

Dysfunctional Zoos & What to Do

Sally Walker*

Introduction

This paper proposes the term “**dysfunctional zoos**” to describe a type of captive wild animal facility that does not function adequately (or at all) for even the most essential canons of zoos, e.g., education, conservation or research. While no one knows precisely the exact number of zoos, or if you will, captive wild animal facilities permitting public viewing, globally, an educated guesstimate might suggest that easily more than 50-75% of such facilities that are known could be defined or described as dysfunctional.

WAZA has adopted a very practical and positive approach to the diversity of zoos in the world by welcoming Regional and National Zoo Associations as WAZA Association Members under certain conditions. WAZA and its member zoos work with the associations in a way that serves long-range goals for the improvement of captive animal facilities that do not function as what is currently called zoos. WAZA accepted the need for action on behalf of institutions then described as **sub-standard zoos** but renamed by WAZA as **Zoos needing Improvement** for the sake of cultural sensitivity. The author suggests that even the best zoo in the world could use some improvement or other; just as no perfect human being exists on Earth, there is no perfect zoo, thus the term “zoos needing improvement” is embarrassingly inappropriate

In 2003, at the Annual WAZA Conference held in San Jose, Costa Rica, there were multiple concerns raised about substandard zoos. Two presentations were given on this topic, one, entitled **The Other Zoo World**¹ by this writer and colleagues calling attention to the proliferation of sub-standard zoos which probably far outnumbered the **professional** zoos. The paper also called for a sub-committee to be set up by WAZA that would formulate a plan for addressing the issue. A second paper on substandard zoo was presented and in addition, much discussion occurred on the state of the host zoo of the conference and what could be done generally. Subsequently, in early 2006 a Drafting Committee was convened by WAZA the members of which produced a Resolution on needy institutions that was adopted by the WAZA membership in the annual conference held in Leipzig, Germany. The resolution declared: we as a community of organized zoos and aquariums have a moral, ethical and professional

responsibility to engage with needy institutions in order to help them improve their standards, achieve conservation goals, and benefit the animals they hold.²

The following year, 2007, the Drafting Committee generated a WAZA **tool kit** for addressing the issue of needy zoos, or **zoos needing improvement**. The tool kit consisted of a set of minimum standards by which these zoos could be inspected and assessed for appropriate assistance, which could be undertaken by proficient zoos according to their interest and resources. The tool kit also included a complaint procedure for use by the regional and national associations or by member zoos. These tools were made available within the year and met with enthusiasm by the membership which officially approved them at the 62nd (2007) WAZA conference³. Since then some individual zoos as well as zoo associations have undertaken projects assisting zoos that needed help, sometimes in localities where the assisting zoo was also running a field project. Other zoos have provided various kinds of help to needy zoos via the regional or national associations such as AZA, EAZA, PAAZAB, SAZARC, EARAZA, etc. In fact, several years before, AZA and EAZA addressed the issue of substandard zoos in their country or region, assessed them and made attempts to assist, often in serious, protracted and expensive exercises.

In the long term, however, the totality of the enterprise has not been very effective in addressing and correcting the issue, primarily due to the sheer enormity of the problem, the speed at which zoos are increasing and the rate and scope of recidivism. There are hundreds, even thousands of dysfunctional zoos in the world, many yet to be documented. These zoos need very drastic improvements in the most elementary and fundamental aspects, such as animal welfare, which covers the entire range of care of captive animal. Many of these establishments are **spurious**, without long-range plans, sustainability, trained and interested staff, an/or other characteristics that define a healthy, functional zoo.

Terminology of bad zoos

Dysfunctional zoos is a more accurate descriptor for what have been referred to as **substandard, needing improvement** or **needy** zoos.

Although the latter terms are not

wrong as such, neither do they convey a realistic picture. Dysfunctional zoos might be defined succinctly as: **animal collections open to the public which don't function as conservation facilities, rather just the opposite**. One might even be so bold as to say that dysfunctional zoos not only do not function as conservation facilities, but as purveyors of decline and extinction.

This term is more appropriate also because it does not imply that such zoos are troubled with just a few poor enclosures or merely ignorant and untrained owners and staff. Dysfunctional implies ill health (physical and/or mental) or a variety of deep-seated and elemental problems that prevent the institution(s) from improving without fundamental changes, or all encompassing transformation, at the governance and ground level, including, but not limited to closure and re-distribution of the animals.

The major difference might be said to be that **good** zoos are busy with conservation actions . . . research, breeding, field projects, education, marketing, etc. and **dysfunctional** zoos are busy generating species decline!

How do zoos generate species decline, and even extinction! They do it through such bad habits as were summarized in the previously cited presentation, *The Other Zoo World* by Walker et al in 2003.

- Waste of wild animal resources both animal and financial.
- Over breeding and release of surplus animals without monitoring which promotes disease, fighting and injury, over-population, over-grazing, etc.
- Creating wrong attitudes in visiting public
- Projecting a bad image of zoos worldwide with poor animal welfare practices
- Acquiring animals from certain unscrupulous animal dealers, other dysfunctional zoos, and local trappers and traders (wild).

This list was expanded and published in 2007 in the WAZA Guidelines for Improving Standards in Zoos, 2007 and again several times since by the author in other published documents.

Managing Trustee/Director, ZOO/
SAZARC sallywalker@zooreach.org

Extinctions

Stating categorically that dysfunctional zoos cause extinctions may seem an extreme claim, however, the sheer number of non-organised zoos in the world reflects a gigantic number of wild animals in captivity without purpose or responsible management. It is not beyond reason to assume that certain species' numbers have been severely reduced by captures for zoos, deaths through mismanagement, etc. One zoo known by the author admitted to having caught six wild Pallas' Cats (*Felis manul*) in the last few years, not all together as a breeding effort but one at a time. When an individual died zoo authorities ordered another captured. Pallas' Cat is a relatively rare and highly delicate species: zoos that obtain them without a systematic plan and expertise in their care are most probably driving them to extinction in their country or region.

Another example in a very different scenario involves herd animals or large herbivores that are surplus stock as they are easily bred and populations are not controlled except by wrong releases! This happens in a great many zoos in South Asia. When released in a forested area without sufficient study of the carrying capacity and appropriateness of the habitat, they can lay waste the entire vegetation of the area, thus leading to extinctions of endemic and indigenous niche-oriented organisms. Disease from the once captive animals may also infect resident animals as testing usually includes only TB.⁴

There are countless scenarios of this type. This example is difficult to prove, as no department or organisation wants to admit to this having happened, or perhaps has not even noticed!

How many Zoos

The number of facilities that are called zoos has been estimated at as many as 10,000 worldwide. The source of that estimate is vague, but if you consider that there are about 1000 roughly documented zoos that are in some way related to WAZA either members as such or members of member regional and national associations and/or wannabe members then it is not difficult to imagine a few more thousand off the grid. This many dysfunctional zoos is too many for our small world and its biodiversity due to impacts mentioned above.

The number of zoos in the world is moot, because no single agency or authority knows for certain how many captive wild animal facilities exist in their country, unless they have a rigorous registration system. For example, in 1982, years before the establishment of the Central Zoo Authority in India, the Department of Environment, Government of India brought out a booklet which listed zoos and botanic gardens of the country as a total of 44.⁵ Suspecting the accuracy of this number, the writer conducted a very simple survey consisting of a stamped postal card sent to all state forest, wildlife and animal husbandry departments, offices and ministries; all environmental, conservation and animal welfare oriented non-governmental organizations; and a variety of individuals and state officials of the states. Returned postcards yielded a list of 122 zoos, safari parks, deer parks, mini-zoos, etc. in various states in India.⁶ Two years later, in 1989 S. K. Patnaik, Director and L. N. Acharyo, Veterinary Surgeon of Nandankanan Biological Park published a Directory of 49 Indian Zoos, having conducted a survey through the forest departments and colleagues and including a great deal of information on each facility.⁷ Combined, these lists got the attention of the Ministry of Environment who began to discuss a zoo policy that, some months or years later, morphed into legislation, and a good thing that was! The Zoo Act was passed in

1991⁸, and in 1992⁹, when the Ministry of Environment announced that all operating zoos of any size had to register with CZA, there many more facilities! In 1994, ZOOS' PRINT magazine published a list of 312 existing zoos and another 13 registered to be established, a total of 342 **then**¹⁰. In fact a primary objective of the Act was to limit or regulate the mushroom growth of zoos by introducing a legal process which included obtaining permission from the government, having a sustainable economic base and authorities. By the time seemingly all zoos had registered the list had mushroomed indeed to 450! ¹¹.

In formulating their legislation, the Government of India did a very clever thing. The drafting committee contrived to define "zoo" in such a way that it would include almost any wild animal facility, even travelling menageries. As much of the impetus to have zoo legislation in the first place was animal welfare and the miserable conditions of many spurious animal facilities as well as the habit of wild captures, it was important to be able to control all of them with legislation. The term "stationary institution" is bedrock to the definition of zoos in other countries but that did not fit India's situations.

South Asian Zoos - India

South Asia till date includes 8 countries, (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka) of which all but Maldives has at least one zoo and one with more than 200.

India, for example, now has 200-plus zoos which is many times the number of zoos of any other country and even of all the other countries' zoos put together. In area India is far larger, so that number of zoos fits the country. Of these, 25% are standard but different sized zoos called Large, Medium and Small according to several different values, and 75% are mini-zoos and deer parks. CZA inspected the zoos, gave them each a list of undesirable constructions or practices, and provided funds and time to improve before conferring recognition or refusal. CZA closed over 200 additional zoos that were deemed hopeless for want of finance and a sufficiently interested patron over the years. In comparison there are about 30-50 known zoos throughout the rest of South Asia. This number includes other captive wild animal centers which are open to the public for viewing, such as the Takin Centre (*Budorcas taxicolor*) of Bhutan, a rescue and conservation breeding facility, as well as spurious facilities known to be operating. The vague number and the fact that no numbers have been assigned to countries reflects a certain variation in facts which changes every year or two!

India was the first country in whole Asia to pass **effective** zoo legislation. As mentioned earlier Sri Lanka had passed a National Zoological Gardens Act 1982,¹² but it was primarily an administrative tool. In 1991 the Government of India via the Ministry of Environment and Forest passed the Indian Zoo Act as an amendment to the Wildlife (Protection) Act. (*op. cit.*) The Zoo Act first featured broad regulatory legislation that also provided for setting up an autonomous Central Zoo Authority (CZA) to implement the Act. A year later (1992) after formation of CZA, detailed Norms and Standards were added as an additional amendment to the Zoo Act, which, itself was an amendment to the Wildlife (Protection) Act, 1975. Every year or two, additional amendments and corrections have been included in the Act, which reflects the evolution in thinking and experience of CZA and its member zoos, and to an extent, some global zoo trends. This flexibility to change ineffective or un-implementable laws and replace them with improved legislation is very good as generally the time- frame for amendments is far shorter than the initial cumbersome and

painful act of passing legislation. It provides a fix for standards proven to be inadequate, for whatever reason, and a methodology for integrating ongoing changes taking place both in and outside the country addressing zoo animal welfare, wildlife biology, conservation education, etc.

The Ministry of Environment and Forests, Government of India does not have absolute power or oversight over all those zoos. CZA staff is not large, and these 200 zoos are operated by a range of state, municipal, private, and non-governmental organizations and institutions. They can all get out of tune quite easily for a variety of reasons. Nevertheless, it can be said quite accurately that India has, by adopting very strong zoo legislation backed up with a well-funded CZA as well as much hope and good will, has significantly improved more zoos than any other effort in the history of zoos, and also closed more zoos! Even the backslider zoos which become complacent after having been inspected and recognized, do not slide back nearly so far as they were originally. Backsliding may occur temporarily when a new director or veterinarian is transferred to the zoo as per India's draconian administrative system, and in any case, all zoos are re-inspected every three years by CZA.

Other South Asian Zoos

Another promising example is Nepal, which claimed only one zoo, the Central Zoo, located in Lalithpur, Kathmandu. Casual information indicated to this author that there may be more zoos, so R. Marimuthu, Education Officer of Zoo Outreach Organisation, visiting Nepal for purpose of conducting a training workshop, was deputed to do a survey. The result of this effort was a list and short description of 14 facilities published in ZOOS' PRINT Magazine.¹³ The Government of Nepal responded immediately, sending a team from Central Zoo to survey the facilities, of which 10 were categorized as zoos.¹⁴ Some months later the Government of Nepal set up a team to formulate legislation using, among other references, the CZA Norms and Standards, and it is currently moving through the various, tedious steps at a reasonable pace.¹⁵ Prospects for passage of zoo legislation in Nepal are very good. There is a proposal for the Central Zoo to function as a sort of coordinating institutions for all the rest of the zoos in Nepal which is very sensible.

In South Asia, Bangladesh and Pakistan are now more or less actively working on zoo legislation to cover the wild animal facilities open to public in

their country. Pakistan is working provincially as some provinces do not have zoos or are not interested, and has a good number of wildlife regulations which could be tapped for certain zoo issues. Sri Lanka is aware of the need for norms and standards to strengthen their existing National Zoological Gardens Act, the primary purpose of which was perhaps to confirm the National Zoo as a Department to set up more zoos; it also includes a few simple rules for visitors. The new and powerful Ministry of Economic Development, that was recently made responsible for the Department of Zoos, has taken a decision to seriously upgrade all existing facilities and establish several new zoos in different areas of the country. It is hoped that strict legislation including high standards will precede this plan.

Bhutan and Afghanistan have only one known or acknowledged wild animal facility at present. Afghanistan has a single zoo in Kabul which was opened August 17th, 1967,¹⁶ but for all practical purposes was destroyed during the bombings a few years ago. Now, as the nation's capital gets back on its feet the zoo is being rebuilt and improved by the Municipal Corporation. Even suggestions are afoot for expansion into adjoining area as well as another zoo just outside the city. Afghanistan National Assembly approved an Environmental Law published in Official Gazette No. 912, 25 January 2007.¹⁷ The document has been unofficially translated from Dari and Pashto to English and carries many provisions, which, for the present, might be interpreted in such a way as to protect species and provide amenities such as education and training.

In the past, Bhutan has listed a both Mini Zoo and a Gharial Breeding Centre that are now not listed, but there is a Takin Centre (*Budorcas taxicolor*) in need of improvement, as public visitation is permitted. This centre is located just on the outskirts of Bhutan's capital, Thimpu, and is one of the few nature-oriented attractions near the city. Since Bhutan has a short history of creating mini-zoos and permitting public in breeding centres, some form of legislation to direct or regulate these practices is required. There are big holes (some for photography) in the rusty fencing around the Centre. If not for the essential goodness of virtually all Bhutanese people, surely some unfortunate event might have taken place.

South Asian Zoo Association for Regional Cooperation SAZARC

The South Asian Zoo Association for Regional Cooperation SAZARC was founded in 2000 for the purpose of creating a link between zoos in the different South Asia countries as well as a kind of affiliation with global zoos and, most of all, to encourage them to get zoo legislation along the lines of the Indian Zoo Act. SAZARC meets every year in a different South Asian country 100% funded by Western Zoos. Every so often SAZARC substitutes a small group with each from a different South Asian country to attend a conference in one of the South East Asian countries.

In all the South Asian countries the model of the Central Zoo Authority Zoo Act, Recognition of Zoos Rules, Norms and Standards (1991, 1992 and amendments thereafter) is an influence. In three SAZARC conferences, in 2002 (Dhaka, Bangladesh), 2008 (Ahmedabad, India) and 2009 (Dehiwala, Sri Lanka) zoo legislation was the major training theme with CZA legislation as an example. In the first instant, Bangladesh, host of the conference, convened a working group and drafted standards for their country using the CZA model. Subsequently, the transfer system worked its black magic in Bangladesh resulting in this important topic being dropped because new officials did not know about it. After a few years, Bangladesh zoo legislation was taken up and followed and is now in the Law Ministry being assessed. It still has a long road to travel and many obstacles but there is some hope that it will go through in the correct format.

At the Ahmedabad SAZARC conference, Resource Person Brij Kishor Gupta, an official from CZA gave several excellent presentations about Indian zoo legislation, including how it had evolved and was being implemented, as well as its pitfalls. Very good work in groups was done there. In Sri Lanka, in 2009, Dr. Miranda Stevenson, Director, BIAZA (formerly an experienced zoo keeper, curator and director), Dr. Kris Vehrs, (Director, AZA and an attorney holding the post of legislative council to AZA for over two decades), and Mike Jordan, formerly Curator, Chester Zoo, now Conservation Advisor, National Zoological Gardens, South Africa presented information on zoo animal welfare and legislation and sat with countries in working groups to assist them in working on these topics. In these conferences, working groups for all the countries were set up to take legislation and animal welfare forward with Indian participants advising.

It is worth a mention that at the 10th Annual SAZARC Conference recently held in Nepal, the theme of Emergency Protocols was linked to 21st Century Crises of Climate Change, Emerging Diseases and Terrorism. In the past year, CZA had taken up the topic of emergency response and required their zoos to create one appropriate for their zoo contained within their Management Plan, without which their recognition might suffer. CZA also commissioned a Disaster Management Plan, a manual¹⁸ compiled from a variety of sources by former Director, Kanpur Zoo. CZA Member Secretary permitted SAZARC to use their document and donated 20 copies to the conference. Again CZA got there first with disaster response as, until this past year, no zoo in South Asia and probably even in all Asia had a systematic response plan in print. In the conference all countries formed their own working groups but combining Afghanistan, Pakistan and Bhutan as the latter two countries had only one attendee. Non-Indian countries used the CZA model plan, which covered everything aside from the 21st century crises, which Indian participants were requested to cover. Participants were requested to submit the idea to their governing body, which, hopefully, would be influenced to set up an official committee to formulate a detailed plan that fits each country respectively.

Getting down to business

So, what business is it of WAZA and WAZA member zoos, which work hard to effectively promote and protect wildlife conservation using their institutions in different ways, to worry about the **other** zoos. Increasingly more WAZA zoos are busy contributing to conservation by supporting field projects, training, education, etc. However, here is a view that while many WAZA zoos are hard at work on conservation, dysfunctional or even some semi-functional zoos may be cancelling this good work animal for animal. Many WAZA zoo personnel have indicated it is "a good thing but not a priority" to help dysfunctional zoos improve. If you look at this situation honestly, however, it may be more of a priority than anyone currently thinks. Because these zoos are off the grid, no one really has a clear idea of their impact. Its like climate change ... hard to convince people because they do not want to believe all those bad things are or might be true. No one in the established zoo world wants to compare the good done by well-meaning zoos and the damage done by indifferent or otherwise non-productive facilities, each group for their own reasons.

Dysfunctional zoos occur in almost all countries. Surprisingly the United States, for example, which has perhaps the most outstanding zoos, has a shocking number of dysfunctional animal holding facilities (anti-AZA institutions, mini-zoos, rescue centres, orphanages, etc.) that are considered **zoos** by their visiting public, if they allow. Some years ago, AZA conducted a study and came up with a figure in the low thousands.

Down to the why

The **why** requires a book, not an article, as reasons vary between and even among countries and regions. The focus of this particular discussion however is overwhelmingly on zoos in formerly colonized continental areas, such as the former Indian subcontinent, now officially South Asia. The **whys** for zoos in South Asian countries as well as several other continental areas have a large number of things in common, many of which seem to be colonial leftovers! In addition to lack of exposure to avant-garde zoos and decades experienced and knowledgeable zoo personnel, a few, only three, of the most destructive of these are summarized here:

- Out-dated administrative systems with cumbersome bureaucratic features which actually hinder progress, but particularly with respect to complex institutions, such as zoos.
- Dramatically hierarchical departments, services, ministries, in which senior-most officials are so much revered or feared that often they cannot be approached with the facts of a situation.
- A draconian system of transfer of mid and senior level officials from seemingly related departments to zoos where they spend six months (or less) to a very few years getting some orientation, and then being transferring back to their parent department instead of to another zoo, where they could use their experience and enhance their skills.

There is almost total blindness to the dramatic negative impacts on institutional quality this system produces. It is **institutional blindness** because there seems to be no solution possible, particularly in India, Pakistan and Bangladesh. This system seems to be more prevalent in forest, wildlife and animal husbandry services than in Municipal or city bureaucracies that have their own problems. To be fair to CZA, a couple of years after establishment, CZA investigated how this system might be changed in India and learned that in order to toss the transfer system, even in one department or discipline, 50% of the states of India have to agree! Almost impossible to get even two Indian individuals to agree so 50% of states is pretty much out of the question. The parent ministry or department would not like to approve because they would almost certainly lose some senior posts if the zoos were declared a separate service. Naturally individual officers and their families would not be happy with this state of affairs.

The outdated administrative structure is tragic, because the countries which laid this on its colonies have moved on with more streamlined and sensible administrative systems, while their offspring, their former colonies, remain the same as centuries ago. The hierarchical nature of these systems is close to military, particularly in certain departments connected with forests and wildlife. It prevents honest and healthy exchange of information and ideas and produces a sort of psychological disease, akin to Dr. Wilhelm Reich's **emotional plague**, which, instead of being passed from generation to generation in families, it is passed from superior to subordinate with similar dynamics.

The transfer system is the most destructive of these examples. In the transfer system, there seems virtually no forethought of which individuals might make the best zoo directors or curators. All personnel are considered equally qualified for the job since they are either foresters or veterinarians. Transfers are not based on merit, although an officer held in some esteem can be transferred to a particular city or town on his request because the schools are good and he has school-going kids, or some other personal reason. Also in some places transfers are considered a punishment post. In India some of the negative impacts have lessened since legislation and CZA were established, as they have brought much needed prestige as well as money and more flexibility to zoos.

The transfers transpire are not from zoo to zoo but from zoo to an only mildly related disciplines (such as eucalyptus or coffee plantations, administration, etc. in the parent department). Parent departments may be forest or animal husbandry, environment, municipality, sometimes wildlife conservation or economic development. One thing in common – the decision makers for the zoos are rarely from zoos.

In South Asian zoos as a whole, this system translates into a shifting, drifting zoo non-community where genuine expertise rarely develops before another transfer takes place, even in India, despite the amazing input of the Central Zoo Authority.

The strength of the destructiveness often lies with the hierarchical system Ministers, Secretaries and other very prestigious officials who often relate naïve or counter-productive suggestions for zoos. Knowledgeable zoo personnel are afraid to correct their seniors. The press loves it when a very senior official makes a suggestion for the zoo – it is as if he or she conferred eternal life for everyone. In fact, many of the problems of zoos of this region starts with senior officials and politicians who do not understand the subtle problems, requirements or current ideology of the world's zoos and of the established and organized contemporary zoo community. Trying the education is difficult because it is not a priority and as soon as or even before one gets a Minister or Secretary sufficiently trained up, its time for them to go.

Is there a fix ?

Using the resources of WAZA, members with sufficient experience in zoos and exposure to low-income countries could make a difference by taking interest and engage the governments of these countries at different levels. Such help and the encouragement of strong principles in managing zoos could help South Asian and other countries zoos to come out of their problems. The prestige value of WAZA is immense in the global zoo community, with virtually all the mainstream zoos aware of the global association and arguably influenced by it. The mainstream zoos possibly could play a significant role also in ferreting out the dysfunctional zoos and determining their future either with training and help or making a case for closure.

Much of the difficulty in improving zoos globally is the cultural dissonance existing between so-called developed and developing countries. For example, the WAZA Drafting Committee created a Zoo Assessment Tool, a form that ostensibly listed the minimum acceptable standards, for the purpose of evaluating substandard, or as they euphemistically came to be called **zoos needing improvement**. This tool and a set of guidelines for improving zoos were approved by WAZA membership in the 67th Annual conference in 2007. At a certain regional conference, which shall remain anonymous for reasons that will

become obvious, the topic of zoo legislation was the theme and the Assessment Tool handed out as an aid to discussion. Participants of the conference snapped it up and innocently adopted it as their accepted, instead of minimum, standard. This was allowed to stand for the time being by the association director in view of the fact that the larger percentage of even the region's best zoos would have to work for some time to meet these minimum criteria. Also this fact itself makes a strong statement in confirmation of the diversity of norms of the zoos of the world.

Why everyone in WAZA should care about this

Dysfunctional zoos bring a bad name to the greater zoo community. It is perhaps the responsibility of all of us to do what we can to either improve or help remove these destructive facilities. Lobbying for zoo/wild animal facility legislation that includes standards, a procedure for registration, inspection, recognition and de-recognition and protocol for closure of hopeless and non-compliant institutions is one way to help, although it can be soul-destroying as per the writer's personal experience of last quarter century. Verily, the process proceeds at a snail's pace. Investing funds in one-off individual zoo improvements can be risky unless the investing zoo or organisation is committed for its. One CAN if committed, make things happen, but much patience is required. Serious backsliding is almost certainly inevitable unless there is strong legislation, an implementing authority and effective penalties in place.

Thirty five years in the **other zoo world** has convinced the writer that without strong legislation and its components, there may be no way to improve or close dysfunctional zoos on a permanent basis.

There are thousands of facilities ...it is a job for all of us. WAZA has developed a series of documents to help with this task. Tackling governments and lobbying for legislation is a slow and painful process but worth the investment long term.

References

- ¹ Walker, S., Morgan, D. and Matamoros, Y. (2003). The "Other" zoo world – bad zoos and their impact: What is to be done. Presented at the 58th conference of the World Association of Zoos and Aquaria WAZA, Costa Rica, November 2003.
- ² WAZA (2006). WAZA resolution on Improving Standards in Zoos. Adopted at

the 61st Annual Conference, Leipzig, Germany, August 2006.

³ WAZA (2009). WAZA resolutions 1946-2009. A complete listing of the WAZA resolutions adopted by the annual conferences. (Resolution 62.2). WAZA Executive Office, Berne, Switzerland. October 2009.

⁴ Walker, S. (Pers. obs.) unpublished.

⁵ Anon (1982). List of National Parks, Sanctuaries, Botanical Gardens and Zoological Gardens in India, Department of Environment, Ministry of Agriculture, New Delhi, 1982.

⁶ Walker, S. (1987). How many zoos? *Zoos' Print* 2(4-5): 7-10.

⁷ Patnaik, S.K. and Acharjyo, L.N. (1989). *Directory of Indian Zoos*. Nandankanan Biological Park, Bhubaneswar, Orissa.

⁸ Anon (1991). Indian Wildlife Amendments: the zoo act, Gazette of India, October 1991.

⁹ CZA (2009). Recognition of Zoo Rules, 1992 (with up to date Amendments), pp. 230-283. In: *Zoos in India*. Legislation, Policy, Guidelines, and Strategies.

¹⁰ Walker, S. (1994). Historical Listing of Indian Zoos according to CZA Registration Forms. *ZOOS' PRINT* 9(11): 29-34.

¹¹ Walker, S. (Pers. comm.) unpublished

¹² Anon (1982). National Zoological Gardens Act, No. 41 of 1982. Government of Sri Lanka.

¹³ Marimuthu, R. & Walker, S. (2007). Report on Animal Facilities. *Zoos' Print* 22 (4): 1-7.

¹⁴ Walker, S. and Marimuthu, R. (2009). Changing zoos in a whole country – Nepal a case study. *Zoos' Print* 24(2): 5-7.

¹⁵ Walker, S. (Pers. obs.) unpublished.

¹⁶ Nogge, G. (1972). Kabul Zoo: the show window of Afghan Fauna, *Outdoorsman Monthly*, 3.

¹⁷ Anon (2007). Environment Law, Islamic Republic of Afghanistan, Official Gazette No. 912, dated 25 January 2007, as approved by National Assembly.

¹⁸ Hemanth Kumar, R. (2009). *Model Disaster Management Plan for Zoological Parks in India*, Kanpur Zoological Park, Kanpur, UP, 112pp.