for the tourism and animal attractions industries globally. They consolidate an abundance of existing guidance and they establish minimum requirements that are supported by tour operators. As such, they are intended for tour operators to issue to their suppliers, for tourist boards in destinations, for destination governments and ultimately and most importantly, for animal attraction and experience suppliers.

All seven manuals are by no means intended to be the definitive source of information about managing animal welfare considerations in animal attractions. We recognise that there is a great deal of variation in available standards around the world and that for many businesses the manuals will contain commonly known information, but for others they will likely serve as a useful reference regarding best practice in animal welfare. In all instances of uncertainty, we encourage suppliers to seek further advice from a suitably qualified individual or organisation.

Guidance manual overview

There are seven manuals within the series:

Global Welfare Guidance for Animals in Tourism

The *Global Welfare Guidance for Animals in Tourism* provides an introduction to animal welfare and an overview of best practice that is applicable to all businesses and attractions within the tourism industry involving animals. It covers:

- An insight into the different ways in which animals and tourism are linked
- Minimum welfare requirements for animal attractions
- Reference to specific welfare needs of commonly managed species.

It sets out guidance around animal husbandry and care designed to improve animal welfare and to phase out inappropriate practices known to have negative impacts on animals.

Specific guidance manuals

In addition, five specific guidance manuals cover a variety of activities commonly encountered through tourism. These manuals are intended to guide suppliers to achieve the minimum requirements for each of the specific activity types, besides encouraging progress towards the best practice outlined.

Specific guidance is available for:

- *Animals in Captive Environments*
- *Dolphins in Captive Environments*
- *Elephants in Captive Environments*
- *Wildlife Viewing*
- *Working Animals*.

This specific guide is for *Animals in Captive Environments* and covers minimum requirements expected by tour operators working with this manual. It also provides best practice guidelines that suppliers of captive animal attractions are encouraged to achieve.

Unacceptable and Discouraged Practices

The final manual in the series relates to practices involving animals which have been classified as either unacceptable or discouraged by the tour operators working with these guidance manuals.

Unacceptable practices

Certain activities are widely recognised as having a detrimental impact on animal welfare, and in some cases, may present a high risk to visitor and staff safety. These activities have therefore been classified as 'unacceptable'. Travel providers working with these guidance manuals have agreed that these activities should not be offered for sale to customers.

Discouraged practices

Some activities involving animals and people may pose health and safety risks. Suppliers of activities involving animals and people should consider and effectively manage both the welfare of the animals and the health and safety of visitors and staff. Travel providers working with these guidance manuals will only consider promoting animal based activities which are classified as discouraged practices where they are satisfied that the risks to animal welfare and the health and safety of customers are managed appropriately.

Certain activities involving animals and customers have been publicly criticised as detrimental to animal welfare. Though there is currently a lack of conclusive evidence, there is a risk that such activities are detrimental to welfare. These activities have therefore been classified as 'discouraged' by the tour operators working with these documents.

All discouraged activities are introduced in this manual (see page 9) and more details are in the specific manual, *Unacceptable and Discouraged Practices*.

Minimum requirements and best practice guidelines

This and the other six guidance manuals contain a set of minimum requirements intended to be the benchmark for the minimum acceptable level of animal welfare in tourism activities. As a supplier reading these manuals, you are strongly advised to ensure that you can easily demonstrate that your business complies with the minimum requirements. Tour operators working with these manuals have committed to these minimum requirements and will be developing procedures to check that suppliers comply and are continually striving for performance improvements. The minimum requirements are subdivided into three sets depending on the animal attraction/species type:

- A. For situations where animals are managed by and/or are dependent on human beings.
- B. Specifically for businesses exhibiting whales or dolphins. These businesses should ensure that they meet the requirements in both A and B.
- C. For businesses with working animals. These businesses should meet the requirements in A and C.

Given the range of species and activities that can be found in captive animal attractions all sets are potentially applicable. To view the minimum requirements please see Section 4 of the *Global Welfare Guidance for Animals in Tourism*.

KEY POINTS

- **Unacceptable practices are known to have a detrimental effect on animal welfare.**
- **Discouraged practices may pose a risk to tourist health and safety and/or a possible risk to animal welfare.**
- **Animal attractions should comply with the minimum requirements for animal welfare.**
- **We encourage animal attractions to aim for best practice in animal welfare.**
- **All seven manuals are compatible with audited industry standards.**

Audits and inspections

We recognise that many animal attraction suppliers are members of trade bodies and associations that already have membership requirements relating to animal welfare best practice and that many inspect their members to ensure these requirements are met. The *Global Welfare Guidance for Animals in Tourism* upholds internationally-accepted standards in animal welfare and legislation and is therefore compatible with existing industry standards. Audited suppliers should be able to demonstrate compliance with these minimum requirements.



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SECTION 1

2 What is animal welfare?

Animal welfare refers to the state of an animal. An animal is in a reasonable state of welfare if it is healthy, comfortable, well-nourished, safe, able to express innate behaviour and if it is not suffering from unpleasant states such as pain, fear and distress. Other terms such as animal care, husbandry or humane treatment refer to how an animal is looked after. Reasonable animal welfare requires disease prevention and veterinary treatment, appropriate shelter, management, nutrition, humane handling and humane slaughter/euthanasia. Animals in a captive environment rely on the care and ability of humans to provide them with what they need to maintain their welfare.

Appropriate animal care

In order to encourage best practice in animal welfare in the tourism supply chain, the *Global Welfare Guidance for Animals in Tourism* and the six supporting guidance manuals build upon the principles of the Five Freedoms (developed by the Farm Animal Welfare Council (FAWC 1979)) and the Welfare Quality® criteria. See Appendix 1: sources of further reading.

The Welfare Quality® principles and criteria were originally developed for farmed domestic animals. An additional three criteria have been included to address animals in tourism. These additional criteria appear in bold in Table 1.

KEY POINTS

- You are responsible for an animal if you supply, own or are in charge of it.
- Five Freedoms form the basis of good animal welfare.
- Welfare Quality® criteria define the details of good animal welfare.

Table 1: The Five Freedoms and how they relate to the Welfare Quality® criteria (including the additional criteria)

Five Freedoms	Welfare quality® criteria
Good feeding	1. Absence of prolonged hunger. 2. Absence of prolonged thirst.
Good housing	3. Comfort while resting. 4. Thermal comfort. 5. Ease of movement.
Good health	6. Absence of injuries. 7. Absence of disease. 8. Absence of pain induced by inappropriate management procedures.
Appropriate behaviour	9. Expression of social behaviours. 10. Expression of natural behaviours. 11. Good human-animal relationship. 12. Positive emotional state.
Protection from fear and distress	13. Absence of general fear/distress/apathy. 14. Ability to seek privacy/refuge. 15. Absence of surgical or physical modification of the skin, tissues, teeth or bone structure other than for the purposes of genuine medical treatment/manipulation/sedation.

Suppliers, animal owners and keepers have a responsibility to the animals for which they are responsible on a permanent or temporary basis. This includes the provision of their health and welfare needs (described in Table 1). A person could, therefore, be responsible for an animal if they supply, own, or are in charge of it.

Application of and adherence to the Welfare Quality® criteria will go some way to safeguarding the welfare of the animal and to providing a state of wellbeing and dignity. Application of the *Global Welfare Guidance for Animals in Tourism* and the six supporting manuals will seek to uphold these criteria, protect animals in tourism attractions or affected by tourism experiences, and help to prevent animal suffering.

SECTION 2

Captive animal attractions and tourism

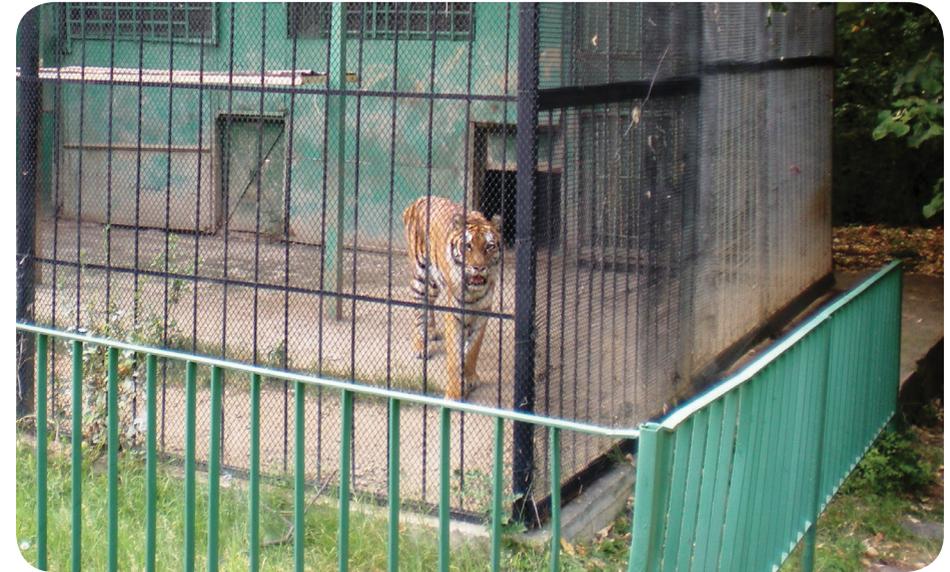
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The captive environment

Guaranteeing appropriate standards of animal welfare in captive environments is complex. Animal species have evolved over thousands of generations, both physically and behaviourally, in order to optimise their chances of survival in the wild. In captivity, animals potentially face a number of challenges for which evolution has not prepared them; the geographical location, climate, enclosures and vegetation may be alien to the species as it exists in the wild. Similarly, some of the survival challenges an animal confronts in the wild may be absent in captivity (hunting, foraging, territorial defence and social dominance). To deliver high standards of welfare these conditions may need to be provided artificially or compensated for. In captivity, animals may no longer choose actions, have control over their environment, or carry out behaviour they have evolved to improve their welfare or survival prospects. They rely on humans to provide suitable physical, social, biological and other conditions.

The range of captive animal facilities

Though there are many different types of captive animal facilities, they commonly focus on enabling the public to view or interact with animals. These include: the urban zoo; rural safari park; aviaries or falconry centres; crocodile and snake farms; riding stables; elephant camps; dolphinaria; animal sanctuaries open to the public; rescue and rehabilitation centres that are open to the public; circuses; individual animals kept for display or performance purposes.



Tiger in an enclosure of an insufficient size and quality.



Bear in a stimulating and diverse captive environment.

SECTION 3

Potential impacts on animal welfare and customer health and safety

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Impacts on animal welfare

In captivity, living conditions should cater for the species-specific needs of the animal. For example, providing opportunities to dig, climb, run, swim, interact as part of a social group etc. Requirements vary depending on the type of species being housed in a captive environment. For information explaining the species-specific needs of common types of animals kept in captive environments, see *Global Welfare Guidance for Animals in Tourism* Appendix 1: animal husbandry information tables.

Failure to address these needs, for example by keeping animals in unsuitable captive conditions for prolonged periods, or in inappropriate social environments, can damage physical and mental health and can contribute to the development of abnormal behaviour, disease and early mortality. Similarly, invasive actions such as the restriction of movement, training using negative reinforcement techniques, being trained to perform unnatural behaviours, or making modifications to the normal physiology of animals to reduce risks when handling, can cause severe and lasting distress.



In captivity, enclosures should be both spacious and environmentally complex to provide optimum living conditions for the animals.

Impacts on customer health and safety

Animals, whether wild or domestic, can be unpredictable and potentially dangerous. Even in a controlled, captive environment or after generations of captive breeding, an animal retains its innate behaviour and instinct. Suppliers of activities involving animals and people should take all reasonable steps to safeguard the health and safety of visitors and staff, as well as the animals themselves.

Many countries have categorised commonly kept animal species by their ability to cause harm; based on this categorisation they then restrict, control or prohibit human/animal contact. For example, in the UK the Department for Environment, Food and Rural Affairs (Defra), has produced a species list based on three risk categories.

For specific animal categorisation based on the Defra species list, please refer to Appendix 1: animal husbandry information tables in Section 13 of the *Global Welfare Guidance for Animals in Tourism*.

Some animal species can harbour diseases that may be transferable to humans and vice versa. These are called zoonoses. Examples include salmonella (associated with birds and reptiles), hepatitis or monkey pox (associated with primates) and the common cold (carried by humans). To prevent zoonotic infection, contact between people and animals should be controlled. Customers should be informed of the potential risks and the rules of engagement for example washing their hands before and after permitted animal contact to prevent disease transmission. For further infectious disease information, please refer to Appendix 2: zoonoses in Section 13 of the *Global Welfare Guidance for Animals in Tourism*.

KEY POINTS

- Captive animals are reliant on their keepers to provide for their species-specific needs.
- Governments restrict or prohibit human contact with certain dangerous species of animals.
- Suppliers should manage animal/human contact to minimise the risk of zoonoses – transferable diseases.

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SECTION 4

Unacceptable and discouraged practices

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Unacceptable practices

Certain activities are widely recognised as having a detrimental impact on animal welfare and in some cases, may present a high risk for visitor and staff safety. These activities have therefore been classified as 'unacceptable'. Travel providers working with these guidance manuals have agreed that these activities should not be offered for sale to customers.



Lion and tiger cubs used in photographic opportunities with tourists may have their claws removed to make them safe for handling.

Unacceptable practices involving animals in captive attractions

- Animals on display in restaurants and entertainment venues involving bad practice.
- Animal breeding or commercial trade in sanctuaries and orphanages.
- Animals used as photographic props involving bad practice.
- Animal performances based on non-natural behaviours and shows where training methods compromise welfare.
- Canned hunting.
- Elephant polo.
- Ostrich riding.
- Unlicensed zoos.
- Surgery or physical modification of the skin, tissues, teeth or bone structure of an animal, other than for the purposes of genuine medical treatment.
- Euthanasia practices which do not comply with best practice guidance.



Live feeding of vertebrate animals is discouraged.

Unacceptable practices involving animals in cultural events and activities

- Animals used for begging e.g. dancing bears, snake charming, great apes.
- Bear baiting.
- Bear bile farms.
- Bear pits.
- Bullfighting and bull running.
- Cockfighting.
- Reptile farms involving bad practice.
- Crocodile wrestling.
- Tiger farms.
- Surgery or physical modification of the skin, tissues, teeth or bone structure of an animal, other than for the purposes of genuine medical treatment.

Discouraged practices

Suppliers of activities involving animals and people should consider and effectively manage both the welfare of the animals and the health and safety of visitors and staff. Travel providers working with these guidance manuals will only consider offering animal-based activities which are classified as discouraged practices where they are satisfied that the risks to animal welfare and the health and safety of customers are managed appropriately.

Examples of discouraged practices are:

- Animal contact and feeding with Category '1', Greatest Risk animals*
- The feeding of animals with live vertebrate prey
- Birds of prey displays and falconry centres using tethering
- Ritual animal slaughter
- Acquisition of wild animals.

For more information see the manual, *Unacceptable and Discouraged Practices*.

*See Appendix 1: animal husbandry information tables

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SECTION 5

Best practice guidance

All captive animal facilities, irrespective of the animal species involved, should aim to meet the generic best practice conditions detailed below. For additional guidance on the specific types of captive animal facility, or activity (e.g. animal sanctuary, guidance on animal contact etc.) and for information concerning certain animals (e.g. elephants, parrots etc.), refer to Section 8 and Appendix 1 in this manual. For best practice guidance concerning captive cetaceans (e.g. dolphins) or captive elephants, see the guidance manuals, *Dolphins in Captive Environments* and *Elephants in Captive Environments*.

Good feeding

In captivity, animals depend on their carers or keepers for appropriate food and water.

Water

Water is usually provided in a receptacle, which will require regular cleaning and replenishing, or in a self-filling device, or via running water flowing through an exhibit. Water should be provided to meet the needs of the species (e.g. droplet drinkers, bowls etc.).

The drinking water source should not be positioned below or close to perches or resting places where it could be contaminated by faeces or urine.

At least twice a day, checks should be made to ensure all animals have access to clean drinking water. Still water can become

stagnant, particularly in hotter climates and this can result in a build-up of disease-causing pathogens. Water sources and receptacles should be regularly cleaned with detergent to prevent pathogens from building up.



Drinking water receptacles need regular cleaning and replenishing; stagnant water can cause disease.

KEY POINTS

- Clean drinking water should be constantly available, frequently checked and replaced daily.
- Bathing water should not be regarded as the drinking source. There should always be a separate source of drinking water.
- The water source should be carefully positioned to ensure it is not contaminated and to ensure all animals have access.
- Bathing water should also be replaced regularly and not allowed to stagnate.

Food

Should be nutritionally balanced and hygienically presented in a way that encourages species' natural behaviour.

Nutritionally balanced food is essential for normal development. In the wild, an animal will naturally seek all appropriate foods and trace elements. However, in captivity these should be provided within the diet selected by the carer or keeper.

Some zoos, for example, provide their animals with additional food supplements. Supplements will vary with the age and condition of the animal. Animals also need a diet that is balanced in both vitamins and minerals. For example, feeding carnivores on only slab meat diets has been known to cause nutritional osteodystrophy (reduced growth and bone disorders) due to insufficient intake of dietary calcium.

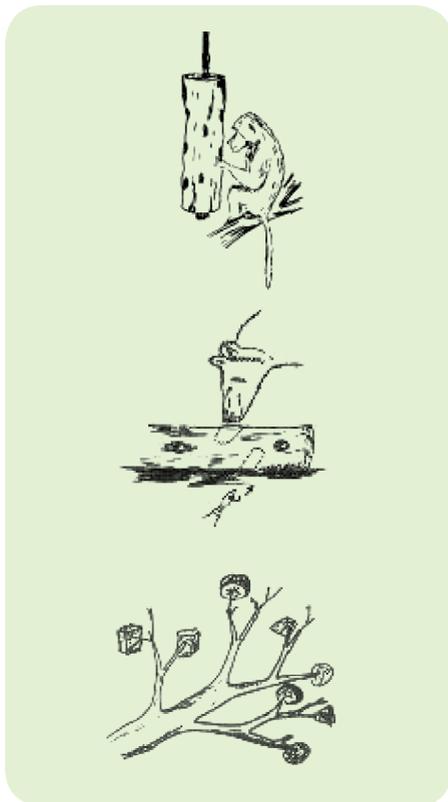
Hygiene and food presentation is vital to animal health. Food should be freshly prepared in a specified, secure area away from the public areas. Food should be properly stored and only used if fit to be eaten. The food preparation area should be cleaned after each use. All old, uneaten and contaminated food should be removed.

Frequency of feeds may need to vary according to the species. For example, herbivores need to eat continuously for much of their waking hours, while large carnivores may need less regular feeding, with fasting days to prevent obesity. Refer to Section 9 of this document for more detail. All individual animals should receive equal amounts of food to avoid provoking aggression between cage companions, or individual obesity.

Food should be presented for environmental enrichment. If food is processed (e.g. de-boned, washed and sliced) and placed in serving bowls, an opportunity to keep the animal mentally and physically stimulated may be lost. Presenting food in a natural form, e.g. on the bone with skin or feathers, or encouraging an animal to forage and seek out food hidden amongst straw, in objects or in crevices, encourages animals to express natural behaviour. It keeps them mentally stimulated and exercised and, in the case of meat on the bone, provides an additional source of minerals and vitamins. Observing this type of behaviour is also more interesting and educational for visitors.

Different enrichment techniques are used for different species. For example freezing food in ice blocks, altering the feeding times, attaching food to branches or presenting it in complex feeding devices (all of which require the animals to work for their food) creates a more stimulating lifestyle.

Examples of presenting food



Drilling holes in a log to insert food. Attaching food to branches encourages behaviour seen in the wild.

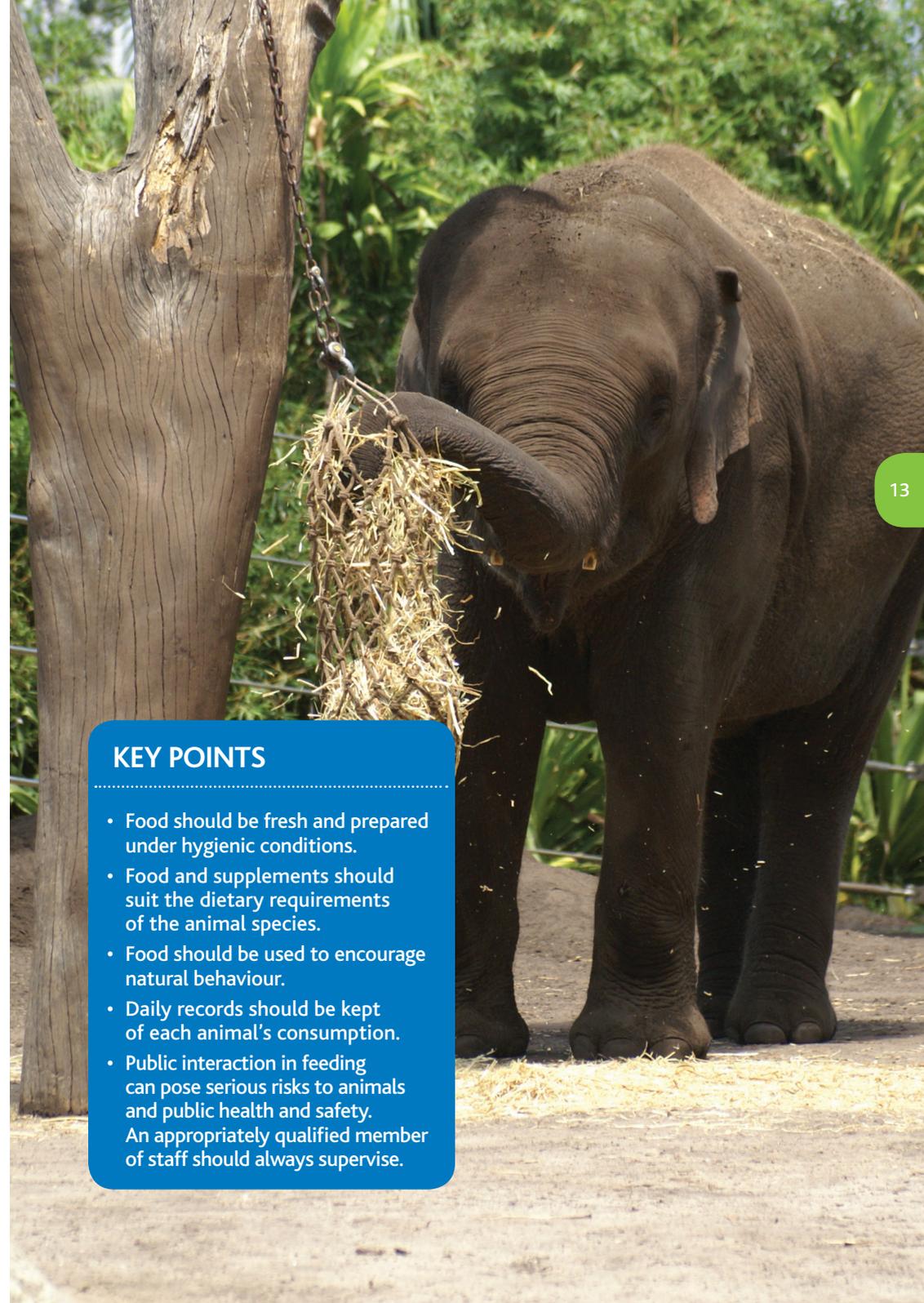


Begging can be a sign that animals are regularly fed by the visiting public.

Bears, primates and numerous smaller mammals are generally very inquisitive. Placing food in crevices and holes, and attaching or suspending food from furniture (branches, ropes etc.) in the enclosure will maintain a higher level of interest and stimulation. Some animals in the wild spend their day browsing in vegetation – this can be replicated to some degree in the captive environment. See left for an example.

Public interaction in feeding can pose serious risks to the health and safety of both the public and animals. Feeding may cause animals to compete for available food; in turn, this may provoke conflict between individual animals or, where animals have become accustomed to expect food from customers, it may result in aggressive behaviour if no food is available.

Any instances where contact between customers and animals is permitted should be subject to stringent risk assessments based upon both animal welfare and public health and safety criteria, particularly in the case of contact with Category 1 species (Hazardous Animal Category, based upon guidance from the UK Secretary of State's Standards on Modern Zoo Practice, Defra 2004). If the public is permitted to provide food to the animals, this should be nutritionally suitable for the species and provided by the attraction. Under no circumstances are animals to be fed popcorn, bread or other human foods. Food provided by the public should only be a small part of each animal's daily intake and the attraction should make regular checks to ensure that food provided by the public is fit for purpose. Members of the public should be required to wash their hands before and after feeding experiences and should be briefed on the associated risks beforehand. In all circumstances an appropriately trained employee should provide constant supervision.



KEY POINTS

- Food should be fresh and prepared under hygienic conditions.
- Food and supplements should suit the dietary requirements of the animal species.
- Food should be used to encourage natural behaviour.
- Daily records should be kept of each animal's consumption.
- Public interaction in feeding can pose serious risks to animals and public health and safety. An appropriately qualified member of staff should always supervise.

Good housing

Enclosures should be the correct size and design to fulfil the animal's specific physical, social, behavioural and movement needs.

Sufficient quantity of space is often difficult to assess. Requirements are often non-quantifiable and vary by species, number of animals held, population dynamics and other factors. Providing minimum-sized enclosures is not a viable option. A simple rule is to take into account the animal species, its usual social structure and refer to the animal husbandry information tables (see Appendix 1 in *Global Welfare Guidance for Animals in Tourism*) which identifies the most suitable furnishings to provide the animal's spatial, physical, behavioural and psychological needs. This will ensure its overall welfare.

Ensuring an enclosure is large enough for an animal to carry out its natural behaviours is a good indicator of quantity of space.

For instance:

- The animals should have sufficient room to escape conflict from cage companions, to seek refuge and privacy from view
- A bird should have sufficient space to spread its wings and fly
- A cheetah or a giraffe should be able to run
- An arboreal monkey should have sufficient horizontal and vertical space.

All facilities should also account for the animals' growth and various stages of their development.

Quality of space is important to ensure the animal is capable of (and encouraged to) expressing its whole range of natural behaviours. Failure to ensure a quality captive environment, which replicates to some degree the complexities of the wild, may result in short and long-term health or behavioural problems. Furniture such as platforms and nest boxes, apparatus like ropes, frames and branches and different ground coverings such as bark chippings, straw or earth, not only encourage natural behaviour patterns but also encourage exercise. This helps maintain an animal's good health.

Shelters and indoor enclosures should have suitable bedding and provide space for rest and comfort. Natural substrate flooring is preferred over non-porous or concrete flooring. Enclosures should be cleaned daily and faeces, urine and uneaten or contaminated food removed. Failure to do so will result in a build-up of harmful pathogens. Facilities should follow veterinary advice regarding the sanitation of enclosures.

Providing shelter and shade from the rain, sun, heat and cold is essential. Adverse weather can cause significant discomfort, or even death, for certain animal species. Animals originating from the tropics, for instance, cannot necessarily adjust to freezing temperatures and similarly Arctic species may find high temperatures difficult to bear. Opportunities to freely seek warmth or to cool down should be available within the animal's enclosure.

Reptiles, which require external heat to regulate their body temperature, may need heat lamps, particularly in cold climates or outdoor facilities. Species from semi-aquatic or rainforest environments (e.g. crocodiles, caiman, turtles, pythons) will require a pool of water large enough to contain the animal, besides a large enough area out of the water. They also need a source of ultraviolet light.

Examples of good practice

These enclosures provide a good quality and quantity of space for the animals.



Lions in a larger enclosure that provide the use of horizontal and vertical space.



An enclosure for coati which offers an opportunity to climb and seek shelter.

Examples of poor practice

These enclosures have limited quantity and quality of space.



Chimpanzees in an unstimulating and unnatural environment.



A safe and enriched enclosure.

Other animals, such as elephants, hippopotamus, tigers and even birds enjoy access to pools or running water to cool down on a hot day. Bathing pools for hippopotamus and elephants should permit them to fully immerse. In all captive facilities, but particularly in hot climates, all animals should be able to seek shade (with good ventilation) during the day, regardless of where the animal species originates.

Aquatic or marine animals in closed water systems (not connected to open water) should have a filtration system. Water quality should be regularly checked throughout the day to assess temperature, salinity, pH, ozone/redox, bacteria and halogen ions. All data should be recorded and be available for inspection. Open water systems should be periodically tested to ensure that the natural exchange of water, water quality and temperature are not compromised in any way as a result of the housing structure. Environmental conditions are dependent on the species and an expert should always be consulted if in doubt.

All aquarium facilities should have back-up systems in case the heating, filtration and water quality systems fail. Adequate provision should be made for the routine servicing, maintenance and uninterrupted operation of life-support systems e.g. aquarium water, humidity and temperature controls. For further information on water treatment, refer to Section 5 of *Dolphins in Captive Environments*.

Refuge from other animals and privacy from view gives animals the opportunity to express normal defence reactions. This is particularly required in mixed exhibits. For example, bears and primates are often housed together in zoos; best practice would ensure that the primates can seek refuge away from the bears. Similarly, individual primates within a family group – which would naturally be organised in a hierarchical structure – benefit from being able to escape any aggression from cage companions.

Simple apparatus and furniture within an enclosure can provide opportunities for refuge and privacy. For instance, nest boxes, crevices, platforms, burrows, thick vegetation and interconnecting pools. See Appendix 1: animal husbandry information tables in *Global Welfare Guidance for Animals in Tourism*. Enclosures with indoor facilities should maintain access throughout the day.

Indicators of poor welfare

A safe and secure environment will help protect both customers and animals. The enclosure should be maintained with no holes in the exterior fencing or boundary, and no opportunities for the captive animal to escape or to make contact with the public (unless this is permitted under constant supervision), or for indigenous animals from outside (such as wild, free-ranging animals) to enter. Allowing indigenous and captive animals to mix may transfer diseases.

Where the public is permitted to enter the enclosure, the number of visitors should be restricted and controlled and there should be areas where the animals can take refuge away from the public. Walk-through enclosures should be constantly supervised.

Enclosure doors and entry gates should be locked at all times.

KEY POINTS

- Enclosures (outdoor and indoor) should be of sufficient size to permit the animals to move and exercise freely.
- A quality captive environment should replicate to some degree the complexities of the wild for that species.
- Shade should be available for all animals throughout the day; all animals should have access to shelter from adverse weather conditions.
- There should be provisions for animals to warm up or cool down (where appropriate).
- Animals should be able to seek refuge from cage companions and privacy from view.
- All enclosures should be locked; boundary and enclosure fencing should be well maintained.
- Where the public is permitted to enter the enclosure, they should be supervised at all times and animals should be able to seek refuge.

Good health

Maintaining healthy animals should be an absolute priority for all attractions that keep animals. The provision of a suitable and stimulating environment, a nutritious diet, appropriate preventative and curative health care, and daily observations and record-keeping are all necessary factors to help secure an animal's wellbeing. It is extremely important that animal keepers apply the appropriate animal care criteria, described in Section 1 of this manual, as an absolute minimum and are fully aware of the range of needs of the species they keep. In addition, all captive animal facilities should either employ or contract a veterinarian who is knowledgeable about wild animal welfare who can identify indicators of poor health and address these, and who is knowledgeable about the species for which they are responsible.

Personal hygiene of staff in enclosures, treatment rooms and food preparation areas should be maintained to a high standard. Smoking by staff and visitors should be prohibited in the vicinity of animals and in animal food preparation areas. The smoking policy of any establishment should comply with any relevant legislation.

Quarantine areas for newly arrived animals should be managed in accordance with veterinary instructions. They should not permit public access and personnel should wear protective clothing. Footwear and utensils used should be regularly cleaned to prevent disease transfer.



Tiger with an abscess on the eye.



An injured crocodile with visible wounds.

Health checks of all animals should be undertaken quarterly. This includes screening for zoonoses (diseases transferable between humans and animals), particularly if public contact is permitted. Daily observations should be made to ensure no animal is displaying negative health indicators.

Stress is not always bad for the welfare of an animal. For example, a certain degree of stress may be associated with natural behaviour such as seeking food or interacting with other animals. However, an animal in a barren enclosure, devoid of furnishings and occupational items, may well be stressed due to fear or frustration that it would not normally encounter in the wild. This would be considered bad stress or distress, which can contribute to poor mental health.



Vet checking a seal's teeth.

Indicators of poor welfare

Living conditions – any build-up of excrement; rotting food; presence of local native wildlife that may carry disease (e.g. mice, rats); overcrowding; dirty water or food bowls; litter; stagnant water and flooding; features inside the enclosure that could cause harm to the animal either from disease, injury or through adverse conditions.

Appearance of the animal – wounds or sores; discharge from the eyes, ears or nose; faeces matted in fur or feathers; signs of diarrhoea; swollen eyes; loss of hair, feathers or scales; broken limbs; signs of limping or lameness; extreme lethargy; overgrown hooves, claws, nails or beaks; visible growths; neurotic or abnormal behaviour; obesity; weight loss. Abnormal behaviour may indicate poor mental health. For examples of abnormal behaviour see Section 9, Direct impacts of captive environments, 4.

KEY POINTS

- Maintaining healthy animals should be an absolute priority for all suppliers.
- The appropriate animal care criteria (Section 1) are vital for good animal health.
- Specific indicators can suggest poor health of a captive animal; these should be checked daily.
- Animals should not suffer distress – often caused by fear or frustration they would not encounter in the wild.
- A qualified veterinarian, with knowledge of wild animals, should make regular, routine inspections.
- Newly-acquired animals should be screened for disease, especially zoonoses.
- The captive environment should be suitably hygienic and clean, free from stagnant water and rotting food.

Please note: Where an animal appears to be in poor condition, this may not be directly related to its current living conditions. It may be as a result of past experiences or living conditions. If any physical or mental health problems are observed, consult an experienced veterinary surgeon.

Appropriate behaviour

Ensuring captive animals can demonstrate normal behaviour is vital for their survival. Abnormal behaviours are more likely to develop in impoverished environments, where animals become frustrated by the lack of sensory stimulation and/or opportunities to express natural behaviours. Studies have demonstrated that animals prefer their enclosures to include: "complexity, variety, challenge and options, rather than just space." (British and Irish Association

of Zoos and Aquariums (BIAZA)). In some cases, introducing effective, changeable environmental enrichment and suitable care can reduce and phase out abnormal behaviours. "The animals should actively explore and interact with their environment and demonstrate a diversity of behaviour similar to that typically observed in the wild." (Journal of the American Veterinary Medical Association.) Operators of captive animal facilities should therefore endeavour to provide a complex and changeable environment that encourages natural behaviour.



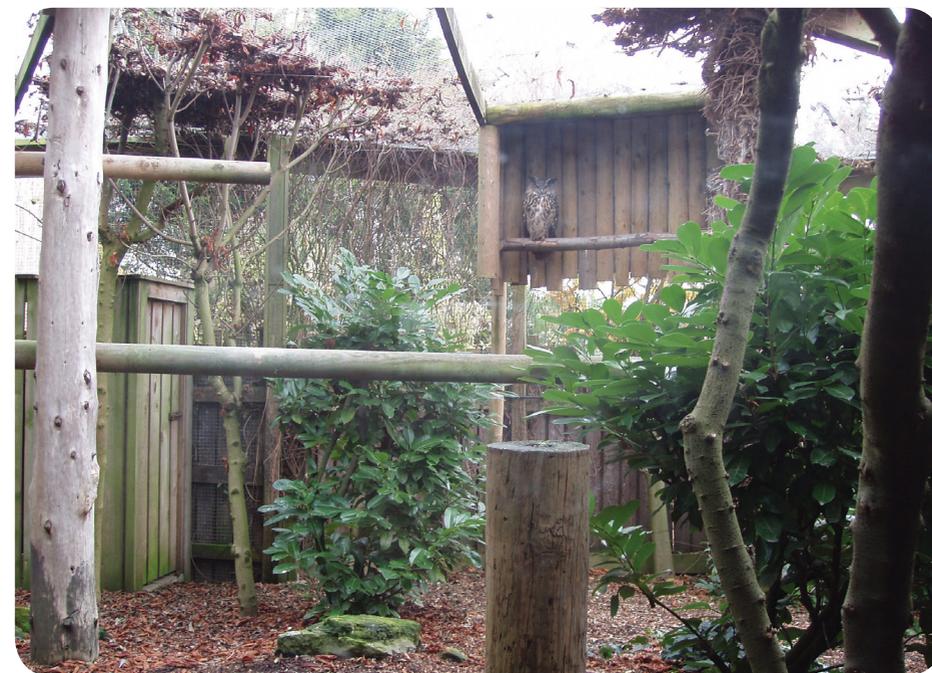
A primate enclosure – behaviour of animals should be considered when designing their living space.

Appropriate furnishings

The natural attributes and behaviour of animal species should be considered when designing their living space. An animal species that naturally lives underground or finds food by digging in the earth should be housed in an enclosure with a soft substrate floor, with burrows if applicable. Similarly an animal that in the wild spends most of the time in the trees needs an enclosure of sufficient height, complete with ropes, branches and thick vegetation to provide a 3-Dimensional space. An animal that spends much of the time in water needs a sufficient amount of water (volume and depth) to swim and dive. Social animal species should be housed with other individuals of their own kind whenever possible.

Environmental enrichment refers to sensory stimulation, which should be appropriate for the animal species, and carefully managed to ensure unpredictability. Examples include: the use of food (scatter feeding, smears, food being concealed); auditory (vocalisations); tactile (substrates, toys); cognitive (puzzle feeders); olfactory (essential oil, dung); visual (banners, mirrors); visual barriers and screens to break up an enclosure into discrete areas.

Environmental enrichment programmes, involving a variety of different enrichment apparatus or activities, are best managed using a calendar, which provides a pre-planned, species-specific schedule, where no two days are the same.



An owl enclosure with space to fly and opportunity to seek shelter and privacy.

Indicators of poor welfare

Abnormal behaviour – stereotypic repetitive pacing, swaying, head-bobbing or circling and bar-biting “demonstrably caused by the frustration of natural behaviour patterns, impaired brain function, or repeated attempts to deal with some problem.” (Mason, 2005). Over-grooming, excessive licking and vocalisation are recognised as displacement behaviours, “arising out of conflict when an animal is driven to perform two behaviours at the same time.” (Bacon 2011) e.g. conflict between the fear of the keeper and the desire to get food; apathy and redirected aggression.

Other abnormalities – abnormal sexual behaviour such as hyper sexuality in primates and sexual imprinting in hand-reared birds (becoming sexually attracted to the keeper); extreme lethargy; heightened aggression; constant vocalisations; high mortality; low breeding success.

Note: abnormal behaviour displayed by an animal may not occur as a direct result of the current living conditions. The abnormal behaviour may have developed at a former captive animal establishment or through copying other animals – particularly offspring copying their parents. Seek advice from an experienced animal behaviouralist or a veterinarian.

KEY POINTS

- Enclosures should be furnished according to the spatial and behavioural needs of the animal species contained.
- Facilities should manage an active environmental enrichment programme for all species.
- Social animals should be housed in social groups.
- Animals should be monitored for signs of stereotypic behaviour or other abnormal behaviour.
- Sufficiently enriching the captive environment can reverse or subdue abnormal behaviour.



Giraffe displaying abnormal licking behaviour.

Protection from fear and distress

Fear and distress can be caused by a variety of factors, for example: isolation from companions, family members or members of the same species; frustration over a lack of food or water, no shade or shelter, or a reduction in personal space; close proximity of the public or other animals; introduction of a foreign object into the captive environment, or something seen as a threat; tormenting or provoking reaction from the animal; aversive (punishing) stimuli, such as electric shocks from enclosure fencing; high pitched, mechanical or monotonous noise; extreme temperatures. Animals should not be near amusement rides, loud speakers and large public gatherings.

Distress, is a reaction to being unable to cope with the circumstance and contributes to poor mental health. This can result in abnormal behaviour, psychological disorders or premature death.

Under no circumstances should animals be abused, tormented, provoked, chased, mutilated or killed as part of a tourism-related encounter. Animals should be allowed to carry out their normal behaviour patterns and not be tethered, or otherwise restricted by physical means or through the use of drugs or sedatives, unless this is for specified animal welfare reasons or under the instruction of a suitably qualified veterinarian.

For more information see the specific guidance manual, *Unacceptable and Discouraged Practices*.

Factors causing possible fear and distress in captive animals

Conflict between cage companions leading to injury or even death can result from several factors:

- Inappropriate social grouping
- Mixed species exhibits
- Inappropriate ratio of females to males
- Overcrowding.

Animals should be able to escape conflict with other animals and to minimise stress, particularly if the animal is pregnant, raising young or injured.

Proximity of predators (e.g. big cats, bears and wild dogs) to prey species (such as hoofed stock, rodents, primates,) can cause severe distress to both groups. For example positioning a snow leopard’s enclosure next to wild goats.

As enclosure design has developed, in some zoos it has been possible to locate predator species and prey species adjacent without causing stress. In these instances, there is sufficient distance, space and physical barriers to ensure that the risk of distress is avoided.



Predator and prey in inappropriately close proximity can cause animals distress.



Animal handling can have serious implications for the health and safety of both the animal and public.



Animal performances should only be based on natural behaviours.

Animal handling and the proximity of humans can cause severe distress in wild animals, largely because it denies their natural 'flight or fight' response – the animal cannot escape the situation. This could have serious implications for the health and safety of both the animal and the public. The public should be warned about dangerous animals and discouraged from contact. For more information, see the specific guidance manual, *Unacceptable and Discouraged Practices*.

Animal training methods should be based on positive reinforcement (providing praise and reward) and not physical or mental abuse. Facilities should produce animal training protocols and make them available for inspection. Animals should not be trained to undertake tasks that have no basis in their natural behaviours. Humanised behaviours such as riding bikes or brushing teeth are unnatural, regarded by many to provide the wrong message and may have involved adverse training techniques that are detrimental to welfare; they should be prohibited. Where animal training is necessary, it should be limited to one hour per day ensuring that the animal(s) has the opportunity to express its normal behaviour. See Section 8 in this manual for specific information about training parrots.

Animals used in performances should not be subjected to abusive practices, loud music, and actions that could cause harm or deprive them of their basic needs. Animals should not be used as photographic props (see Section 6, Animals as photographic props). Aquatic animals should not be removed from the water for a period that is likely to cause them stress, or to become dehydrated.

Wild animals are unpredictable – even when tamed or captive-bred – and with most performances staged close to the audience, there is a greater risk to both the animal and

the viewing public. Performances should be based only on natural behaviours. For more information see the specific guidance manual, *Unacceptable and Discouraged Practices*.

Every possible effort should be made to ensure that stress levels are minimised for an animal. Performances that jeopardise animal welfare, or are based on unnatural behaviours, have been categorised as unacceptable by the travel providers using these manuals.

Tethering an animal to a fixed position naturally limits the animal's movement, its ability to express natural behaviour and to seek refuge. This may not only cause the animal significant distress, frustration and possible fear, but it may also result in injury.

For instance, camels should always be tied low to the ground or provided with sufficient rope length to enable them to sit down (a camel that has started to sit down should sit all the way down before it can stand again). Camels that are tied high with a short rope can strangle. Chained elephants may suffer deep wounds as a result of straining on the chains. Tethered birds of prey are often seen attempting to jump/fly from their perch and this can result in leg fractures.

Indicators of poor welfare

Signs of fear and distress in animals can include: abnormal, repetitive behaviour; agitated or erratic movement; continuous vocalisation; bar-biting; self-mutilation, feather or fur-plucking; vigorous tail-flicking; spasmodic body-shivering; head-shaking; excess saliva; diarrhoea; nostril-flaring; panting; apathy; heightened aggression; unwillingness to enter an area or to leave an area; hiding. Please note, however, that these symptoms may be caused by other factors and a qualified veterinarian should be consulted in case of doubt.

KEY POINTS

- Distress can result in abnormal behaviour, psychological disorders or premature death.
- Animals should be allowed to move and exercise freely; they should not be restrained.
- Animals should be able to escape conflict with other animals and to minimise stress.
- Animal handling and the proximity of humans can cause severe distress in wild animals.
- Performances that jeopardise animal welfare, particularly if based on unnatural behaviours, has been categorised as unacceptable by the travel providers using these manuals.
- Animals should not be drugged, abused or mutilated.



Overgroomed parrot: over-grooming can be a sign of poor welfare or distress.

SECTION 6

Managing the risk of poor animal welfare

Animals as photographic props involving bad practice

Where animals are used in photo opportunities with customers, this should be devoid of bad practice. Bad practice here may involve manipulating animals e.g. restricting their movement or expression of normal behaviour; sedation and the use of drugs to weaken an animal; the physical or surgical modification of the skin, tissues, teeth or bone structure of the animal. Travel providers working with these guidance manuals have agreed that these activities should not be offered for sale to customers.

Animal contact and feeding

It is widely recognised that physical contact with a hazardous animal may cause injury, poisoning or disease, and be a serious threat to human life. Governments seeking to protect their citizens have categorised commonly kept animal species by their ability to cause harm; they then restrict, control or prohibit human/animal contact. In the UK for example, the Government Department for Environment, Food and Rural Affairs (Defra), has produced a species list (Appendix 12, Standards of Modern Zoo Practice). We have adopted this list and its hazard categorisations in *Global Welfare Guidance for Animals in Tourism* (see Appendix 1: animal husbandry information tables).

In any instance where contact between customers and animals is permitted, this should be in accordance with stringent risk assessment criteria for both animal welfare and public health and safety. Travel providers working with these guidance manuals will only consider promoting animal-based activities which are classified as discouraged practices where they are satisfied that the risks to animal welfare and the health and safety of customers are managed appropriately.

Best practice

Risk assessment should be undertaken before any animal handling takes place. This should include assessing the individual animal's ability to cause harm and the possible risk of transmitting disease. Implications for the animal should also be considered. For example, is the individual animal accustomed to being close to humans? Has it been previously handled? Could it be susceptible to human diseases like the common cold?

Risks may be heightened if the opportunity exists for people to feed animals. See Section 5, Good feeding, in this manual. Suppliers should ensure customers are informed of the potential risks before any handling takes place and require customers to wash their hands both before and after contact. All animal handling should be under constant supervision by experienced staff.

Performances, shows and circuses

Any animal performances should be free from bad practices that could jeopardise animal welfare. Performances, shows and circuses that compromise welfare or are non-educational have been categorised as unacceptable by travel providers using these manuals.

Performances should not involve animals performing unnatural behaviours such as riding bicycles, standing on their heads, walking tightropes, smoking cigarettes or jumping through hoops of fire. Training regimes, performances and, when applicable, transport relating to shows and circuses potentially have negative impacts on the animals concerned. These may lead to abnormal behaviour or cause injury, disease and early mortality. For more information, see the specific guidance manual, *Unacceptable and Discouraged Practices*.



Animal performances should be free from bad practice that could jeopardise animal welfare.

Best practice

Where animals are used in performances and shows, there should be guarantees that living conditions and the care provided meet the Welfare Quality® criteria, set out in Section 1 of this manual. Animals in performances should be able to demonstrate natural behaviour in the context of an educational experience, with informative and accurate commentary about the species' biology and ecology. Animals should have sufficient rest periods and performances should not cause the animals harm.

Swimming with captive animals

All swim-with activities should be constantly supervised by experienced staff. For more information about interactions with cetaceans, see the specific guidance manual, *Dolphins in Captive Environments*. The UK Department for Food and Rural Affairs (Defra) also provides guidelines in its Zoos Forum Handbook. See Appendix 3: further reading.

Best practice

A comprehensive risk assessment should be undertaken before any animal-human contact takes place. This should include assessing the individual animal's ability to cause harm and the risk of transmitting disease. Implications for the animal should also be considered. Suppliers should ensure that customers are informed of the potential risks, and are given a detailed briefing on their conduct during the activity. Suppliers should ask customers to remove all jewellery and to wash with anti-bacterial soap, before and after the activity takes place.

Birds of prey displays and falconry centres

Birds of prey kept for demonstration purposes are frequently tethered by means of a leather anklet around one leg, which is attached to a length of cord (a jess), fixed to a block or bow. This prevents the bird from taking flight and greatly restricts movement. The tethering of birds is discouraged; it is preferable to keep birds of prey in a free flight aviary that provides sufficient space for flight. Indoor flight, or flying birds of prey in restricted areas, should be prohibited.



Birds of prey should only be flown outdoors as part of a licensed activity.

Best practice

Subject to meeting the Welfare Quality® criteria, set out in Section 1 of this manual, and the provisions of any other relevant guidance manual, we encourage licensed keepers to house birds permanently and untethered in flight aviaries. This is particularly necessary for all species of owl and vulture. As natural predators, birds of prey should only be flown outdoors, daily, as part of a licensed activity. They should have the opportunity to free-fly for significant periods, sufficient to maintain full health and vigour. Birds should have at-will access to drinking water and shelter from adverse weather conditions. At night they should be protected from possible predators. Where handling by the public does take place, it should be supervised and customers should be informed of the potential risk before any handling takes place. They should be required to wash their hands both before and after handling.

Animal sanctuaries and orphanages

An animal sanctuary should be a licensed facility that provides rescued, injured, confiscated, orphaned, or abandoned animals with short or long-term refuge and/or rehabilitation. High standards of animal welfare should be the primary objective, and living conditions should meet species-specific needs. It is unacceptable for a sanctuary or orphanage to breed animals, or commercially trade or loan their animals to other facilities. Allowing animals to breed will divert valuable resources away from rescuing animals in need and can result in animals being kept in inadequate, overcrowded conditions. For more information, refer to Section 2 in the specific guidance manual, *Unacceptable and Discouraged Practices* and Section 9 in the *Global Welfare Guidance for Animals in Tourism*.

Riding of animals

Riding of animals should only be permitted in certain circumstances:

- When animals have not been taken from the wild for this purpose
- When animals are trained only using positive reinforcement techniques
- When animals are not over-worked or required to carry loads that may compromise their welfare.

The equipment (tackle, saddles) they use to carry passengers should be comfortable and should not cause discomfort, pain or injury. The animals should receive the highest standards of husbandry and veterinary care. In addition, their captive life should meet the provisions of this document and those described in the specific guidance manual, *Working Animals*.

Best practice

Suppliers should ensure the animals receive humane training techniques, sufficient rest time and adequate shelter, ventilation and thermal protection from extreme weather (caused by rain, sun and wind). There should be access to veterinary care.

Animals should not be subjected to:

- Ill-fitting, dirty and/or unsafe equipment
- Being worked too young in relation to bone strength and joint development
- Difficult terrain such as stones, hard and dusty surfaces and steep hills
- Poor riding styles and animal handling practices including jerking of reins, harsh stops and direction changes
- Riding at high speeds
- Use of bull hooks and whips
- Carrying weight loads which could be detrimental to their welfare.

SECTION 7

Euthanasia

Euthanasia is a challenging concept in relation to captive animal attractions. While most would like to think it is not practised, save in exceptional circumstances, it is widely acknowledged as part of animal management within captive attractions. There are several useful pieces of guidance on this issue. For example, in the UK, the Secretary of State's Standards of Modern Zoo Practice (Defra) provides a useful guide on euthanasia. It states:

"Euthanasia is an acceptable procedure only if an animal cannot be provided with captive conditions which meet the Five Freedoms (see Section 1 in this document), or it cannot be released into the wild."

Although breeding for conservation purposes is to be encouraged, species for which there is marginal or no conservation value should be carefully assessed on whether to allow them to breed, and, if not, appropriate action taken to prevent stock from increasing unnecessarily. In the main, measures should be taken to control unwanted or unnecessary breeding. This is preferable to euthanasia of healthy stock.



Antelope pictured in a zoo; there is little conservation value attached to antelope breeding in captivity.

Euthanasia is justifiable under certain conditions, which include the following:

- If in the opinion of a vet, an animal is suffering from an incurable disease, or severe pain or suffering which cannot be alleviated
- If a zoo has to close, euthanasia may be the only option for some animals and the most humane for others
- If the animal poses a serious and unavoidable threat to human safety (e.g. because it has escaped)
- Culling of surplus stock (including unacceptable sex ratios) where over-crowding compromises the welfare of the animals so that it is impractical to maintain them within the Five Freedoms.

It is important that a modern zoo has a policy, with appropriate protocols, to ensure humane and timely euthanasia to minimise suffering. It should be capable of demonstrating that zoo operators have:

- Information and guidance from their veterinary surgeon on euthanasia, including emergency methods
- Facilities for the humane despatch of animals of all the species kept, including for killing animals in emergency conditions
- Support and advice on public relations aspects of euthanasia.'

For the UK Secretary of State's Standards of Modern Zoo Practice, see Appendix 3: further reading.

KEY POINTS

- Euthanasia is only carried out under express instruction and authorisation from the on-site or contracted vet.
- Euthanasia should only be in accordance with the principles set out in the UK Secretary of State's Standards of Modern Zoo Practice.
- Euthanasia should only be a last resort when all other alternatives have been exhausted.

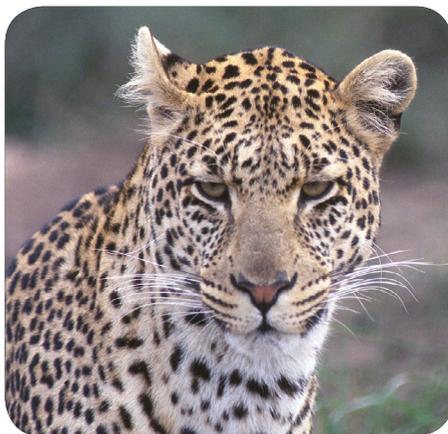
SECTION 8

Managing the impacts on specific species

It is a minimum requirement to provide for animals' spatial, physical, psychological and behaviour needs. These are species-specific and should be applied regardless of the animal's circumstance, the numbers of individuals involved or the ages or sexes of the animals.

The animal welfare standards provided in Section 1 of this manual are the minimum requirements for captive animals. Additional species-specific requirements should also be applied. Guidance for all commonly kept mammals, birds, reptiles and amphibians is provided in Appendix 1: animal husbandry information tables of the manual, *Global Welfare Guidance for Animals in Tourism*. These provide the supplier and travel provider with a description of conditions (called opportunities) that should be available in the enclosure to encourage exercise and natural behaviour.

In this section, you will find best practice guidance specifically for keeping felids (wild cats), primates, bears, parrots and sharks, all of which require specialist care and specific facilities.



Jaguar; just one of the 41 species of felids.

Felids

There are 41 known species of felids (cat family) distributed across North America (e.g. puma, Canadian lynx), South America (e.g. jaguar, ocelot), Africa (e.g. African lion, cheetah, leopard, serval), Europe (e.g. Eurasian lynx, wildcat) and Asia (e.g. tiger, snow leopard, jungle cat). Felids are generally secretive animals; they are often nocturnal and live in relatively inaccessible habitats. Around three-quarters of cat species live in forested terrain, while other species live in mountainous terrain and deserts. All felids are agile climbers. With the exception of lions, the majority are solitary animals, although offspring tend to stay with their mothers until an average of 18 months old. Felids are carnivores. Longevity largely depends on the species, but lions for example can live for 20 years. Many felid species are threatened by extinction due to habitat loss and poaching.

Captive environment

The different felid species adapt differently to life in captivity. This largely depends on their species-specific needs. Inappropriate diet, insufficient space to exercise and minimal mental stimulation can lead to severe health and welfare complications including growth deficiencies, abnormal behaviours (not observed in the wild), obesity and early mortality. Most felids are extremely dangerous animals. Keepers should be sufficiently trained, and enclosures should be designed and constructed of durable materials to prevent escape or access to public areas.

Nutritious diet

All felids are carnivores; they require the amino acids found in animal protein to survive. Beef and horse products are preferred and if obtained from commercial sources they

may already have the appropriate vitamins and minerals added (amounts of which vary according to age and status of the animal). Whole and part carcasses (on the bone) are preferable – ground muscle meat and slab meat may have inadequate vitamin and mineral content. Rodents or fowl may be used to vary the diet but should not be a dominant part of the diet for large felids; they lack nutritional quality. Meat should come from a reliable and trusted source and be fit for consumption: disease free; free from BSE (Bovine Spongiform Encephalopathy); free from drug residues. Identity tags on the carcasses should be removed beforehand. To prevent obesity, large felids may be fasted at least one or two days a week. Feeding at different times during the day will reduce bouts of anxiety and boredom. Uneaten, contaminated meat should be removed from the enclosure.

Indicators of poor welfare

Deficiency in vital minerals, vitamins or protein can have serious consequences for physical development and health; it can cause reduced growth and bone disorders, often referred to as nutritional osteodystrophy. Felids kept in an enclosure that is too small and deprived of mental stimulation are likely to suffer a range of behavioural frustrations. These typically include neurotic behaviours such as stereotypical pacing and apathy.

Best practice

The species-specific behavioural, social and psychological requirements of felids should be considered in enclosure design and husbandry. Even a very large zoo enclosure cannot provide the space of a wild tiger's home range, but opportunities for the animals to express natural behaviours should still be provided.

These include:

- Feeding areas should include places where food can be hidden, and novel feeding techniques that encourage natural hunting behaviour
- Enclosures should have resting areas and indoor quarters (e.g. elevated platforms, boxes, trees)
- Natural ground substrate should allow digging (concrete is not appropriate)
- Enclosures should provide various microclimates including dry, sunny, sheltered areas for cool weather and shaded areas open to the wind for warmer times
- Tropical species (particularly clouded leopards) should have warm, sheltered outdoor areas to encourage use of the outside enclosure even in colder weather
- Felids, particularly from colder climates, should have areas where they can cool down
- Visual barriers, thick vegetation and hiding places should allow felids refuge from visitors
- Where more than one animal is present (many felid species are kept in pairs), visual barriers should allow individual animals to escape one another's sight to reduce stress
- Enclosures should provide opportunities for climbing e.g. trees, frames, platforms) and scratching
- Enclosures should provide opportunities for walking and running

- Lions should have opportunities for social interaction
- Vantage points should be protected but with a good view out of the enclosure
- Enclosures should have accessible pools for swimming, particularly for tigers and jaguars
- There should be a policy of not sourcing animals from the wild, unless for a demonstrable and justifiable conservation need
- There should be no physical contact between the animals and the public. The majority of felids are Category 1 Hazardous Animals. See Appendix 1 in the manual, *Global Welfare Guidance for Animals in Tourism*.



Activities that permit tourists to be in direct contact with dangerous animals should undergo thorough risk assessments.



Orangutan; most primates live in a social system.

Primates

Primates are primarily distributed across tropical or subtropical regions of the Americas, Africa and Asia. Primates are classified in two main groups: Prosimians (including lemurs and lorises) and Simians (including monkeys and apes). Monkeys consist of two monophyletic groups: New World monkeys from Central and South America (e.g. howler, squirrel and capuchin monkeys) and Old World monkeys found in Africa and Asia (e.g. baboons and macaques). Apes include gibbons and the great apes (e.g. chimpanzees, bonobos, orangutans and gorillas).

Lemurs, lorises, New World monkeys and many Old World monkeys are largely arboreal while some Old World monkeys and apes are partially terrestrial, such as baboons, langurs, patas monkeys and gorillas. Species are found in a wide variety of habitats from the mountain-dwelling Japanese macaque and Barbary macaque, to the squirrel and spider monkey that live in trees in tropical forests. All species, however, possess the ability to climb. Primates can leap from tree to tree, walk on

two or four limbs, knuckle-walk, and brachiate – arm-swinging between branches. Primates have advanced cognitive abilities: some make tools and use them to acquire food; some have sophisticated cooperative hunting strategies; they are status conscious; they recognise kin and animals belonging to the same species.

The majority of primates live in a social system, which may include cooperative behaviours such as social grooming, food sharing and collective defence against predators or of a territory. Most species live in family groups but exemptions include monogamous species, such as gibbons; they form a male and female bond. Individual male loris and orangutans may also defend territory alone.

Diet varies amongst species. Though they are mainly omnivores, many primates have anatomical specialisations so they can exploit particular foods, such as fruit, leaves, gum or insects. Longevity of primates largely depends on the species, but chimpanzees, for example, can live for 25 to 35 years. Many species are threatened and some face extinction due to habitat loss, wild-capture for the pet trade and poaching.

Captive environment

Given the huge diversity of primate species, their varying needs in diet, environment, social interaction and behaviour should be considered when designing an enclosure and ensuring they have opportunities to express natural behaviour. Carers should be sufficiently trained and enclosures should be designed for specific behavioural needs and constructed to prevent escape (primates are deceptively strong).

Indicators of poor welfare

Primates kept in an enclosure of insufficient space, deprived of mental stimulation and company from conspecifics are likely to suffer a range of behavioural frustrations. These typically include abnormal repetitive behaviours, self-mutilation, stereotypical pacing and neck twisting and in some species, playing with and ingesting faeces. Aggressive behaviours often signal competition for available food, sleeping sites and mates, establishing dominance hierarchies, or an imbalance in social structure.

Best practice

The behavioural, social and psychological requirements of primate species should be considered in enclosure design and husbandry. Enclosures should provide opportunities for the animals to express natural behaviours and should include:

- Feeding areas, including places where food can be hidden and scattered (e.g. opportunities for foraging)
- Sufficient space for the group size and composition
- Enclosure complexity. Arboreal species require sufficient vertical space and appropriate furnishings to provide opportunities to climb, and a 3-dimensional space. For species that spend significant time on the ground, greater horizontal space is more important, but with a minimum of 50% of full room height via climbing structures or similar furnishings
- Quality of space that accounts for the natural habitat of the species, and the physiological and psychological needs of the animal

- Varied opportunities for interaction with the environment with key elements that are regularly changed, to combat boredom, minimise stress and help assure quality of life
- Opportunities to climb, including horizontal and vertical elements, platforms to allow resting, sleep, social behaviour, feeding above ground and vantage points
- Furnishings for the specific primate species with bedding material, branch work, nesting/ hide boxes, appropriate substrate, vegetation and other enrichment materials designed to encourage normal behaviour patterns
- Ground substrate that is as natural as possible to allow digging and foraging (concrete is not appropriate), plus additional substrates (e.g. bedding materials, leaf litter) in which primates can make day and night nests/beds
- Shade and shelter in multiple locations to ensure that all troop members simultaneously have access to shade/shelter throughout the day/night. Shelter areas also need to provide dry space during wet weather
- Warm, sheltered outdoor areas available for tropical species, to encourage use of the outside enclosure even in colder weather
- Appropriate visual, olfactory, and acoustic barriers within the space. If more than one primate occupies the enclosure, visual barriers should allow animals to escape one another's sight, to minimise stress
- Opportunities for social interaction
- Consideration of group dynamics within the enclosure when increasing populations beyond eight animals

- Regular monitoring of group interactions and use of space to determine whether enlarging the enclosure or constructing an additional enclosure provides optimum habitat for the primates
- Areas/places where individual primates can retreat to escape from conspecifics
- Varying topography to create natural visual breaks, windbreaks, shade and areas for distance viewing by animals (particularly for ground dwelling species)
- Accessible pools
- There should be a policy of not sourcing animals from the wild, unless there is a demonstrable and justifiable conservation need.
- There should be no physical contact between humans and primates. Primates not only have the potential to cause serious injury, but there is a risk of zoonoses; animals may carry harmful to lethal diseases. Similarly, humans have the ability to carry diseases that are lethal to primates.



Captive animals should be kept in appropriate social groupings.

Bears

There are eight bear species that can be found across North America (American black bear, polar bear and brown bear), South America (spectacled bear), Europe (brown bear and polar bear) and Asia (Asiatic bear, sun bear, sloth bear and panda bear). All are terrestrial animals that predominately live in temperate to tropical forest (with the exception of polar bears).

Bears are intelligent, curious and adaptable, keen climbers and enjoy access to bathing water. All bears are solitary animals. Those from colder climates tend to hibernate in winter months. They are largely most active at dusk, with some species (e.g. Asiatic and sloth) most active at night. Bears are good parents, and offspring tend to stay with their mothers for one to three years (depending on the species).

The majority of bear species are omnivores and forage for a variety of fruit and berries, vegetation, honey, insects and larvae, carrion and meat. Polar bears eat predominately meat (although they do eat kelp and berries in the wild), but panda bears only eat a variety of bamboo species. Bears can live for 20 to 30 years. All bear species are threatened by habitat loss and in some locations, hunting.

Captive environment

Bear species do not generally adapt well to a life in captivity, which often cannot provide sufficient space and in many cases sufficient mental stimulation and exercise. This often results in development of abnormal behaviours (not observed in the wild), obesity and early mortality. Bears are also extremely dangerous animals. Keepers should be sufficiently trained and enclosures should be designed and constructed of durable materials to prevent escape.

Indicators of poor welfare

Bears kept in an enclosure of insufficient space and deprived of mental stimulation are likely to suffer a range of behavioural frustrations. These typically include abnormal repetitive behaviours, self-mutilation, stereotypical pacing, neck twisting, head swaying and rocking, as well as apathy.

Best practice

The behavioural, social and psychological requirements of bears should be considered in enclosure design and husbandry. Even a very large zoo enclosure cannot provide the space of a wild bear's home range, but enclosures should provide opportunities for the animals to express normal behaviour. This includes:

- Feeding areas, including places where food can be hidden and scattered (e.g. opportunities for foraging)
- Access to resting areas and indoor quarters (e.g. mock rock caves, dens)
- Ground substrate that is as natural as possible to allow digging (concrete is not appropriate), plus additional substrates (e.g. bedding materials, leaf litter, bark chippings) in which bears can make day and night nests/beds
- Pathways
- Various microclimates, including dry, sunny, sheltered areas for cool weather and shady areas open to the wind for warm times
- Warm, sheltered outdoor areas which should be available for tropical species, to encourage use of the outside enclosure even in colder weather
- In hot climates, areas in which the bears, particularly those from colder climates, can cool down
- Visual barriers and hiding places on the ground, allowing bears to hide both from conspecifics and from visitors

- If there is more than one animal in the enclosure, visual barriers which allow bears to seek privacy from each other to help reduce stress
- Obstacles deterring attacks by one bear on another bear
- Opportunities for climbing (e.g. trees, frames, platforms)
- Opportunities for walking and running
- Opportunities for social interaction
- Areas/places to which small and newly introduced bears can retreat to escape from conspecifics
- Vantage points which are protected but have a good view out of the enclosure
- Elevated areas for bears, particularly semi-arboreal bear species, to rest
- Multiple levels/steep topography
- Accessible pools and opportunities for swimming, sufficient for all bears housed in the enclosure
- Species-specific environmental enrichment
- There is a policy of not sourcing bears from the wild, unless there is a demonstrable and justifiable conservation need
- There should be no physical contact between bears and the public.



Macaws; most parrots nest in tree hollows and earth banks.

Parrots

There are approximately 372 species of parrot in 86 genera that make up the order Psittaciformes. Most originate from the tropical and subtropical regions, with some in temperate regions they are divided into the Psittacoidea (true parrots), Cacatuoidea (cockatoos) and Strigopoidea (New Zealand parrots). Most parrots eat seeds, nuts, fruit and vegetable matter; a few (e.g. cockatoos, kea) eat insects and meat, whilst the lories and lorikeets focus on floral nectar and soft fruit. Many species also eat clay to detoxify poisons within seeds. Parrots are generally monogamous breeders; they form a strong bond between male and female, remaining together even during the non-breeding season or when they join larger flocks. Most parrots nest in tree hollows and earth banks (or nest boxes in captivity). Large parrots can live between 40 and 65 years. Being colourful and the most intelligent of birds, with many having the ability to learn and imitate surrounding noises, parrots are common in captive facilities and their capture for the pet trade continues to threaten the survival of many species.

Captive environment

Parrots held in captivity should be housed in conditions that allow normal behaviour (e.g. flight, opportunities to climb, to seek privacy and be housed in the company of their own kind). Small cages, a lack of stimuli and solitary confinement often causes distress, the development of abnormal behaviour and early mortality. Parrots in zoos may have had their wings clipped (cutting of the flight feathers) or pinioned (removal of part of wing) which prevents flight (temporarily or permanently).

Parrots are also often involved in performances and appear as props in souvenir photographs. Performances that are based on non-natural behaviours, those that compromise welfare or those that use adverse training techniques have been categorised as unacceptable by the travel providers using this manual. For more information, see the specific guidance manual, *Unacceptable and Discouraged Practices*.

Training

Training methods can vary and depend on the knowledge of the trainer; they may not have had formal training in animal handling, or they may lack a scientific understanding of animal behaviour or benign behaviour modification methods. Training methods should only be based on positive reinforcement and not based on food deprivation, punishment or other negative reinforcement technique. A lack of food beyond four hours during the daytime may cause suffering and poor feather growth – herbivorous parrots are not naturally adapted to cope with this deprivation.

Indicators of poor welfare

Birds kept in small cages are likely to suffer a range of behavioural frustrations. These typically include feather damage and neurotic behaviours including self-plucking, self-mutilation, and stereotypical route-tracing of the cage (like repetitive pacing). Self-plucking and self-mutilation in birds is easily identified by bald patches.

Best practice

The behavioural, social and psychological requirements of parrots should be considered in enclosure design and husbandry. The captive environment should not only provide the opportunity for flight, but also provide other opportunities for the animals to express natural behaviours. Considerations include:

- The aviary environment should afford protection from all predators, from the public and from bad weather. Yet it is essential to allow access to fresh air, rain, and sunshine
- Open and enclosed areas where birds can choose either the well-ventilated sunlit area or the enclosed protected area for refuge and privacy. Aviaries should be large enough to allow birds to escape constant disturbances from outside and also prevent stress from overcrowding inside

- The size of the aviary should be based on multiples of the species' wingspan. Preferred minimum dimensions should be: length 8x the bird's wingspan; height 3x the bird's wingspan; depth 4x the bird's wingspan. A large macaw, e.g. a green-winged macaw with a wingspan of 1.4m would therefore require an aviary whose minimum measurements were 11.2m long, 4.2m high, 5.6m deep
- Adequate perches should be made of tree branches of various diameters; not smooth, same diameter spherical dowels. These can cause foot deformities and are not recommended. These perches will help simulate the natural environment and maintain healthy feet. Perches should be located far enough apart to allow maximum flight for exercise, but should not be placed too near the ends of the aviary, where birds could rub against the wire or walls as they turn, which could damage feathers
- Aviaries should be constructed to exclude rats, mice, wild birds, cats and other predators. The Parrot Society and the World Parrot Trust recommend the use of double-wired mesh, the outer wire mesh being 1cm². The wire mesh walls should be buried to a depth of 25cm in the ground or sunk into a 25cm concrete foundation to prevent rats, mice and predators from burrowing into the aviary under the mesh. The mesh should also be covered by non-transparent material to a minimum height of 75cm from ground level to prevent birds on the floor being traumatised by prowling cats or other predators
- Lead-based paints on wire and walls of the aviary should be avoided as cases of lead poisoning have been reported. Certain galvanised wire may contain high levels of toxic materials in the galvanised finish. Many aviculturists insist on weathering new wire before construction
- The aviary should provide an environment consistent with the specific needs for the birds. A bare, uninteresting aviary will lead to birds being bored and depressed, which may cause feather plucking, both from self-mutilation and aviary mates. Aviaries should provide dust and water baths to encourage a normal grooming routine, which will control external parasites and encourage good feather condition
- A variety of seeds, fresh budding branches, green foods, fruit, insect larvae, proprietary crumbles, mineral blocks, homemade mixtures, cooked eggs, and honey should always be made available. This should maintain stock in peak condition. Natural chalk blocks and mineral blocks will assist in the maintenance of beak wear and will help prevent overgrown beaks

- Environmental enrichment, such as branches of leaves and buds hung in the aviary or fruit stuck along the branches will encourage natural foraging and climbing behaviour. The sensory stimulation will help maintain the birds' psychological health
- Wooden walls, perches, floors and the aviary support structures will become contaminated by pathogens and parasites. Special care should be taken to treat such areas with appropriate insecticides (e.g. pyrethrins) and disinfectants. Covering a concrete floor with sand/earth is recommended, as this can be easily removed. Faecal-contaminated furniture should be regularly replaced
- Overcrowding, mixing aggressive or territorial species and maintaining incorrect sex ratios within species will create problems. Inter- and intra-species aggression will lead to injury or death of the less dominant individuals. Segregation of species into one pair per aviary is the only answer
- Opportunities for social interaction should be standard with most species, keeping in pairs
- There should be a policy not to source birds from the wild, unless there is a demonstrable and justifiable conservation need.



Sharks are predators and any activity where human contact is permitted requires a thorough risk assessment.

Sharks

Sharks are a group of fishes characterised by a cartilaginous skeleton (elasmobranchs), which are also closely related to rays. There are known to be 400 species of shark, which occupy all seas. Having a different physiology to bony fish, sharks should keep moving in order to stay afloat and are incapable of swimming backwards or hovering. Most sharks are cold-blooded (poikilothermic), meaning the internal body temperature is the same as the ambient environment. Some shark species are solitary hunters, many lead benthic lives (on the sea bottom), whilst others are highly social, remaining in large schools. Sharks are carnivorous, detecting their prey through electroreceptors and an acute sense of smell. Shark lifespans vary by species, but most live 20 to 30 years.

Captive environment

Like all elasmobranchs, sharks require unique husbandry methods for their long-term captive survival. Until recently this has been poorly understood and as a result, only a few species of shark manage to survive in aquarium conditions for a year or more. The appropriate captive environment and specifically, water quality, is vital to survival. Unless appropriate husbandry practices are adopted, elasmobranch survival in aquariums can be lower than in their natural habitat.

According to the Elasmobranch Husbandry Manual (see Appendix 2: further reading), exhibit design is the single most important factor. The manual recommends aquariums that are planning to obtain and display elasmobranchs to consider five key factors: exhibit goal; exhibit design (exhibit size, shape, volume, and depth); species availability; species compatibility; species potential for reproduction.

Consideration should be given to the behavioural, social and psychological requirements of the species. To swim correctly, many sharks require an extensive, uninterrupted, horizontal swimming dimension (Stoskopf, 1993). Without this, shark species may injure the head and/or eyes on rough, rocky outcroppings. In this case, this species should be in an exhibit with large, open swimming areas, smooth décor, and rounded tank walls to prevent abrasions. The more closely an aquarium can mimic the animal's natural habitat in both swimming area and structure, the better the animal's health will be.

Sharks are classified as Category '1' Greatest Risk species (see Appendix 1: animal husbandry information tables in the manual, *Global Welfare Guidance for Animals in Tourism*).

Compatibility

It is important to ensure there is compatibility both within and between elasmobranch species, and with other fish and invertebrates. For example, many species, such as the wobbegong shark (*Eucrossorhinus* spp. and *Orectolobus* spp.), have a tendency to eat almost any tank inhabitant. Whilst predation is a natural response, it can be minimised by selecting certain species of elasmobranchs that do well in a multi-taxa environment. Feeding these animals frequently and providing refuge areas for smaller aquarium inhabitants can also minimise predation.

Water quality and treatment

Water sources, salt constituents and contaminants can all contribute to problems encountered when mixing artificial seawaters, preparing natural seawater, during system start-up for elasmobranch Life Support Systems (LSS), and daily LSS operation. Water quality is vital to survival and LSS should provide acceptable water clarity, biological filtration, removal of dissolved organics, minimisation of bacterial pathogens and effective gas balance. Aquaria management should fully understand these factors, the implications for the animals exhibited, and troubleshooting procedures. All of these are described in detail in Section 6 of the Elasmobranch Husbandry Manual (see Appendix 1: sources of further information).

Indicators of poor welfare

The presence of stress in the captive environment can cause the following: lack of appetite and anorexia, evasive or avoidance behaviour. Stress can also cause changes to any of the following: skin colour, ventilation, swimming behaviour, feeding behaviour, blood parameters, and steroid titers. Stress can be caused by a number of factors, including poor water quality and close proximity to people. A chemical imbalance in the water may cause the sharks to exhibit erratic swimming and in severe cases early mortality. Further details on physiological and behavioural changes in captive elasmobranch are discussed in Section 19 of the Elasmobranch Husbandry Manual (see Appendix 3: sources of further information).

Best practice

The behavioural, social and psychological requirements of the shark species should be considered in exhibit design and husbandry. Considerations include:

- The optimal diet reflects diet in the wild, both in quantity and quality. These parameters change seasonally within species and between species. Feeding of elasmobranchs in captivity is mostly done with pre-frozen food to eliminate the possibility of parasitic infection and to ensure food availability. Loss of vitamins and minerals due to food transport, storage, and preparation make vitamin and mineral supplementation necessary. Guidance on nutritional advice and the techniques used for delivering the food to specific elasmobranchs are provided in Section 14 of the Elasmobranch Husbandry Manual (see Appendix 1: sources of further information).
- To aim to meet species' biological needs, exhibits should mimic the species' natural habitat in both swimming area and structure as described in Section 5 of the Elasmobranch Husbandry Manual (see Appendix 1: sources of further information).

- Structures and rocky outcroppings within the exhibit should be designed with consideration given to the natural attributes of the species
- Ground substrate should be as natural as possible to allow digging (bare concrete is not appropriate)
- Species in the exhibit should be selected for suitability and compatibility with the other species exhibited
- Varied topography and crevices in the exhibit should provide refuge for potential prey species, in order to minimise predation
- Social species should be exhibited in a social structure
- Species-specific environmental enrichment should be included to minimise potential stress to elasmobranchs in captivity. Section 13 of the Elasmobranch Husbandry Manual provides more detail (see Appendix 1: sources of further information).
- Where attraction staff dive with elasmobranch, this should follow the best practice protocol as described in Section 12 of the Elasmobranch Husbandry Manual (see Appendix 1: sources of further information).
- There is a policy not to take animals from the wild, unless there is a demonstrable and justifiable conservation need
- Where contact between members of the public and sharks is permitted, it should be subject to a thorough risk assessment which demonstrates that the risks to both animal welfare and public health and safety are appropriately managed. This particularly applies in instances of contact or close proximity between customers and Category 1, dangerous sharks, as classified by the UK Secretary of State's Standards on Modern Zoo Practice. (see Appendix 1: sources of further information). Travel providers will only offer these activities for sale if they are able to ensure that the risks to both public health and safety and animal welfare are effectively managed.

SECTION 9

Additional best practice indicators

Around the world varying degrees of regulation exist with regards to animal attractions. Additionally, there are also a number of professional associations which animal attractions can join and which regulate their members regarding animal welfare standards. Below are additional indicators of best practice.

- In many countries, an operating animal attraction is regulated and regularly inspected by the appropriate government body. This sometimes includes minimum standards of animal welfare. For example all zoos in member countries of the European Union should meet the requirements of the European Zoos Directive.
- In countries where animal attractions are required to have a licence or permit to operate, the attraction should have a valid licence or permit that is on public view or readily available.
- The animal attraction should ideally be a member of a professional trade organisation that prioritises animal welfare. That organisation should have standards and guidelines and provide accreditation after inspection and evaluation.
- The attraction should keep up-to-date records of all wild animals held including numbers of each species, births, deaths, animal acquisitions and disposals. For an example of an animal stocklist see Appendix 5: sample animal stock-list.
- The attraction should have insurance that covers the facility and every person under a contract of service (or acting on their behalf) against liability for any damage or injury caused by any of the animals, whether inside or outside the attraction, including transportation to other premises. This should be in addition to public liability insurance and compliance with mandatory health and safety requirements.
- The attraction should provide ongoing training for animal keepers and/or require keeping staff to have a recognised animal management qualification.
- Animal sanctuaries/orphanages should not allow animals to breed or replace animals. If this is allowed, the attraction needs to be re-classified. For more information on appropriate sanctuary operation, see Section 11: Animal sanctuaries.
- All animals kept should have been acquired legally and in accordance with international and national legislation.

Record keeping

Under the EC Directive 1999/22/EC, all zoological collections in the European Union should keep up-to-date and accurate records of all their animal species. This should include details of births, mortalities, arrivals and disposals. The minimum requirements specify

that suppliers should keep such records (see Section 4 of the *Global Welfare Guidance for Animals in Tourism*).

Below is an example of part of an animal stocklist which is fully explained in Appendix 5: sample animal stocklist, of the *Global Welfare Guidance for Animals in Tourism*.

Mammalia	1	2	3	4	5	6	7	BPC	RLC
Marsupialia									
<i>Phascolarctus cinereus adustus</i> Queensland koala	2.0.0	2.0.0	0.0.0	0.0.0	0.0.0	2.0.0	2.0.0	ISB	NT
<i>Potorous tridactylus</i> Long-nosed potoroo	0.0.0	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0		LC
Insectivora									
<i>Echinops telfairi</i> Hedgehog Tenrec	6.2.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0	ESB	VU
Primata									
<i>Eulemur fulvus rufus</i> Red-fronted lemur	1.2.0	0.0.0	0.0.1	0.0.1	0.1.0	0.0.0	1.1.0	ESB	VU
<i>Eulemur macaco flavifrons</i> Black lemur	0.1.0	1.0.0	0.0.0	0.0.0		0.0.0	1.1.0	EEP	VU
<i>Hapalemur griseus alootrensis</i> Alaotran gentle lemur	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	0.1.0	EEP	CR
<i>Lemur Catta</i> Ring-tailed lemur	0.10.0	2.0.0	0.0.0	0.0.0	0.0.0	0.3.0	2.7.0	ESB	VU
<i>Varecia variegata rubra</i> Ruffed Lemur	1.1.0	0.0.0	0.0.0	0.0.0	1.1.0	0.0.0	0.0.0	EEP	EN
<i>Daubentonia madagascariensis</i> Aye Aye	1.1.0	0.0.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0	EEP	EN
<i>Galago moholi</i> Senegal bushbaby	1.0.0	0.1.0	0.0.0	0.0.0	0.0.0	0.0.0	1.1.0	EEP	LC
<i>Callimico goeldii</i> Goeldi's monkey	2.3.0	0.1.0	0.0.0	0.0.0	0.1.0	1.3.0	1.0.0	EEP	NT
<i>Callithrix pygmaea niveiventris</i> Eastern pygmy marmoset	3.4.0	0.0.0	2.0.3	0.0.0	0.0.3	0.0.0	6.3.0		LC

Acquisition of wild animals

Many in the international conservation community consider the removal of animals from the wild (where it is not for a demonstrable conservation need) to be an unacceptable practice. Indeed, some consider it undermines conservation efforts aimed at protecting species in the wild. The capture of any wild animal should therefore be governed by a strict set of guidelines. Acquisition from the wild is discouraged and suppliers should instead source new acquisitions from captive breeding programmes.

Before contemplating the capture of a wild animal, the following strict guidelines should be considered:

- Legislation governing international trade in wild-caught species (CITES), and regional, national and local laws relating to the capture of animals from the wild
- Potential conservation impact of removing individual animals from the wild on the survival prospects of a species or population (taking into account CITES Non Detriment Findings (NDF) and relevant IUCN guidelines). See Appendix 3: captive animal guidelines in the *Global Welfare Standards for Animals in Tourism*
- Potential welfare impact on individual wild animals, for example injury and mortality as a result of capture and transport. The impact of selected removal (for example of males) on the sex ratio
- The captive welfare of the animal and whether its destination has suitable and acceptable conditions that meet all its species-specific needs.



Crate used for transporting wildlife.

Generally, animals should not be acquired from the wild unless there is a demonstrable and justifiable conservation need, or it can be demonstrated that the acquisition will not adversely affect in any way the conservation status or welfare of the species.

Animal husbandry guidelines

The *Global Welfare Standards for Animals in Tourism* bases its species-specific keeping standards upon guidance from the Secretary of State's Standards of Modern Zoo Practice, Defra 2004; and species-specific standards and environmental enrichment for appropriate living conditions taken from the Animal Protection Ordinance of Switzerland, Tierschutzverordnung 2008 (APOS). This consolidated data provides the most complete and up to date available information for species commonly kept in captivity. The standards provide basic species-specific needs and do not take into account diverse environmental factors particular to different geographical locations. If in any doubt, suppliers should consult an appropriately trained veterinarian to ensure that captive environments are appropriate for the animals. For further captive animal guidelines see Appendix 1: animal husbandry information tables in the *Global Welfare Standards for Animals in Tourism*. For sources of additional guidance on captive animals, refer to Appendix 3: captive animal guidelines in the *Global Welfare Standards for Animals in Tourism*. Appendix 1: sources of further information provides information on taxa-specific guidelines.

Education and conservation

Since the ratification of the Convention on Biodiversity (CBD) in 1992, zoos worldwide have been encouraged to participate in raising greater awareness about the environment, biodiversity and endangered species, besides awareness of current threats and what people can do to prevent endangered species' demise.

Some zoos have responded by creating and seeking to implement a conservation and education strategy: the World Zoo and Aquarium Conservation Strategy (WZACS). See Appendix 1: sources of further information.

In the European Union, the EC Zoos Directive (1999/22/EC) also requires zoos to be licensed, to meet standards of animal welfare and husbandry, to partake in conservation programmes and to educate the public about conservation and specifically about the animal species on display.



Example of detailed and informative signage on tiger enclosure.

Education

Each animal attraction should:

- Have an education strategy and an active education programme to engage the public
- Have at least one trained member of staff dedicated to delivering the education programme
- Have facilities/services to deliver the programme to the public, schools etc.
- Display accurate information about the animal species exhibited at the relevant enclosure. This information should include: the species name (both common and scientific); biological characteristics; social status; description of natural habitat; threats to the animal species in the wild
- Ensure that animals used in performances are only required to demonstrate natural behaviour
- Provide a few facts on each species, to capture customer attention whilst being informative.

Conservation

Each animal attraction should:

- Participate in conservation programmes
- Raise awareness and funds for conservation projects
- Actively conserve biodiversity and inform the public about conservation efforts in the wild
- Have a conservation policy related to the aspirations of World Zoo and Aquarium Conservation Strategy (WZACS)
- Act responsibly and not acquire animals from the wild
- Inform the public about wildlife trade and discourage them from buying wildlife products.



Animal attractions should act responsibly and not acquire animals from the wild.

Direct impacts of captive environments

Five Freedoms	Examples of bad practice	Best practice
<p>1. Good feeding</p>	<ul style="list-style-type: none"> • Dirty or stagnant water. • Food bowl covered in faeces. Bare enclosure with food in a bowl. 	<ul style="list-style-type: none"> • Continual access to clean, fresh water. • Nutritious food hygienically prepared. • Active environmental enrichment programme using food replicates and encourages natural feeding behaviour. 
<p>2. Suitable environment</p>	<ul style="list-style-type: none"> • Cramped conditions restrict an animal's ability to express natural locomotive behaviour. • Inability to escape adverse weather conditions, rest comfortably or seek shelter. • Keeping cold-blooded species such as reptiles in cold, barren enclosures with no heat lamps or access to water. 	<ul style="list-style-type: none"> • Greater space offering the opportunity for social animals to interact with their own kind and a complex environment permitting the animal(s) to express natural locomotive behaviour. • Provision of nest boxes, burrows, denning areas, perches, access to shelter. • Providing species such as reptiles with opportunities to regulate their body temperature by either warming under a lamp or cooling down in a pool. 

Five Freedoms	Examples of bad practice	Best practice
<p>3. Good health</p> <ul style="list-style-type: none"> • Veterinary surgeon without knowledge and expertise in animal welfare. • Coloured discharge from eyes, nose or ears, broken limbs, feather or fur loss, open wounds or signs of malnutrition, lack of general care (overgrown hooves, matted hair, evidence of disease). 	<ul style="list-style-type: none"> • Veterinary surgeon on-site or contracted with adequate knowledge and experience in the health and welfare of wild animals in captivity. • Bright eyes, shining coats, full feathers, a healthy physique and the absence of negative welfare indicators. 	
<p>4. Appropriate behaviour</p> <ul style="list-style-type: none"> • Social animals kept alone. • Lethargic behaviour or repetitive pacing or swaying, self-mutilation, heightened levels of aggression or fear. 	<ul style="list-style-type: none"> • Animals housed in an appropriate social group. • Appropriate furnishings and an environmental enrichment programme that provides the ability for animals to express their natural behaviour such as climbing, digging, swimming, diving, foraging, and nest building, etc. 	



Five Freedoms	Examples of bad practice	Best practice
<p>5. Protection from fear and distress</p>	<ul style="list-style-type: none"> • Heightened levels of fear. • Inability to seek refuge and inability to avoid direct human contact. • Evidence of surgical modification of the skin, tissues, teeth or bone structure. • Evidence of sedation. • Inability to escape aggressive cage companions. • Animals being chased, provoked or being harassed. • Unless under the guidance of an appropriately trained vet. 	<ul style="list-style-type: none"> • Ability of animals to use all features of an enclosure without manipulation, instruction or coercion. Animals not being put in circumstances that create fear, distress, anxiety or the risk of injury, eg as photo prop. • Ability for animals to move at will, to escape and find refuge.



Appendices

Appendix 1: sources of further information

Category	Further info source	Description
Legislation & Conventions	Animal Protection Ordinance of Switzerland (Tierschutzverordnung) The Swiss Federal Council. (2008).	Species specific requirements and enrichment recommendation
	Source: www.admin.ch/ch/d/sr/4/455.1.de.pdf	
Organisation & Associations	Welfare Quality®	Animal Welfare Quality Criteria
	Source: www.welfarequalitynetwork.net	
Organisation & Associations	The World Zoo Conservation Strategy: the Role of the Zoos and Aquaria of the World in Global Conservation -Executive Summary. (1993)	Guidance on the role of zoo and aquaria on conservation
	Source: www.waza.org/en/site/home	
Organisation & Associations	World Zoo Organisation and the International Union for Conservation of Nature (IUCN)	The World Zoo Organisation (IUDZG) and The Captive Breeding Specialist Group of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species™/Species Survival Commission Chicago, IL: Chicago Zoological Society.
	Source: www.iucn.org/	
Organisation & Associations	Australasian Zoo Keeping	Collection of global animal husbandry guidelines for mammals, birds, reptiles, amphibians, fish, invertebrates
	Source: www.australasianzookeeping.org/Husbandry%20Manual%20Guidelines.htmk	
Organisation & Associations	WAZA	World Association of Zoo and Aquaria
	Source: www.waza.org/en/site/conservation/conservation-strategies	

Category	Further info source	Description
Organisation & Associations	Elasmobranch Husbandry Initiative	Guidance on elasmobranch Husbandry: Conservation and Ethical Care of Sharks, Rays and Chimaeras.
	Source: www.elasmobranchhusbandry.org/	
Organisation & Associations	Parrot Society	Husbandry and Management of Parrot Species. McMillan R. J.
	Source: www.cites.org/eng/transport/index.php	
Organisation & Associations	Association of British and Irish Wild Animal Keepers (ABWAK)	Environmental Enrichment Guidelines.
	Source: abwak.org/	
Organisation & Associations	BlAZA	British and Irish Association of Zoo and Aquaria.
	Source: www.blaza.org.uk/	
Organisation & Associations	International Union for Conservation of Nature (IUCN).	International Union for Conservation of Nature (IUCN) Red List of Threatened Species™(2002). Guidelines on the Management of Ex-situ populations for Conservation.
	Source: data.iucn.org/dbtw-wpd/edocs/Rep-2002-017.pdf	
Organisation & Associations	American Zoo Association (AZA)	Animal Care Manuals
	Source: www.aza.org/animal-care-manuals/	
Organisation & Associations	The Global Federation of Animal Sanctuaries (GFAS),	Standards for Animal Care of Bears (2011). Standards for Animal Care of New World Primates (2011). Standards for Animal Care of Old World Primates (2011). Other standards are available.
	Source: www.sanctuaryfederation.org/gfas/home/	
Organisation & Associations	European Association of Zoos and Aquaria (EAZA) (2008 Association (AZA)	Minimum Standards for the Accommodation and Care of Animals in Zoos and Aquaria.
	Source: www.eaza.net/about/Documents/Standards_2008.pdf	
Organisation & Associations	SPANAs	Survey of holiday makers and animal welfare concerns.
	Source: cdn.yougov.com/cumulus_uploads/document/n9rzwb071/YG-Archives-Spana-Holidaying-070812.pdf	

Appendix 2: further reading by species

Species	Source/reference
African Lion	African Lion Husbandry Guidelines, Hillermann A. (2009)
Cheetah	Cheetah Husbandry Manual, Ziegler-Meels K (2009)
Eurasian Lynx	Eurasian Lynx Husbandry Guidelines, Krelekamp (2004), EAZA
Leopard	Leopard Husbandry Guidelines, Houssaye F. & Budd J. (2009), EAZA
Large/Small Felids	Minimum Husbandry Guidelines for Mammals: Large/Small Felids (1997), AZA
Tiger	Tiger Husbandry Guidelines, Baker R. (2006)
New World Primates	Standards for Animal Care of New World Primates. (2011) GFAS
Old World Primates	Standards for Animal Care of Old World Primates. (2011) GFAS
Lemur and Brown Lemur	nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Mammalia/Ring%20Tailed%20Lemur.pdf nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Mammalia/White%20Fronted%20Brown%20Lemur.pdf
Lorises	www.loris-conservation.org/database/captive_care/manual/
Marmosets and Tamarins	www.csew.com/cottontop/SSP/Enghome.htm nagonline.net/HUSBANDRY/Diets%20pdf/Golden%20Lion%20Tamarin%20Nutrition.pdf
Capuchins	nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Mammalia/Black%20Capped%20Capuchin.pdf

Species	Source/reference
Baboons	nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Mammalia/Hamadryas%20Baboon.pdf
Gibbons and Simangs	nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Mammalia/Siamang.pdf nswfmpa.org/Husbandry%20Manuals/Published%20Manuals/Mammalia/White%20Handed%20Gibbon.pdf
Chimpanzees	www.aza.org/uploadedFiles/Animal_Care_and_Management/Husbandry_Health_and_Welfare/Husbandry_and_Animal_Care/ChimpanzeeCareManual2010.pdf
Orangutans	www.czs.org/czs/OHM
Bears:	Brown Bear Husbandry Manual, Lorenzo S. (2009) EAZA Ursid Husbandry Guidelines (2007), 2 nd Edition GFAS Standards for Animal Care of Bears (2011) Giant Panda Husbandry Manual, Kleinman D. (2003). National Zoo. Polar Bear Husbandry Manual, (2009) AZA Polar bear Nutrition Guidelines, Lintzenich B.A. <i>et al</i> (2006)
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Consultees

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John Roberts, Director of Elephant and Conservation Activities, Anantara Golden Triangle and Golden Triangle Elephant Foundation

Jonathan Vaughan, BSc, MSc, IEEM. General Manager, Lilongwe Wildlife Centre

David Hancocks BSc. BArch., Consultant

Peter Fricker, Projects and Communications Director, Vancouver Humane Society.

John Denerley, Director, Galloway Wildlife Conservation Trust

Laura Higham, BVM&S, MRCVS. Veterinary Programme Advisor, SPANA

Manny Mvula MSc., Senior Consultant, Tribal Voice Communications

Elise Allart, Manager, Sustainable Tourism, TUI Netherlands

Dr Deepani Jayantha, BVSc, DESMAN G-Cert., Country Representative, Sri Lanka, Born Free Foundation

Stefanie Boomsma, Sustainable Tourism Coordinator, TUI Netherlands

Dr Sonya Hill, M.Phil., Ph.D. Applied Ethologist

Jonathan Chell, Marketing Manager, Elephant Hills Luxury Tented Camp

Nick Marx, MSc. Director, Wildlife Rescue and Care Programmes, Wildlife Alliance

Kimberley Wells MSc, Senior Welfare Advisor, The Brooke

Amanda Mayhew, Manager Ecotourism and International Trade Policy, Humane Society International

Kisor Chaudhuri, Independent Expert, Government Advisor (India) and Fellow of Royal Geographical Society.

Chris Lee, Trade Marketing Manager, Tourism Authority of Thailand

Sabrina Cambiaso, Director, Dominican Republic Tourism Board

Manuel Diaz Cebrian, European Regional Director, Mexican Tourism Board.

Andrew Greenwood MA, VetMB, DipECZM, CBiol FSB FRCVS, Partner, International Zoo Veterinary Group

Dr Jamie Lorimer, University Lecturer, School of Geography and the Environment, University of Oxford

Philip Mansbridge, Chief Executive Officer, Care for the Wild International

Kisor Chaudhuri FRGS, Wildlife Management Consultant, Haridwar, Uttarakhand, India

Manoj Gautam, Executive Director, Jane Goodall Institute Nepal

Cynthia Moss, Director, African elephant specialist, Amboseli Trust for Elephants

Dr. Brij Kishor Gupta, Evaluation & Monitoring Officer and Member, Expert Group on Zoo Designing Central Zoo Authority, Ministry of Environment & Forests, India

Kedar Gore, Director, The Corbett Foundation

Dr. Stuart Semple, Reader in Evolutionary Anthropology, Institute of Primate Tourism Research, University of Roehampton

Cathy Williamson, Captivity Programme Manager, Whale and Dolphin Conservation (WDC)

Alan Knight OBE, Chief Executive, International Animal Rescue

Nancy L. Gibson, Founder / Chief Executive, Love Wildlife Foundation

Kathy Gill, Strategy Director, Biosphere Expeditions

Dr Susanna Curtin, Senior Lecturer, Researcher in Eco/Wildlife Tourism, School of Tourism, Bournemouth University, UK

Professor Claudio Sillero, Bill Travers Fellow for Wildlife Conservation, WildCRU, Zoology, University of Oxford

Mr Marc Ancrenaz, Co Director, The Orangutan Project

Project management team

Daniel Turner – Born Free Foundation

Simon Pickup – ABTA

Shelly Beresford – ABTA

Statement from the Born Free Foundation

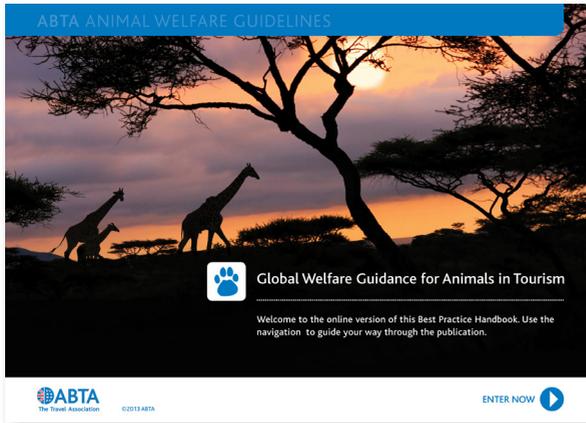
Each year, the Born Free Foundation receives thousands of calls from members of the public concerned by the suffering of animals that they witness whilst travelling. Born Free investigates these concerns and, as part of our follow-up procedures, contacts governments calling on them to draw up, improve and enforce animal welfare legislation. We also work with the travel industry which is ideally placed to influence the current situation and bring about positive change. Our extensive expertise in the science of animal welfare and wildlife conservation ensures Born Free can provide accurate and reliable information which can be used to tackle many of the negative and harmful practices that impact on the welfare of both captive wild animals and their free-living counterparts, as well as the habitats they depend upon. The Born Free Foundation is delighted that our experience has contributed to a landmark decision by ABTA to produce its ground-breaking *Global Welfare Guidance for Animals in Tourism* and six supporting guidance manuals which represent a significant step towards improving animal welfare standards of attractions associated with and supported by the tourism industry.

Appendix 4: photo captions and credits

Page	Caption	Credit
5	Tiger in an enclosure of an insufficient size and quality.	Born Free Foundation
5	Bear in a stimulating and diverse captive environment.	Born Free Foundation
6	In captivity, enclosures should be both spacious and environmentally complex to provide optimum living conditions for the animals.	Born Free Foundation
8	Lion and tiger cubs used in photographic opportunities with tourists may have their claws removed to make them safe for handling.	Princess Alia Foundation
9	Live feeding of vertebrate animals is discouraged.	Danny Otnes
10	Drinking water receptacles need regular cleaning and replenishing; stagnant water can cause disease.	Born Free Foundation
12	Begging can be a sign that animals are regularly fed by the visiting public.	Born Free Foundation
13	Elephant feeding.	Mike Dooley
15	Lions in a larger enclosure that provides horizontal and vertical space.	Wilson
15	An enclosure for coati which offers an opportunity to climb and seek shelter.	Born Free Foundation
15	Chimpanzees in an unstimulating and unnatural environment.	Born Free Foundation
16	A safe and enriched enclosure.	Wild Futures
18	Tiger with an abscess on the eye.	Born Free Foundation
18	An injured crocodile with visible wounds.	Northrop
19	Vet checking a seal's teeth.	Stock image library
20	An owl enclosure with space to fly and opportunity to seek shelter and privacy.	Born Free Foundation
21	An owl enclosure.	Born Free Foundation
22	Giraffe displaying abnormal licking behaviour.	S Fisher
23	Predator and prey in inappropriately close proximity can cause animals distress.	Born Free Foundation
24	Animal handling can have serious implications for the health and safety of both the animal and public.	A Fallon
24	Animal performances should only be based on natural behaviours.	Animals Asia Foundation

Page	Caption	Credit
25	Overgroomed parrot: over-grooming can be a sign of poor welfare or distress.	Born Free Foundation
27	Animal performances should be free from bad practice that could jeopardise animal welfare.	Animals Asia Foundation
28	Birds of prey should only be flown outdoors as part of a licensed activity.	Mike Dooley
30	Antelope pictured in a zoo; there is little conservation value attached to antelope breeding in captivity.	Don DeBold
32	Jaguar; just one of the 41 species of felids.	Born Free Foundation
34	Activities that permit tourists to be in direct contact with dangerous animals should undergo thorough risk assessments.	Born Free Foundation
35	Orangutan; most primates live in a social system.	Julie O'Neill
37	Captive animals should be kept in appropriate social groupings.	Kris Abildgaard
39	Macaws; most parrots nest in tree hollows and earth banks.	Glen Bowman
42	Sharks are predators and any activity where human contact is permitted requires a thorough risk assessment.	S Jefferson
48	Crate used for transporting wildlife.	Stock image library
49	Example of detailed and informative signage on tiger enclosure.	Born Free Foundation
50	Animal attractions should act responsibly and not acquire animals from the wild.	Stock image library
51	Rotting food.	Born Free Foundation
51	Elephant enrichment feeding.	Mike Dooley
51	A fox in a cage.	Born Free Foundation
51	An example of a good enclosure.	D Turner
52	Overgrown hooves.	Born Free Foundation
52	Farrier with a horse.	The Brooke
52	Circling rhino; can be a sign of stress.	Info Zoos
52	Gorilla foraging for food.	C Davies
53	Cheetah used as a photo prop.	M Lunn
53	Mongoose shelter.	Born Free Foundation

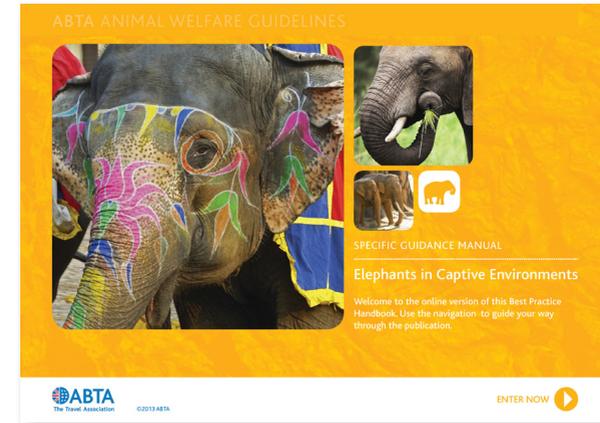
ABTA ANIMAL WELFARE GUIDELINES



Global Welfare Guidance for Animals in Tourism



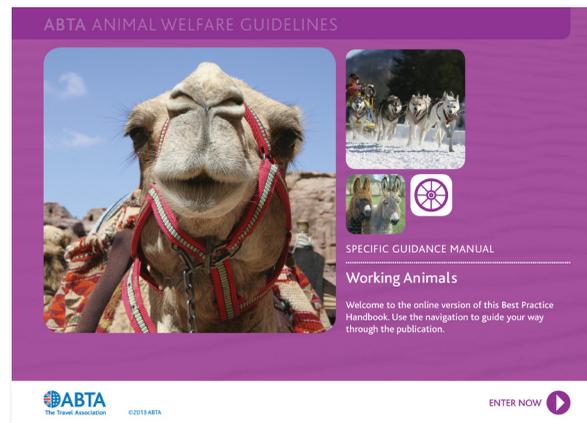
Dolphins in Captive Environments



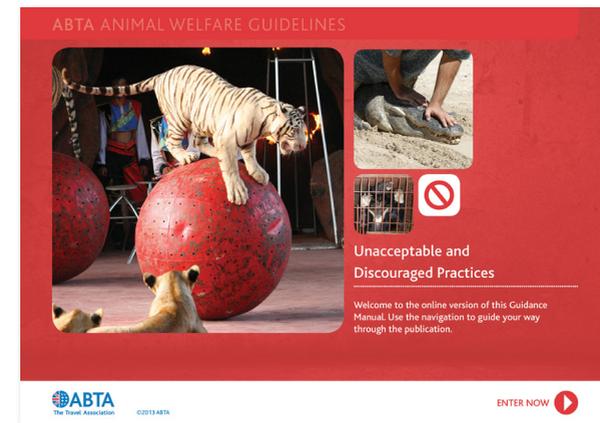
Elephants in Captive Environments



Wildlife Viewing



Working Animals



Unacceptable and Discouraged Practices

ABTA Ltd
30 Park Street, London SE1 9EQ
Tel: +44 (0)20 3117 0590
Fax: +44 (0)20 3117 0581

Email: sustainabletourism@abta.co.uk
Web: www.abta.com
Twitter: @ABTAtravel