

Global perspectives on animal welfare: Asia, the Far East, and Oceania

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Summary

In Asia and the Far East, livestock undergo major suffering due to malnutrition, overloading, and ill-treatment. At slaughter animals are handled roughly and watch other animals being killed; stunning is not practised. Cruelty to other animals such as elephants, horses, donkeys, bears, dogs, and circus animals has largely been prevented through the efforts of animal welfare organisations. Governments have taken initiatives to establish Animal Welfare Boards and enact laws for the prevention of cruelty to animals, but their efforts are far too limited to be of any significance and financial constraints and lack of personnel inhibit the implementation of the laws that do exist.

In New Zealand and Australia, legislation and strong consultation procedures at governmental and community level strive to regulate and improve the welfare of animals in all spheres, but in other Oceanic countries there is a need for both an update in, or establishment of, legislation covering animal welfare. Limited progress has been made due to the status of the Veterinary Services and a lack of resources. Although some public and educational awareness programmes are carried out, increasing exposure to international media and attitudes of visiting tourists suggest that further awareness work needs to be undertaken.

To address the problems of animal welfare in developing countries, it would be inappropriate to adopt the international standards that are implemented in the developed countries. Each developing country should evolve its own standards based on its own individual priorities.

Keywords

Animal welfare – Companion animal – Draught animal – Legislation – Public awareness – Slaughter – Veterinary profession – Wild animal.

Introduction

This paper covers ongoing animal welfare issues throughout Asia, the Far East and Oceania, including New Zealand and Australia. As these areas are geographically, socially and economically diverse, animal welfare concerns vary in priority and nature. Animal welfare in agriculture, including small-scale farming in developing nations and large-scale industrial farming is explored. The role of the veterinary profession and participation by government and non-government organisations in each country is illustrated. It covers the differing welfare practices for

companion and wild animals, from those nations where human health and poverty take priority to those who have developed specific current legislation to address animal welfare issues.

Asia and the Far East

Developing countries of the world, especially in Asia, have high human and livestock populations (mostly rural and agricultural based) and limited land, which means that there is less pasture available for animals. Out of

100 million bullocks and buffaloes, 7 million are in urban areas. These draught animals (DAs) are still the backbone of agriculture and there is very little mechanisation.

Developing countries with a rich heritage of cultural and religious traditions have not sheltered livestock from abuse. In quantitative terms, the present effort of animal welfare organisations is only a tiny fraction of what needs to be done to improve animal welfare. It is also ironic that this happens even though most of the religions in these countries deify animals.

Welfare of work animals

From the beginning of civilisation DAs, bullocks, horses, camels, mules, donkeys, etc., have been making a significant contribution to society. Draught animal power (DAP) is an excellent example of the mass application of appropriate technology. It is ideal for use on small farms, as buying a tractor or a tiller is only economical when the farm size is above four hectares (although, on a hire basis, tractors and tillers can also be used for smaller farms). More than two million people in India depend on DAP for ploughing, for pulling vehicles, and for carrying goods. For a variety of reasons the developing countries of the world may have to depend on DAP for many more years to come.

The DAs plough 100 million hectares of land and haul 1,800 million tonnes of freight in 15 million animal drawn carts (Table I) (8).

Table I
Total freight carried by draught animals in India per year
(calculated on the following assumptions)

Item	Number/quantity
Rural-based bullock carts	12 million
Urban-based bullock carts	3 million
Average working days in rural areas	100 days
Average working days in urban areas	300 days
Average load carried in rural areas per day	750 kg
Average load carried in urban areas per day	1,000 kg
Average distance covered with load in rural areas per day	12 km
Average distance covered with load in urban areas per day	15 km
Freight carried in 12 million rural-based carts per year	12 m x 750 kg x 100 days / 1,000 = 900 million tonnes
Freight carried in 3 million urban-based carts per year	3 m x 1,000 kg x 300 days / 1,000 = 900 million tonnes
Total	1,800 million tonnes

There are over 100 million small farms in developing countries, e.g. in Sri Lanka, it is estimated that out of nearly 1.5 million cattle, approximately 1.1 million belong to smallholders in rural areas and estate sector.

As DAP is so important to developing countries, it is regrettable that these animals are not well cared for. Due to a lack of pasture and commercial feed, livestock are in semi-starved conditions (except high-yielding milk animals and DAs while at work). In India, because of the monsoon season, land is only available for ploughing during certain periods of the year. As a result, more than 100 million DAs are idle in India for 200 days a year, during which period they are ill-fed and become weak, thus reducing their draught capability. This leads to further ill treatment when the animals are forced to work beyond their capacity. While at work, they are overworked, underfed, and maltreated. Millions suffer neck injuries and are bruised due to whipping and hot iron branding. Even shoeing and castration are done in primitive ways, inflicting needless suffering. The implements and carts to which they are hitched are inefficient, crude and painful. Animal welfare organisations undertake measures to improve the situation, but much more needs to be done (10, 12, 13).

Bullocks are the most common working animal in developing countries, but in many countries in Asia buffaloes and donkeys are also used. Of the more than 50 million donkeys in the world, 50% are found in Asia, with the People's Republic of China having 10 million, Pakistan 3.5 million and India 2 million. The most common use of donkeys is for transport, but, to a limited extent, they are also used for ploughing (11). The advantage of using donkeys is that while a pair of bullocks is able to haul a tonne in a traditional cart, a single donkey or mule is able to haul half to three quarters of a tonne with ease as they are of better breeding and are fed well.

Welfare of production animals (milk and meat)

In India, meat animals are part of a livestock system that contributes 40 million euros to the country's GNP. The market value of livestock is 80 million euros. 100 million livestock animals and 200 million poultry birds are produced every year, which supplies meat totalling 5 million tonnes valued at 12 million euros. This meat is processed and sold through India's large number of abattoirs and meat shops, both legal and illegal, which employ a total of 1 million people.

In India, cruelty to animals takes place at every stage during slaughter. Five to eight million buffalo calves are killed immediately after birth. Eighty million large animals work for seven to ten years before becoming available for slaughter. Over 120 million meat animals and 500 million

poultry also undergo significant suffering from the time they are dispatched for slaughter till they die. Transport and handling methods are primitive and crude. Slaughter animals are made to walk long distances or transported in overcrowded trucks and trains. At the slaughter itself animals are handled roughly and animals awaiting their turn watch other animals being killed. Due to misinterpretation of religious injunctions and continued resistance to stunning, unnecessary suffering is inflicted (14).

The most reprehensible part in the production sequence is the stage at which the animals are taken to the abattoirs. At present, they are transported on foot or carried in overcrowded trucks or goods trains. The typical length of the final journey is 100 to 300 miles. The Southern State of Kerala in India has the unique distinction of being the final destination of animals from all over South India: about a million animals per year are walked there 200 to 300 miles, in the course of which they lose weight and are incessantly beaten. These animals are generally not fed and watered en route. Animals – young and old, big or small – are all tied in twos and fours in order to reduce the number of animal minders or personnel on the trail. This results in injury and fatigue to the animals. They are badly beaten while they are herded together and driven fast to reach markets and abattoirs on time. It is an excruciating sight to watch them falter, fall down and be whipped so that they get up. On any working day, a million work animals may receive anywhere from 10 to 20 million beatings, assuming a five-hour working day. Similarly, needless suffering is inflicted on animals that are transported to Kerala on trucks: they travel three or four days together in overcrowded, ill-ventilated and humid conditions (9).

Once the animals reach the slaughterhouse they are further subjected to severe cruelty: they are killed in front of other waiting animals and sharp sticks are inserted into the anus or vagina to force them on to the slaughter platforms. To restrain young buffaloes the front leg is broken and swung around the neck. Pigs are slaughtered by repeated stabbing and cattle are cast by hitting them on the head, etc. Stunning has not been introduced and although several attempts have been made to streamline and upgrade present abattoirs every effort has been negated due to various reasons.

Poultry farming

The developing countries of Asia started following the archetypal factory farming system with either intensive deep litter or battery cages from 1965 onwards. Three quarters of the world's 4,700 million egg-laying hens are confined in tiny battery cages. India is the world's fifth largest egg producer with 150 million laying hens, about 60% of which are in battery cages. These wire cages are so small that the hens cannot flap their wings, so barren they have no nest for their eggs, and so restricting that the birds' bones often become so brittle they can snap like dry twigs.

Broiler chickens

Each year, about 40,000 million broiler chickens are reared worldwide (3). Over 650 million are slaughtered in India each year. Reared for meat, broilers are usually crammed together, many thousands of birds in each barren shed. They are not caged, but kept at such high stocking densities that the birds quickly carpet the floor of the shed. Broiler chickens grow at super-fast rates, so fast that their bones, heart and lungs often cannot keep pace. Broiler chickens under six weeks old suffer painful crippling due to fast growth rates, whilst one in a hundred of these very young birds dies of heart failure (1).

Recommendations for preventing cruelty to work and production animals in developing countries

To address the problems of animal welfare in developing countries, it would be inappropriate to adopt international standards implemented in developed countries. Each developing country should evolve its own standards based on their own individual priorities. In general, the following recommendations would be helpful to most developing countries and their implementation will be easier and more practicable than those designed for developed countries.

Working animals

By improving carts and implements (ploughs, etc.), the effort required of the animals will be reduced and their work capacity for ploughing and carting doubled. Injury will be reduced if not eliminated altogether. There will be no need for whipping and beating, since well-fed animals, attached to improved implements and carts, can haul effortlessly.

Production animals

There are many ways in which the welfare of production animals could be improved, as follows:

- transporting animals for long distances on foot to abattoirs should be banned by law and the concept of rural abattoirs should be established
- trucks and trains should be well designed and their capacity enlarged through the provision of two or three tiers, thus allowing individual animals more space
- feeding and watering arrangements during transport should be made compulsory, and surveillance arranged to ensure compliance
- appropriate loading, unloading and handling facilities should be introduced to reduce damage and suffering
- specific laws to protect the welfare of broiler chickens should be introduced

- guidelines should be set for maximum stocking density for broiler chickens
- battery farming should be reduced and more free-range systems should be implemented
- legislation to safeguard the welfare of animals should be introduced and old legislation amended.

In India, the Animal Welfare Board of India, under the Ministry of Environment and Forests, plays a very important role in monitoring the role of non-governmental organisations (NGOs) involved in animal welfare; assisting them both technically and financially and functioning as a watchdog for all animal abuse. During the last few years, it has been responsible for strictly enforcing a ban on cow slaughter and introducing alternatives to experimentation of animals, etc.

Welfare of companion animals

The welfare of companion animals, particularly stray dogs, has been a subject of great concern in Asia. Stray dogs have been caught and killed in the most horrific way for more than 100 years. The city municipal corporations which were responsible for controlling the stray dog population were not equipped to handle this in a scientific way. To overcome this, some of the NGOs in developing countries such as India have started animal birth control (ABC) programmes as an alternative to killing stray dogs. This programme has been successful in most of the countries which have adopted it (in India, for example, where the Blue Cross runs an effective ABC programme) (4). Moreover, this type of programme combined with anti-rabies vaccinations has considerably reduced the number of rabies deaths in countries such as India, Sri Lanka and Nepal.

Welfare of wild and captive animals including animals used in entertainment

Animal welfare and wildlife conservation are two distinct areas of animal protection. While conservation is all about population, welfare is about the individual. Therefore, the human protection of wildlife should encompass both preservation of the species and their natural habitats while also ensuring the welfare of the individual animals. There are many instances where this combination of care is needed to ensure that animals are both protected and treated humanely. Examples include harvesting of wildlife (whaling and trapping of fur animals), killing for entertainment (hunting of elephants, bears, deer, etc.), exploitation (circuses, zoos and bear farms) and culling (seals and kangaroos) (2).

Although some of these issues are mainly a concern for developed countries, developing countries also have their share of welfare problems in these areas. For example,

marine turtles are caught in their thousands in India and transported to markets in the most inhumane conditions in which their bodies are sliced up for meat while they are alive.

Bear farming has been very common in the People's Republic of China and Japan where bears are farmed for their bile (used in traditional medicine). For example, in Japan alone there are nine Bear Parks holding over 1,000 bears in total. These parks also serve as a source of entertainment for the public. In the People's Republic of China, more than 7,000 bears are kept in small cages for over 10 years. Dancing bears are still found in India and Pakistan where the bear cubs are caught from the wild (the mother bear is usually killed in the process). The cubs are inhumanly treated to train them to 'dance' on their hind legs. The bears are forced to do what the owner wishes because of the intense pain inflicted upon the animals by the use of a chain or rope drilled through its sensitive muzzle (15, 16).

In many developing countries elephants play an important role as work animals and on religious occasions. Most of the elephants are kept under semi-starved conditions, working long hours and doing heavy work such as lifting logs, etc. Due to deforestation the natural habitat of elephants has been eroded and the wild elephants in Asia are living under starvation conditions and at great peril of being hunted and killed when they encroach on farms in search of food.

The estimated elephant population in Sri Lanka is about 3,000, but for various reasons the natural habitat of the elephant is gradually decreasing. The Government established an 'Elephant Orphanage' in 1975 in which the environment is very similar to their natural habitat and animals are always kept under strict veterinary care. Twenty-two calvings have taken place since 1975 and the total number of elephants in the orphanage has increased to nearly 70 at present (5).

Camels are used for transport in India and their welfare is often sub-standard. Once their capacity to work is finished they are abandoned or sent for slaughter, often being forced to trek long distances from their natural habitat.

Animals in circuses and zoos are also kept under inhumane conditions. In India, legislation has been introduced to ban animals in circuses, but even once the animals are rescued they do not find proper care and live in overcrowded and most unfavourable conditions, as the agencies which rescue them do not have enough resources to rehabilitate them.

Welfare of animals used in experiments

Most developing countries have introduced laws where animals used in experimentation and research have to be

cared for properly and experiments done under strict supervision to avoid unnecessary pain and suffering to these animals. Alternatives to animals such as computer models have been introduced to avoid unnecessary use of animals in experiments and research.

Oceania

This section is based on information obtained from the Oceania countries (Fiji, Vanuatu, the Commonwealth of the Northern Mariana Islands [CNMI], Tonga, French Polynesia and Wallis and Fortuna) that responded to the authors' request for information.

In Oceanic countries the regulation of animal welfare is in its infancy, if it is considered at all. Other more basic issues such as human health and the economy have a greater priority at this stage, and there are few resources, including the basics, such as veterinarians and funding, to manage animal welfare issues. There is still a great deal of work that needs to be done in this area.

One of the main reasons for the limited progress is the status of the Veterinary Services. In Tonga, for example, there is currently no qualified government veterinarian, and there are rarely any veterinarians practising in the country. There have never been any private veterinarians in Tonga, on the rare occasions when there has been a veterinarian on the islands they have worked for the government. Similarly, Wallace and Futuna do not have any veterinarians at the moment, nor do they have any animal welfare policies in place.

While some Oceanic countries have legislation which refers to animals to some degree it is frequently out of date and may no longer be appropriate or there are no resources to monitor or enforce it. The absence of veterinarians in some of these countries means that animal related policies, if in existence, require review and may no longer be relevant. For instance, the Tongan Animal Diseases Act of 1978 was reviewed in 1994, but recent changes in quarantine activities and biosecurity issues in Tonga mean that parts of these documents will probably already be out of date. There is also an issue with enforcement, for example, the Tongan Pounds and Animal Act of 1918 makes it illegal for anyone to keep free-range pigs, goats, horses or cattle, yet, many of these animals still roam in public places. Also under this Act, police officers are permitted to kill any pigs found on road sides or public places. The Dogs Act of 1930 gives any livestock owner the right to kill any dog wandering on his/her land. These Acts need to be reviewed to determine whether they are still effective and whether they are being enforced.

The history of Oceanic countries and the resulting justice systems that are in place are also influencing factors in the

management of animal welfare. For example, in French Polynesia the central French government is responsible for animal welfare issues. Similarly, the CNMI is a territory of the United States of America (USA), so any law, policy or regulation introduced by the USA Congress or by any of its agencies or departments is applicable in the CNMI.

Awareness and attitudes of the people is another major issue. In most of the Oceanic countries surveyed there appears to be a lack of awareness among the general population about animal welfare issues. Their diverse attitudes and societal expectations regarding animal welfare vary from that of communities in Australia and New Zealand and this affects policy development and implementation.

Vanuatu

Awareness of animal welfare and perceptions in regard to the importance of animal welfare vary widely within Vanuatu. There appears to be a growing concern amongst the general population, particularly in urban areas, that animals should be cared for humanely. However, in rural areas, it is still not uncommon to see cases of neglect of pigs and companion animals, mainly due to inadequate nutrition, lack of control of parasitism, or inappropriate methods of restraint. Some traditional customary practices in regard to the slaughter of pigs, and the production of pig tusks for jewellery, also represent possible welfare issues.

There is legislation in place defining expected welfare standards and measures available for enforcement. The Prevention of Cruelty to Animals Act (1988) defines:

- offences in regard to cruelty
- ill treatment of animals
- expected standards in regard to humane slaughter
- expected standards in regard to humane transport of animals
- expected treatment of sick animals
- various investigation and enforcement procedures
- exemptions for some customary practices.

Vanuatu has three government veterinarians and one private practitioner. This means that in many areas access to veterinary care is available for those animals requiring it. Government veterinarians are responsible for enforcing welfare legislation, and these veterinarians also monitor humane slaughter and transport practices at export and domestic slaughterhouses.

Vanuatu has a significant cattle farming industry and education programmes have been conducted in regard to

best practices for castration and dehorning. The extensive pasture-based farming systems and excellent health status of the animals mean that cases of cattle neglect are not commonly seen.

For reasons that are not clear, the companion animal population in urban areas of Vanuatu does not appear to suffer from the neglect seen in some other Pacific countries. The vast majority of dogs and cats within the urban areas are in good health and have owners.

Future changes in attitudes to animal welfare in Vanuatu will come in several ways:

a) Amongst farmers, government programmes will continue to raise awareness of the need for humane treatment and transport. This will also increase as Vanuatu begins to export beef to countries with consumer groups that are sensitive to welfare issues. This has already been seen with the establishment of several organically certified farms for export of beef to Australia.

b) Amongst the urban community, increasing exposure to overseas media and the expectations of tourists will continue to influence public perceptions of welfare.

Fiji

Animal welfare has long been an issue in Fiji, with legislation addressing areas such as cruelty to animals, animal experimentation, humane slaughtering of farm animals, stray dogs and uncontrolled livestock. However, such legislation was enacted during colonial rule and urgently needs updating to address current issues in animal welfare.

In addition to updating and enacting relevant legislation, there needs to be a massive and widespread publicity campaign to educate the general public on animal welfare. Cultural and religious practices and traditional values often are the main culprits in perpetuating practices that should have been abolished long ago. Classic examples of this are the cultural slaughtering of cattle and pigs, where no regard is given to numerous animal welfare concerns. Such disregard is almost always entirely due to ignorance and/or financial constraints.

While in principle supporting animal welfare, very few government policies actively promote animal welfare, since resources are limited and other priorities addressing 'human welfare' such as poverty alleviation and rural development always take precedence. Animal welfare has therefore been left to concerned individuals, and local, regional and international organisations such as the Fiji Veterinary Association, the Fiji Society for the Prevention of Cruelty to Animals (SPCA), City and Town Councils, the Secretariat of the Pacific Community (SPC), the

Commonwealth Veterinary Association and the International League for the Protection of Horses (ILPH).

The SPCA intermittently carries out educational campaigns in local primary schools which have proved to be quite effective. However, they are constrained by limited resources and a limited reach (to schools in the Suva area only). The SPC has a number of publications aimed at primary age students which are also proving popular. The ILPH, in conjunction with Fiji's Ministry of Agriculture, provides technical advice on proper horse management and while not all of Fiji can be covered, the results of their efforts can be seen in the areas that they have been active in.

While Fiji enjoys the greatest number of veterinarians of all the Pacific Island countries there are still not enough to have a major impact on animal welfare. Veterinary care is greatly needed both for companion animals and livestock, but a combination of a shortage of veterinarians and reluctance on the part of the public to pay what veterinarians would like to charge for their services results in needless animal suffering and increased mortalities.

Apart from a lack of awareness of animal welfare the Fiji public is price conscious: it is estimated that 25% of the population live below the poverty line and another 25% at the poverty line. This in theory leaves only 50% of the population able to afford veterinary care. However there is a general lack of appreciation particularly in financial terms, of veterinarians, to the detriment of animal welfare.

Efforts are underway through numerous meetings and workshops to have a concerted approach to animal welfare not only in Fiji but covering other South Pacific Island nations. Veterinarians and livestock personnel are playing a major role in this and it is hoped that funding will be available this year to begin work on this project.

Tonga

The lack of human and financial resources is the biggest barrier to developing and monitoring policies in Tonga. Due to the shortage of veterinarians, animal welfare and related policies require review and some policies in place may no longer be appropriate. Policy formulation itself is a challenge and especially in an area where there is an absence of experts. In addition, there is a lack of public awareness and understanding of animal welfare issues.

Although there is a large number of people that care about their animals, both farm and pet, the connection between animal health and animal welfare still needs to be addressed. Government veterinarians working in Tonga do observe evidence of animal abuse and mistreatment of animals such as pigs and dogs and these problems and their challenges are likely to continue unless the shortage of veterinarians is addressed.

Promotion of, and compliance with, any future animal welfare legislation would potentially not be a problem as there are lots of Tongans who do care about animals. There is also a variety of ways to promote policies, such as local papers, radio, television and village meetings. Again, the major problem is the lack of resources. The public have already shown their concern about the number of stray dogs in public places and a dog population (spay/neutering) control programme has been implemented to counter this problem.

The need for consultation and ongoing communication is crucial. Initially there needs to be a survey on the issue of animal welfare to find out about the current situation. Monitoring international development is important in increasing public awareness and knowing what is going on around the world. This will strengthen networking and the sharing of information.

French Polynesia

Animal welfare has been a growing concern for the Government of French Polynesia over the last decade. This gradual change has been the result of two major influencing factors: the increasing awareness of animal welfare among the islands' population (largely due to the action of animal protection associations and veterinarians), and the increasing pressure coming from the tourists who visit and remark on the number and condition of stray dogs. As tourism is the first source of income for the country and the government is striving to develop this activity, animal welfare is gaining attention. At this stage almost all the attention is on stray animals (mainly dogs and to a lesser extent cats); there is minimal concern for farm animals.

The local government of French Polynesia has the full capacity for policy making regarding animal welfare. However, the French Polynesian justice system is under the jurisdiction of the central French government through the Procureur de la République (Public Attorney) who alone can pronounce penalties for breaking laws. The mistreatment of animals is punishable by the law under the 'Code Pénal' (criminal code) which is applicable in French Polynesia. The French Polynesian administration is not, however, involved in its enforcement.

In addition, the 'Code des Communes' (city code) states that the mayor of each town is responsible for establishing and implementing urban animal control policy. In this respect the mayor can be involved in animal welfare issues. The mayors are responsible directly to the representative of the French Government: the Haut-Commissaire.

In 2001, the local government passed a regulation, *Délibération n° 2001-16 APF du 1^{er} février 2001*, which is a

general framework that sets the basis for animal protection in French Polynesia. The necessary acts for the application of this text are, however, still to be agreed upon.

Beyond the complexity of the jurisdictional system, the real issue is one of taking the responsibility for dealing with a problem that will cost money and could raise discontent within the local population. The French Polynesians have strong views regarding the welfare of animals: although the animals are plagued by parasites and left to themselves to roam the streets, they are fed by the population and perceived as belonging to the area. However, it is perceived as unnatural and shocking to lock them in or desex them, and therefore, people who collect injured animals to heal them have met with resistance among the population.

New policies must be formulated to tackle the issue of animal welfare, but the first step in encouraging compliance with such policies and ensuring a real improvement in animal conditions is to increase public awareness through educational media campaigns that promote birth control and health care for animals.

As the population is becoming increasingly urbanised the problem of stray dogs is becoming an increasingly sensitive issue and attitudes to animal welfare are slowly beginning to change. However, encouraging the public to comply with animal welfare policies will be a long process, and success will be directly dependent on the money invested in communication and the determination of the various stakeholders, including government authorities, the public, animal health professionals and animal welfare associations.

Commonwealth of the Northern Mariana Islands

The CNMI is generally subject to the federal laws of the USA. There is no policy formulation regarding animal welfare in the CNMI. The Saipan Island Mayor's Office has for six years or more been trying to establish a dog pound or an animal holding facility for stray or loose pets. Although they continue to work on this issue, success has so far eluded them due to the lack of funding. The biggest issue is that Saipan has many stray dogs, even in the vicinity of big, resort hotels, some of which bite people, especially tourists. The CNMI are very fortunate that they do not have rabies to compound the problem. These dogs are usually mangy, hungry and emaciated, although most are friendly. They are fed by concerned tourists and they pick up a lot of left-over food from local picnickers.

The Government Veterinary Office is ready to assist and actively play a role in improving the welfare of local animals. It supports the Mayor's Office in its determination to build an animal pound and to enforce its animal control

(leash) law and licensing requirements. In the future, the Government Veterinary Office could assist by providing vaccination, worming and other health care services for impounded animals, especially treating mangy dogs and rehabilitating sick ones. It could also provide a euthanasia service for old, very sick or debilitated and unwanted animals. Success in this endeavour will, however, depend on how much funding can be obtained. There is no question that there is a great opportunity for improving the welfare of animals in the CNMI.

The CNMI Government just recently reopened its small animal veterinary clinic, even though a privately owned and operated clinic already exists. The aim is to address the needs of pet owners who cannot afford to pay for the services of the private veterinarian as it is often beyond the financial means of the average pet owner. However, the services provided are very limited, and only include services such as worming, vaccination and minor treatments for mange, ringworm, and coral allergy. All these basic health care services are being provided to improve animal welfare.

Although steps are being taken to improve animal welfare in the CNMI there are still issues of concern, e.g. cockfighting. Cockfights are a traditional source of entertainment and fun for the locals and a legal means of gambling. Quite a few people depend on cockfighting for their livelihood by raising and selling the fighting cocks. The government makes a little bit of money out of it in the form of taxes and licensing fees. Beer, drink and food concessionaires also make good money from cockfighting and this money is freely circulated on the islands. Although it is inhumane it has been tolerated since the Spanish occupation of the islands in the 1500s.

As mentioned above, the CNMI is a territory of the USA and hence its laws are applicable to the CNMI. Recently, the 'Farm Bill' was passed by Congress and enacted into law. This new law prohibits the importation into the USA, or any of its territories, of poultry (chickens) for the purpose of fighting. Poultry must be imported in 'pairs' (one female for every male), although this part may not be applicable in a state or territory where cockfighting is still legal under local legislation. The new 'Farm Bill' obviously disadvantages the cockfighters in the CNMI, although they are still allowed to breed cocks for use in fighting.

Other than the 'Farm Bill', no new policies are being pursued or promoted in the CNMI. The Saipan Mayor's Office is still, however, actively pursuing the construction or establishment of a dog pound, the enforcement of the local leash law to control stray dogs and other animals and the introduction of a license fee for animal owners. Depending on how much the licensing fee is going to be, this new requirement may affect many of the animal lovers and owners on the island. Some may be forced to stop

owning pets, unless the license fee can be tailored to meet the needs of certain pet owners, e.g. a sizeable discount for the elderly or physically impaired. Monitoring compliance of the 'Farm Bill' is proving to be somewhat difficult at this early stage due to lack of inspectors and enforcement personnel or compliance officers. This will soon change, however, as locals develop an understanding of the importance of animal welfare. Herein lies the need for consultation and public awareness, education, and outreach campaigns. Communication with stakeholders, on a continuing basis, should vastly improve the island situation as regards its opinion and beliefs concerning animal welfare.

Wallis and Futuna

There is currently no veterinarian on the Wallis and Futuna Islands but there are regulations that have been developed for animal welfare.

New Zealand

Animals are very much part of the way of life in New Zealand. It is primarily an agricultural nation, heavily dependent on the exports of animals and animal products, with over 60% of its earnings derived from the agricultural sector. By far the biggest number of animals are broiler chickens (67 million) followed by over 45 million sheep. Other farmed species include 9 million dairy and beef cattle, 3 million layer hens, 1.6 million deer and 0.4 million pigs. In addition to animals used in agriculture, animals are also used in entertainment in horse racing and other equine sports, rodeos, circuses and zoos and in a working context as cattle and sheep dogs, guide dogs, police dogs and biosecurity dogs. New Zealanders are also keen pet owners and the domestic cat per human population is one of the highest in the world, with 48.6% of households owning one or more cats. Animals are also used under strict guidelines in research, testing and teaching.

Animal welfare policies and practices in New Zealand have historically been underpinned by progressive animal protection legislation. New Zealand has had legislation covering the care of animals since the 19th Century. Changes to legislation have generally been incremental rather than revolutionary and this approach has been instrumental in the development of current animal welfare policies and practices in New Zealand.

Legislation

The welfare of animals in New Zealand is primarily regulated by the Animal Welfare Act 1999 (the Act). The Act covers all vertebrates and includes all mammals, birds,

reptiles, amphibians and fish with a bony or cartilaginous skeleton. Some invertebrates, e.g. particular species of crustaceans, are also included. The Act also applies to animals used in science – for research, testing or teaching.

The name of the Act reflects a change in focus from previous legislation, which was designed to simply protect animals from acts of cruelty and mistreatment. Although neglect, ill treatment and cruelty are still prohibited and punishable under the Act it also requires that owners of animals or those caring or responsible for animals have a 'duty of care', whereby they must meet the physical, health and behavioural needs of animals. Those needs are further defined by the internationally recognised 'five freedoms' (6) i.e.:

- freedom from thirst, hunger and malnutrition – by ready access to fresh water and a diet to maintain full health and vigour
- freedom from discomfort – by providing a suitable environment including shelter and a comfortable resting area
- freedom from pain, injury and disease – by prevention or rapid diagnosis and treatment
- freedom to express normal behaviour – by providing sufficient space, proper facilities and company of the animals own kind
- freedom from fear and distress – by ensuring conditions that avoid mental suffering.

Additional obligations include a requirement to alleviate pain and distress, and to kill animals in a humane manner. However, although these outcomes are set by legislation, the ways in which they are met is a matter for individual animal care-givers or owners to decide. This outcomes orientation is a strong feature of New Zealand's animal welfare policy. It focuses on what is important – the welfare status of the animal – and thereby allows flexibility and innovation in how an acceptable welfare state is achieved.

The Act does not expand on the obligations that are required of an owner or care-giver, for example, it does not detail what constitutes an appropriate amount of food and water for a particular species. Detailed standards of care are found in codes of welfare.

Codes of welfare

Codes of welfare have a significant role in reflecting, managing and changing animal welfare policies and practices in New Zealand. Codes of welfare are used to promote appropriate behaviour, establish minimum standards and encourage best practice. Codes of welfare have a legal status and failure to comply with a minimum

standard can be used to support a prosecution under the Act, but conversely compliance with a minimum standard can be used as a defence under the Act. The use of codes allows for a greater flexibility and responsiveness to changes in technology, scientific knowledge and society's expectations. The ability to more rapidly respond to changes was one of the primary objectives of this legislation.

Minimum standards must take into account scientific knowledge, good practice and available technology. In changing standards, cognizance must be taken of cultural and religious beliefs, the economic costs, and the feasibility and practicality of effecting a particular change.

Codes can be developed for individual species, e.g. broiler hens and pigs; for specific activities, e.g. on-farm practices; for entertainment, e.g. circuses and zoos; or for generic activities, e.g. transportation and slaughter.

Codes of welfare may be drafted by any person or organisation. Drafting by industry groups or representative groups of particular species, e.g. the Companion Animal Council, is encouraged as this ensures that codes are practical and reflect current practices but also assists with ongoing stakeholder 'ownership' and compliance by those affected by a code. Once drafted, codes are subjected to a rigorous process which is the responsibility of the National Animal Welfare Advisory Committee (NAWAC). Draft codes are subjected to two rounds of public consultation, thus ensuring that the views of stakeholders, animal owners and the wider community are taken into account.

Leadership and participation in animal welfare change in New Zealand

Primary responsibility for animal welfare in New Zealand rests with one government minister, the Minister of Agriculture, who is advised by two independent national committees, which are established by the Animal Welfare Act, and with one ministry, the Ministry of Agriculture and Forestry (MAF). The two independent committees are the NAWAC and the National Animal Ethics Advisory Committee (NAEAC).

The NAEAC deals with the scientific use of animals (i.e. research, testing and teaching) while the NAWAC deals with welfare-related matters relevant to all other animal uses.

The NAWAC membership consists of individuals with expertise in animal welfare advocacy; animal science, agricultural and veterinary science; companion animals; the commercial use of animals; ethics; and environmental and conservation management; it also includes a representative of the public interest. The committee was modelled on a similar advisory body in the United Kingdom (UK), the Farm Animal Welfare Council.

Between 1989 and 1999, the NAWC led the development of 21 codes of recommendations and minimum standards for the welfare of animals. Although these codes were voluntary, they were widely adopted and due to their successful use, codes of welfare were subsequently accorded legal status by the Animal Welfare Act. Wide consultation during the formulation of codes is considered to be a major factor in securing stakeholder cooperation in implementing them. Furthermore, the ten-year period during which the previous voluntary codes were developed and used successfully is also considered to have greatly facilitated acceptance by stakeholders and others of the legally binding minimum standards in the codes of welfare mandated under the Animal Welfare Act.

The role of the NAEAC is to oversee all matters relating to the use of animals in science (research, testing and teaching) and to provide advice to the Minister of Agriculture on ethical and welfare issues relating to the use of animals in science. The NAEAC membership consists of individuals with expertise in animal welfare advocacy; veterinary, biological and medical science; education; ethics; research; environmental and conservation management; and the commercial use of animals in research, testing and teaching.

In addition to these two committees, MAF plays a vital role in relation to animal welfare and is committed to promoting compliance with New Zealand standards and to identifying more effective and efficient ways for Government to reach its targets in this strategically important area. MAF's mission statement is:

- to support society's expectations for the welfare and humane treatment of animals
- to support the development of animal welfare standards, within New Zealand agriculture, which will contribute to market success and optimum positioning for New Zealand products and animals.

A dedicated group within MAF, the Animal Welfare Group, carries out MAF's specific animal welfare responsibilities. It plays a pivotal role in the administration and enforcement of the Animal Welfare Act.

The Ministry maintains important international links through its participation in the trans-Tasman Animal Welfare Working Group (AWWG), regular contact with animal welfare agencies in a number of other countries (including the UK, Canada and the USA), an active involvement in the World Organisation for Animal Health (OIE) and membership of the OIE AWWG and associated *ad hoc* groups.

Within the legislative framework administered by MAF, there is a highly cohesive structure for the promotion of animal welfare policy and practice, with industry research and

professional and voluntary organisations providing input into areas such as education and training, technical standards research, and the development of quality systems. In addition to the legislated bodies there are a number of other non-legislated groups which are concerned with the welfare of animals. Such groups include the Animal Behaviour and Welfare Consultative Committee (ABWCC), the Animals in Schools Education Trust (AASET) and the Australian and New Zealand Council for the Care of Animals in Research and Teaching (ANZCCART).

The ABWCC, established in 1997, is a forum for the exchange of information about animal welfare between New Zealand animal industry groups, government departments, researchers, the veterinary profession and public animal welfare organisations. Its role is to provide a forum to identify significant animal welfare issues, identify areas of research, promote a scientific approach to animal welfare matters, provide a forum for interaction between members and promote the dissemination and transfer of the results of animal welfare research to scientific, industry and public groups.

The AASET is a charitable trust established in 1995 by the New Zealand Veterinary Association. Its mission is to ensure that school children understand the obligation to have concern for the welfare of animals and to ensure that children obtain a balanced view of people's relationships with animals. The trust recognises that attitudes towards animals are formed early in life.

The objective of ANZCCART is to provide leadership in developing community consensus on ethical, social and scientific issues relating to the use of animals in research, testing and teaching. It has hosted conferences and workshops on a wide range of issues. New Zealand has been a member of the Council since 1993.

Use of animals in science (research, testing and teaching)

The New Zealand public support animal-based science, but only when strict and clearly defined conditions are met. Regulatory controls for the use of animals were initially put in place in 1984 and were subsequently incorporated into the Act as a legal framework for the conduct of animal-based science in New Zealand. In fact, there is a specific section in the Act which deals solely with the use of animals in science.

Each person or institution carrying out manipulations on animals must have a Code of Ethical Conduct, reviewed by the NAEAC and approved by the Director-General of MAF. The Code of Ethical Conduct defines the practical obligations on the individual or organisation when engaging in manipulations.

All projects involving manipulations on animals must be first approved by an Animal Ethics Committee (AEC), the composition of which is defined in the Act. An AEC must have three independent members (a veterinarian, a member of a recognised animal welfare organisation and lay person). The committees must take into account a number of factors when reviewing an application to carry out animal research, such as the degree of suffering, pain relief, number of animals being used, the likelihood of success, alternative techniques, etc. The Act requires that all those involved in using animals must be cognisant of the 'Three Rs' principle – reduction, refinement and replacement. There is a legal requirement to submit an annual report of the numbers and species of animals being used and the degree of suffering experienced.

The Act places specific restrictions on the use of non-human hominids (gorillas, chimpanzees, bonobos and orangutans) in research, ensuring any use is tightly controlled. Any use must be in the best interests of the individual animal or its species, and the benefits must outweigh any likely harm. Only the Director-General of MAF may approve their use.

New Zealand's animal welfare science and research capability

The 1990s saw a marked increase in New Zealand's specific animal welfare capability. In 1991 the first animal welfare research group was set up as a tripartite arrangement between AgResearch, the Meat Industry Research Institute of New Zealand (MIRINZ) and the University of Waikato. In the same year, an animal welfare science research group was established at Massey University, with a Chair in Animal Welfare Science following in 1994. In 1998 Massey University established the Animal Welfare Science and Bioethics Centre. Throughout the same period, animal welfare research was also undertaken by a MIRINZ group which is funded by the meat industry. Welfare research is also carried out by other AgResearch centres and the environmental research organisation Landcare. Research has been and is being undertaken in a wide range of areas, including transportation, slaughter, poultry welfare, livestock welfare, and feral pest control.

The development of these research centres was paralleled by a concomitant increase in funding for animal welfare research from both central government and industry. Funding from other countries, such as the UK, is also supporting New Zealand-based research projects.

These and other developments have provided New Zealand with wide-ranging expertise in animal welfare science and the capacity for linked bioethical analysis. This strength is essential for reviewing and establishing credible animal welfare standards nationally, for providing

authoritative critiques of standards operating in other countries, and for maintaining the respect currently accorded to New Zealand standards. Both the NAWAC and the NAEAC regularly draw on this expertise.

Role of the veterinary profession

From the mid 1990s, in recognition of the close relationship between animal health and welfare, the veterinary profession in New Zealand strongly supported specific animal welfare initiatives. This built on the profession's comprehensive contributions over many decades through its focus on promoting animal health. Veterinarians contribute in numerous ways:

- through membership of the NAWAC and the NAEAC
- as independent members of all AECs
- as a source of animal welfare advice for animal owners and care-givers
- by providing expert advice on animal welfare investigations and prosecutions
- by helping to maintain New Zealand's 'disease-free' status through major roles in biosecurity and disease surveillance
- by supervising the humane handling and slaughter of livestock in all commercial slaughter plants
- as MAF staff members with specific responsibility for promoting animal health and welfare and as members of code-writing groups.

Compliance and enforcement

The MAF has dedicated animal welfare inspectors spread throughout New Zealand. In addition to MAF inspectors, police officers are also inspectors under the Animal Welfare Act. The Act also allows the Minister of Agriculture to appoint approved organisations to enforce the legislation and destroy, sell or rehouse animals which are given into their care. The Royal New Zealand Society for the Protection of Animals (RNZSPCA) has had the ability to enforce animal protection legislation since 1884 and this status has continued with the Animal Welfare Act. The RNZSPCA derives its own funding through grants, donations and bequests. Central government provides financial assistance for the training of inspectors and in some circumstances assistance is provided in prosecutions.

Australia

Animals play an important role in Australian daily life as a source of food, fibre and other products, and animal industries will continue to play key roles in maintaining Australia's economic well-being in the 21st Century.

Australia, therefore, sees that it is essential that it has contemporary and comprehensive animal welfare legislation. The Australian approach to animal welfare requires that animals under human care or influence are healthy, properly fed and comfortable and that efforts are made to improve their well-being and living conditions. In addition, there is a responsibility to ensure that animals which require veterinary treatment receive it and that if animals are to be destroyed, it is undertaken humanely. The Australian Government always takes steps to involve appropriate stakeholders in the development of animal welfare policy from the outset, and this approach was used in the development of the Australian Animal Welfare Strategy (AAWS), which was endorsed by the Primary Industries Ministerial Council in 2004.

Australian Animal Welfare Strategy

The AAWS (Fig. 1) was developed in 2004 to provide direction for the development of future policies and the revision of existing approaches to animal welfare (details are available online at <http://www.daff.gov.au/animalwelfare>). It embraces a broad vision for the humane treatment of all sentient species of animals, i.e. species that have the capacity to have feelings and to experience suffering and pleasure (sentience implies a level of conscious awareness). It provides a framework for

sustainable improvements in animal welfare outcomes and recognises the intimate connection that exists between animal welfare and animal health and production. This framework will help to clarify roles and responsibilities, enable governments and stakeholders to engage in setting standards and priorities and to set strategic goals.

The AAWS facilitates a national consultative approach to animal welfare that welcomes involvement of broad community, industry and government interests, with the hope that it will obtain community support for the implementation of approved standards. It aims to achieve a balance between education, extension and regulation and provide for greater harmony and consistency across jurisdictions.

Animal welfare legislation and codes of practice

As recognised in the AAWS, Australia has a strong framework in which to establish, implement and enforce acceptable animal welfare standards at national, state, territory and local levels. It uses a science-based approach and overlays this information with social, ethical, cultural, economic and environmental considerations. National codes of practice and auditable industry quality-assurance programmes are also in place and provide a sound basis for

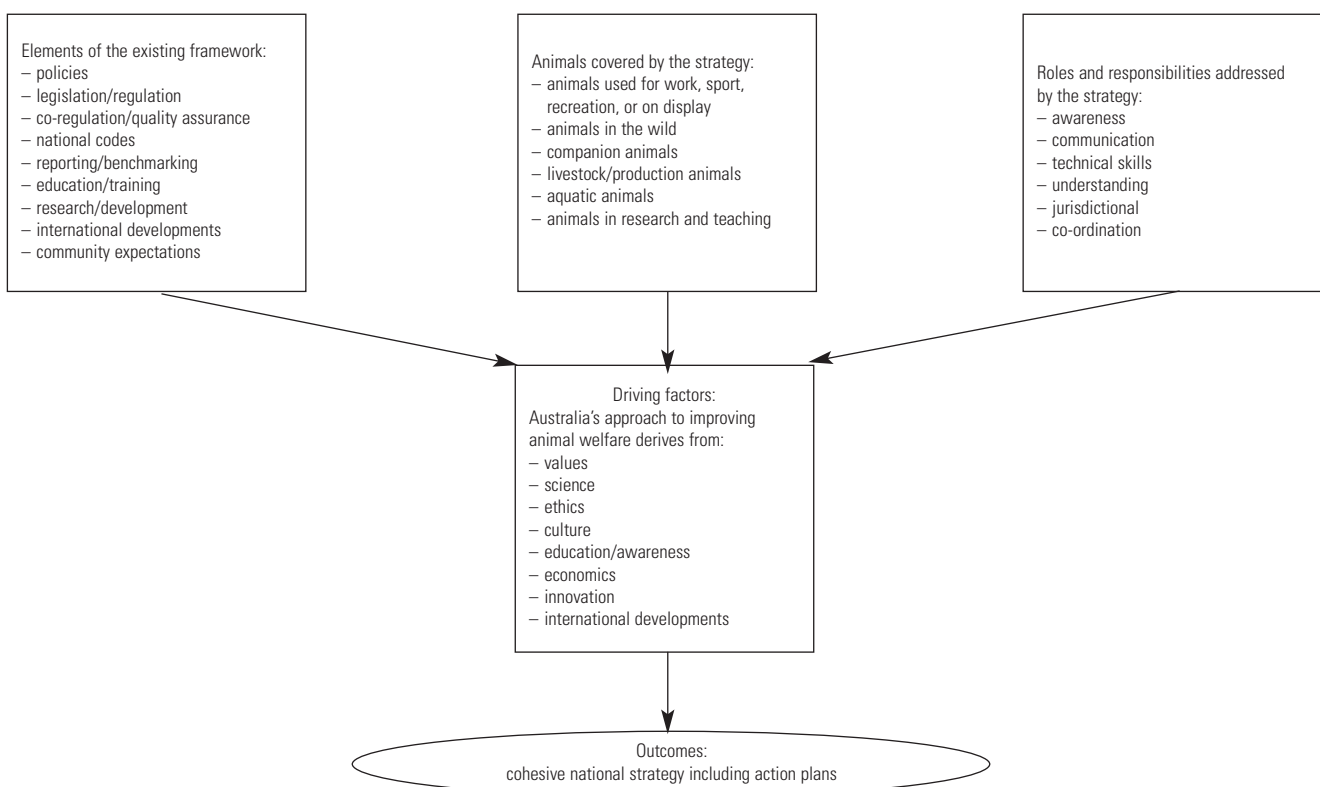


Fig. 1

The Australian Animal Welfare Strategy – an overarching national strategic framework

the humane and responsible use and treatment of animals. Australia's membership and active involvement in the OIE, e.g. its membership on the animal welfare *ad hoc* groups, enable it to keep abreast of international developments.

Under the Australian Constitution, State and Territory Governments are responsible for the way animals are cared for and the way in which they are produced. The State/Territory Governments set and enforce animal welfare standards through laws on the prevention of cruelty to animals. Most of the States/Territories also have Animal Welfare Advisory Committees (AWACs) to provide advice to their respective Ministers on animal welfare issues and recommend amendments to animal welfare legislation. Members of the AWACs, all of whom are representatives of appropriate animal welfare stakeholders, are appointed by the Minister.

All States/Territories conform to the Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (the Code) by incorporating it into legislation. 'The purpose of the Code is to ensure the ethical and humane care and use of animals used for scientific purposes' (7). The Code has been developed to provide guidance to investigators, teachers, institutions, AECs and all those involved in the husbandry and use of vertebrates and some of the higher order invertebrates used in research. Under the Code, AECs are required to determine whether the use of animals in individual research projects is justified ethically and that the three principles of replacement, reduction and refinement are adhered to.

In addition, Australian State and Territory Government representatives, in consultation with industry and welfare organisations, have developed codes of practice for different species (cattle, goats and sheep) and different modes of animal transport (rail, road, sea and air). These Model Codes of Practice are intended to ensure that livestock are treated in a humane and responsible manner. The development of these codes takes into account consumer and public concerns, scientific knowledge, available technology, the practicalities of implementation and the economic impacts of the proposals. Ministerial Committees are required to provide their endorsement before the Model Codes of Practice can be published. Although the Model Codes of Practice detail the minimum standards as well as Recommended Best Practices they are model codes only and each State/Territory modifies them to suit their respective legislation. The Model Codes are revised as there are advances in the understanding of animal physiology and behaviour and new technology relating to the husbandry of animals.

In addition to the AECs located at research and teaching institutions, and State/Territory and Australian Government AWACs there is also a national structure of ministerial committees for coordination of policy

development and implementation that considers animal welfare policy development issues (AAWS 2004).

The trans-Tasman AWWG works to facilitate the development and promotion of national animal welfare standards and the harmonisation of animal welfare standards as applied through legislation. The AWWG also identifies emerging animal welfare issues of strategic importance for research or policy development in consultation with industry and other stakeholders and advises and recommends policy to the Animal Health Committee on relevant issues relating to production animal welfare and on non-production animal welfare issues of national significance.

The National Consultative Committee on Animal Welfare (NCCAW) is a non-statutory body whose purpose is to provide advice to the Minister for Agriculture, Fisheries and Forestry on animal welfare issues, to advise on the effectiveness and appropriateness of national codes of practice, policies, guidelines and legislation to safeguard or further the welfare of animals and protect the national interest, and to liaise with other relevant bodies such as the Animal Health Committee and the AWWG. Membership of the NCCAW includes the Royal Society for the Prevention of Cruelty to Animals and Animals Australia, and representatives from industry and government (national, State and territory).

Case study

Following the Cormo Express incident, on 10 October 2003 the Minister for Agriculture Fisheries and Forestry announced a review of the livestock export industry in response to concerns about animal welfare. One of the recommendations from the review was the development of Australian standards for the export of livestock underpinned by legislation. The resulting Australian Standards for the Export of Livestock were developed using a broad consultative process. Consultation mechanisms were established to enable stakeholders to provide input and to garner ownership. These mechanisms included: establishment of a Livestock Export Standards Advisory Committee comprising representatives of key industry and government stakeholders; and convening six multi-disciplinary expert working groups, one for each key part of the export chain (on-farm/sourcing; land transport; pre-embarkation assembly premises; vessel preparation and loading; on-board management and air transport). In addition, the Standards were sent to key stakeholders and posted on the Department of Agriculture Fisheries and Forestry website with an associated questionnaire for 30 days public consultation. These Standards will form part of the new regulatory arrangements for the live export trade administered by the Australian Quarantine and Inspection Service. ■

Perspectives mondiales en matière de bien-être animal : Asie, Extrême-Orient et Océanie

S.A. Rahman, L. Walker & W. Ricketts

Résumé

En Asie et en Extrême-Orient, les animaux d'élevage sont exposés à de grandes souffrances dues à la malnutrition, à la surexploitation et aux mauvais traitements. À l'abattoir, les animaux sont manipulés brutalement et assistent à l'abattage de leurs congénères ; l'étourdissement n'est pas pratiqué. Les actions des organisations de protection des animaux ont en grande partie permis d'éviter la cruauté envers les autres animaux tels qu'éléphants, chevaux, ânes, ours, chiens et animaux de cirque. Les gouvernements ont pris des initiatives visant à créer des comités pour le bien-être animal et à promulguer des lois pour la prévention de la cruauté envers les animaux, mais leurs actions sont bien trop limitées pour avoir un impact quelconque. De plus, les contraintes financières et le manque de personnel empêchent l'application des lois existantes.

En Nouvelle-Zélande et en Australie, la législation et les procédures consultatives à l'échelon gouvernemental et local s'efforcent de réglementer et d'améliorer le bien-être animal à tous les niveaux, mais dans d'autres pays d'Océanie, la législation portant sur le bien-être animal doit être améliorée, voire créée. Les progrès réalisés ont été limités en raison du statut des Services vétérinaires et du manque de ressources. Bien que des programmes d'éducation et de vulgarisation soient entrepris, l'exposition accrue aux médias internationaux et l'attitude des touristes montrent qu'il est nécessaire de poursuivre l'action de sensibilisation.

Les problèmes liés au bien-être animal dans les pays en développement ne sauraient être réglés en adoptant les normes internationales qui sont appliquées dans les pays développés. Chaque pays en développement doit élaborer ses propres normes en fonction de ses priorités.

Mots-clés

Abattage – Animal de compagnie – Animal sauvage – Animal de trait – Bien-être animal – Législation – Profession vétérinaire – Sensibilisation du public.



Perspectivas mundiales en materia de bienestar animal: Asia, Lejano Oriente y Oceanía

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Resumen

En Asia y el Lejano Oriente, el ganado padece grandes sufrimientos a causa de la malnutrición, la sobrecarga y los malos tratos. En el matadero, el animal es tratado con brutalidad y asiste al sacrificio de sus congéneres. No se practica el aturdimiento. La labor de asociaciones de protección de los animales ha servido

para prevenir en gran medida los actos de crueldad contra otras especies como elefantes, caballos, asnos, osos, perros y animales de circo. Los gobiernos han dado pasos para crear consejos de bienestar animal y aprobar leyes que proscriban la crueldad con los animales, pero esa labor resulta insuficiente para arrojar resultados tangibles; por otro lado, la escasez de medios económicos y humanos dificulta la plena aplicación de las leyes existentes.

En Nueva Zelanda y Australia las disposiciones legislativas, combinadas con procedimientos eficaces de consulta de instancias oficiales y comunitarias, ayudan a reglamentar y mejorar el bienestar de los animales en todos los ámbitos, pero en otros países de Oceanía es preciso poner al día o simplemente elaborar legislación en la materia. Los progresos han sido exiguos debido a la situación de los Servicios Veterinarios y a la falta de recursos. Aunque se están aplicando programas de sensibilización pública y educativa, el creciente acceso a medios de comunicación internacionales y la actitud de los turistas llevan a pensar que ello no bastará, y que será precisa una labor más intensa de sensibilización.

A la hora de abordar los problemas de bienestar animal en los países en desarrollo sería impropio regirse por las normas internacionales que se aplican en países desarrollados. Convendría que cada país en desarrollo elaborara su propia normativa en función de las prioridades que tenga definidas.

Palabras clave

Animal de compañía – Animal salvaje – Animal de tiro – Bienestar animal – Legislación – Profesión veterinaria – Sacrificio – Sensibilización pública.



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