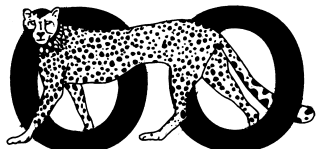


ZOOS' PRINT



News of Zoo and Wildlife Networks in South Asia --
Published by Zoo Outreach Organisation

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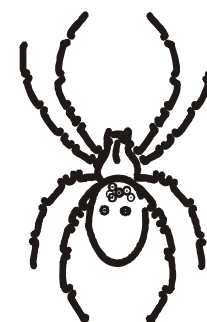
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We welcome members who will agree to support zoos and captive breeding centres in a positive and constructive manner only. Members may be called upon to assist with educational and information gathering activities in their area.

Applicants for Membership in any category must sign a pledge resolving to support zoos in a positive and constructive manner and to abide by the wildlife laws of this and other national and international conventions.

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We welcome articles from the conservation community of India and SAARC countries. Articles from other tropical countries will also be considered if relevant to Indian and SAARC countries problems and potential. Articles having implications for intensive management of small, wild, populations are particularly welcome.

Type: Articles of semi-scientific or scientific / technical nature. News, notes, announcements of interest to conservation community are acceptable.

Feature articles — articles of a conjectural nature — opinions, theoretical, subjective.

Case report; case study or notes — short factual reports and descriptions.

News and announcements — short items of news or announcements of interest to zoo and wildlife community

Cartoons, puzzles, crossword and stories

Subject matter : captive breeding, (wild) animal husbandry and management, wildlife management, field notes, conservation biology, population dynamics, population genetics, conservation education and interpretation, wild animal welfare, conservation of flora, natural history and history of zoos. Articles on rare breeds of domestic animals are also considered.

Source : Institutions such as zoos, breeding facilities, holding facilities, rescue centres, research institutes, wildlife departments, wildlife protected areas, bioparks, conservation centres, botanic gardens, museums, universities, etc.

Manuscript requirements:

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Articles should include relevant photographs, illustrations, tables, etc. wherever necessary or desirable.

Articles should contain citations to be included in a bibliography alphabetically and contain all details referred in the following style : surname, initial(s), year, title of the article, name of journal, volume, number, pages.

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Overview of the 9th Conference of the South Asian Zoo Association for Regional Cooperation - Sri Lanka, 2009

Organiser

Zoo Outreach Organisation

Hosts

National Zoological Gardens, Dehiwala & Ministry of Sports and Public Recreation, Government of Sri Lanka.

Local sponsors

Ministry of Sports and Public Recreation, Sri Lanka
Department of National Zoological Gardens, Sri Lanka.

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Paignton Zoo, UK
The Benindi Fund, UK
Twycross Zoo, UK
Universities Federation for Animal Welfare, UK
World Association of Zoos and Aquariums

The Sixth Annual Joint CBSG / RSG South Asia Meeting and the 9th Annual SAZARC Conference

were held in Hotel Palm Beach, Mt. Lavinia and National Zoological Gardens, Dehiwala. Resource persons were from UK and USA, participants from India, Pakistan, Nepal, Bangladesh, Bhutan (first time), and of course Sri Lanka.

A full Report of the CBSG/RSG meeting was published in April issue of ZOOS' PRINT. This is the Report of the SAZARC conference which took place from 11-15 February and was followed by a tour on 16-17 Feb.

A formal Inauguration of 9th SAZARC conference was conducted on 10th February evening, following on to CBSG RSG meeting, with Minister, Secretary and Addl. Secretary of the Ministry of Sports & Public Recreation, Director of National Zoological Gardens and Director, SAZARC on the dias. There were traditional Sri Lankan musicians and dancers to lead the dignitaries and perform during a lavish dinner. It was a grand beginning for the 9th SAZARC conference.

The theme of SAZARC for the second consecutive year was zoo legislation. Participants wondered what more there was to cover considering the extensive material presented in the last SAZARC conference Jan-Feb 2008 and they surely found out. We announced "fine tuning" of legislation, accreditation and inspection of zoos as the subject matter of this year. We had three resource persons, one of them, Mike Jordan of ATMOS who was with us last year, Miranda Stevenson of BIAZA who has been a resource person in two previous conferences, and Kris Vehrs of AZA. We spent mornings in a comfortable Hall at the Palm Beach Hotel having presentations and working groups

and afternoons at the zoo conducting inspections and discussion afterwards. We also heard a presentation about each of the National Zoological Garden's facilities over three days.

Day by Day activities

Working Group Reports, Technical Presentation summaries & participants /resource persons list follow this overview.

On Day 1, 11 February we gathered in the Assembly Hall where Mr. H.M.B.C. Herath, President of SAZARC and Additional Secretary to the Ministry of Sports and Public Recreation graciously welcomed resource persons and participants declared the conference open. Sally Walker, Director, SAZARC introduced the topics each morning and made announcements. On the first day Miranda Stevenson spoke on zoo legislation and standards. Kris Vehrs spoke on Animal Welfare Legislation, USA style and its relationship to the AZA's zoos. Mike Jordan gave a Curator's approach to zoo inspection.

After tea we split into country-based Working Groups to discuss the progress and benefits of zoo legislation to their institutions, and possible problems in implementation.

Afterwards, there was lunch at the zoo, after which participants were divided into three groups, each assigned to a different resource person and a different taxon group, e.g. 1. Birds/herptiles, 2. large mammals, 3. small mammals, 4. service areas (vet hospital, storage, kitchen, and with a plan of trading off every day until all participant groups had inspected all those areas of the zoo. This exercise was not so much to teach people how to be inspectors as in a formal exercise, but to sharpen the skills of all participants to see more of the various anomalies when they went around their own zoo. This was followed by a discussion and then a presentation on the National Zoological Gardens by Dammika Malsinghe, Dy. Director of the zoo and wrapping up the day. Participants returned to the hotel for a time and then proceeded by bus to the Grand Oriental Hotel, Colombo Fort.

On Day 2, 12 February covered possible impediments of legislation & Zoo Ethics by Kris Vehrs and Five Freedoms of Animal Welfare by Miranda Stevenson. Lunch and inspections followed the pattern set the previous day followed by a presentation on the well-known Pinnewala Elephant Orphanage. After this there was a planned shopping visit followed by Dinner at Global Tower, Bambalapitiya.

On Day 3, 13 February we had Reports of country Zoo Legislation Working Groups of the previous day, with Development of Standards and Accreditation by Kris Vehrs. Lunch and practice inspections of animal

enclosures again followed by a presentation by Renuka about the two new zoos which will be constructed in the next two years. Afterwards there was a demonstration of the Human Elephant Conflict educator packet by B.A. Daniel and Marimuthu and Dinner at Dampe Village, Piliyandala.

On Day 4, 14 February, presentations covering Conservation, Education and Research by Miranda and Accreditation, Part 2 by Kris Vehrs followed by excellent presentations by officers of Dhaka Zoo, Lahore Zoo and Van Vihar National Park Bhopal. Zoo inspections covered behind the scenes with two groups followed by a detailed discussion of inspections. Dammika gave an interesting presentation on the design of the upcoming Safari Park at Ridyagama, Hambanthota. Our group went shopping again and then to dinner at a Thai restaurant, called the Ceynor.

On Day 5, 15 February, delegates were still enthusiastic despite a tight schedule. Sally began with an exercise listing potential topics for training for the 10th anniversary SAZARC conference. This will be held at the Central Zoo, Kathmandu where the first meeting of SAZARC was convened. Mike Jordan gave an extensive lecture on Marking and Individual Identification of animals (this was by request of National Zoo Dy. Director, Dammika, followed by definitions of key words for legislation and policy and a separate presentation on CITES by Kris which was well received, despite being the last of five days of lectures. After lunch a holiday from inspection was declared and the group went from lunch directly to the city for last day purchases.

A gala dinner had been organized at a nearby restaurant right on the beach. The valedictory ceremony, including speeches, thanks, distribution of certificates, awarding of a gift of a stone elephant from the Minister's own hands, handing over of the SAZARC banner from current President (Mr. Herath of Sri Lanka) to new President (Ms. Sarita Jnawali of Nepal) was followed by a lovely dinner.

SAZARC Tour

Traditionally there is a SAZARC tour at the end and so it was this year. SAZARC participants got on a bus and drove south down the coast alongside the ocean, visiting Hikkaduwa Marine Sanctuary by Hambanthota which included a ride in a glass bottom boat to see corals, brightly coloured fish and marine turtles. A visit to Ft. Galle and the quaint little town broke up the journey to Bundala National Park at Hambanthota where we saw wild elephants, crocodiles, and many Sri Lankan birds. That night we were taken to the beach in Bundala NP to watch 3 species of tiny marine turtles hatch, make way through the sand and to the sea. Wildlife staff had to help the baby turtles as they could not dig their way out of the sand dunes before suffocating. Five species of marine turtles lay eggs on that single beach. Special thanks to the Wildlife Department at Hambanthota who went all out to show us their wildlife and provide a truly unique

experience. We reached our hotel and at dinner after midnight! The following day we drove to Ratnapura where we visited a gem river, a gem mine before purchasing gems at a nearby shop. Making our way back to Colombo we had a lot of laughs and reached the hotel for dinner and departure for home country.

We are very grateful to our sponsors from abroad and to Sri Lankan government for contributing financially to this conference and tour, to our Resource Persons for contributing academically, to our hosts for contributing their time to make everything enjoyable for us and to our participants and members for attending.

Sally Walker, Director, SAZARC

Addendum :

Training topics

Topics suggested included Zoo animal management (sexing, nutrition, breeding tools, carrying capacity), Conservation education / awareness (signages), Health management / disinfectants, Animal handling / transportation, Upgradation of zoo with present constraints, Population management, Environmental Enrichment, How to train zoo keepers, Disposition of conflict animals, Zoo designing, Behavioural change of visitors and Visitor management, WAZA membership, Record keeping, Vaccination, Communication skills with particular reference to media, PHVAs, and Management of politicians and bureaucrats!

SAZARC Kabul Zoo-help project

Also discussed was a project to be taken up by SAZARC working under advice and direction of the Kabul Zoo Email Advisory Group to help and mentor the Kabul Zoo in Afghanistan in whatever way could be done. Already the Lahore Zoo, Pakistan has given a very generous donation of Pak Rs. 4,50,000 for purchase of medicines. Central Zoo Authority of India has agreed to help with training, not only for Afghanistan but for all SAZARC countries. Kabul Zoo has participated in one SAZARC conference and Zoo Outreach Organisation training.

2010 Conference

Right after SAZARC, Daniel, Marimuthu and Sally went to Nepal to conduct our 2nd series of three educator training workshop in Human Elephant Coexistence HECx. The first two in the series were conducted at Chitwan National Park at the "public gathering"-friendly Camp of the National Trust for Nature Conservation NTNC. This Camp is right on the edge of the Park and also within walking distance to Chitwan township which is right on the bank of a river. Since the 7th CBSG RSG and 10th SAZARC meetings will be held in Nepal, we will very likely to conduct SAZARC (theme to be decided) in Kathmandu at the Clarion Hotel where SAZARC was born, in honour of our 10th Anniversary. After SAZARC we will move to Chitwan where we will have our CBSG RSG meeting which will cover one or two of the suggestions in our training brainstorm, e.g. PHVA and other technical topics interspersed with trips into the forest to see some animals and maybe have an actual PHVA on one species.

Zoo Legislation Working Groups

Introduction :

Since inception, SAZARC has promoted the importance of specific regulatory and directional legislation for zoos in the South Asian region, following the lead of Zoo Outreach Organisation with India. In the early to mid-80's, the (then) Department of Environment, Government of India published a booklet listing 44 zoos which were believed comprised the total number of zoos operated by local, state or national government. . First, Zoo Outreach Organisation (1988) and the Nandankanan Biological Park (1989) published lists of zoos discovered in their search which more than tripled the 44, and predicted as many as 300-400 active zoos in the country. These Reports sounded an alarm which precipitated a process culminating in the first zoo legislation in Asia, e.g the Zoo Act (1991) which came into being relatively quickly as an Amendment to the Wildlife Protection Act.

The topic of zoo legislation using India as a model came up at the founding meeting of SAZARC and has been a consistent thread running through all SAZARC training and conferences. In the third meeting, organised in Bangladesh, offered training on general animal management led by Miranda Stevenson who covered zoo legislation and standards, the Five Freedoms of Animal Welfare and the "C.A.R.E.R." acronym for the essentials of a good zoo, e.g. Conservation, Animal Welfare, Recreation, Education, Research. This led to Bangladesh participants convening a working group to formulate principles for a national zoo association and a Bangladesh Zoo Act. This could not be realised due to some political problems but in the last two years, using the WAZA Assessment Tool and other references, the Dhaka Zoo and Ministry of Animal Husbandry have drawn up a detailed draft zoo act which they could work on at the current meeting.

In Pakistan in 2004, a meeting was conducted in Lahore inviting all the zoos and SAZARC Director, to discuss and work on a proposal for zoo legislation which was followed by more work in 2004, when Lahore Zoo and the Punjab Wildlife Department hosted the SAZARC conference and zoo legislation was a strong theme, again with Miranda Stevenson as lead trainer.

Last year, meeting in Ahmedabad, India, SAZARC conducted a training specifically on zoo legislation with Dave Morgan, Mike Jordan and Brij Kishor Gupta which was highly inspirational and led to much progress for Nepal and Bangladesh. At that meeting SAZARC adopted the WAZA Assessment Tool as a model for the standards they wished to include in zoo legislation. The WAZA tool leaned heavily on the Indian and South African Zoo standards and legislation.

This year with Kris Vehrs from AZA, Miranda Stevenson and Mike Jordan we could make more progress with increased interest and commitment from Pakistan, a new country (Bhutan) represented, progress reports from Bangladesh and Nepal and impressive working group input from Sri Lanka.

Zoo legislation for each South Asian country or in some instances (such as Pakistan) every Province, is particularly important due to their administrative systems which, for many,

involve frequent transfer of officials, and various environmental, economic, cultural and educational reasons. SAZARC is increasingly encouraged with the progress made in this area.

Following are the Reports of various working groups :

Pakistan Working Group

Group members: Abdul Qadeer Mehal, Punjab Wildlife Parks, Lahore; Muhammad Yousaf Pal, Director, Lahore Zoo; M. M. Qazi, Karachi Zoo; Miranda Stevenson, Facilitator.

Background

There are three provinces in Pakistan which have zoos, e.g. Punjab with Lahore Zoo & others; Sindh has Karachi Zoo and Karachi Safari Park; and the Federal Controlled Territories – Islamabad. Therefore, in order to be accepted and effective, any zoo legislation would have to be provincial legislation and would be passed by the relevant Provincial Assemblies within each province.

The advantages of having zoo legislation would be:

- Improved husbandry, enclosures and welfare environment of the animals would be improved
 - breeding problems and surplus stock problems
 - should make animal exchange easier as currently a director needs to go to government to get permission to transfer animals, legislation should allow the director to make the decision
 - Perhaps stop staff transfers i.e. problem of transfer of skilled staff
- Should make decision-taking easier and less bureaucratic
- Make training of staff compulsory and encourage staff progression
- Encourage financial autonomy – this is essential for the progression of the zoos in the country
- Environment of the animals would be improved
- Breeding problems: may assist with deposition of surplus stock but there was some debate about this but agreed that exchange of animals should be easier

Punjab

The Punjab Wildlife Protection Act has been amended to include captive wildlife; this is all wild animals, not just exotic kinds. This is the first step. The second step is, through an amendment to the Act, to attach a zoo act to the Wildlife Protection Act with standards of care included. Draft standards have been written but were not available at the meeting. These encompassed Welfare, Conservation and Education. Help had been supplied from both India and South Africa. These were with the relevant government legal department. Unfortunately security is the highest priority of the present National Government and Punjab Assembly, but it is hoped that in about a year's time the Zoo Act could be added to the Wildlife Protection Act.

Sindh

Qazi felt that it may be possible to amend the Sindh Wildlife Act once the Punjab had zoo legislation. However there is not a great will with the City authorities to do this at present. Currently they really only interfere in matters of finance and animal movement. There are some 18 townships within Karachi and five of these already have mini-zoos, therefore legislation would help control this, although there is no desire from the executives of the townships to have such zoo controls. These zoos are not of a good standard and actually provide ammunition to explain why legislation is required. Federal Controlled Territories may be the most difficult, but the same principle applies. Unfortunately as Raja Javed and other from Islamabad were unable to attend, it was not possible to discuss further.

Bangladesh Working Group

Group members: Jillur Rahim Shahriar, Sr. Asst. Secty, Ministry of Fisheries and Livestock MFL; Md. Shafiqur Rahman Shoshi, Dhaka Zoo; Md. Golam Rabbani, Rangpur Zoo, Rangpur; Dr. Zahed Mohammad Malekur Rahman, Dulhazara Safari Park; Abudur Razzaque Mia, National Advisor, MFL; Chowdhury, Md. Mongur Morshed, Chittagong Zoo.

Though, Bangladesh has no Zoo Act as yet, it is needed for improved management and conservation of captive animals, which Government of Bangladesh has supported in principle.

In the SAZARC meeting in 2003 a Working Group created a Draft of a Zoo Act using the Indian Zoo Act as a model. This launched the idea of zoo legislation for Bangladesh but there were difficulties in deciding which Ministry would float the act. Later seven Inter-Ministerial Meetings were conducted and submitted a draft copy of the Zoo Act to the Ministry of Law for vetting. Now it is waiting by the National parliament. The Act is to make provisions for establishment of Zoos and for conservation of wildlife in Bangladesh under the authority of the Ministry of Fisheries and Livestock with the Director General of to perform the main functions.

In the working group salient points were reviewed discussed, such as Why Bangladesh needs a Zoo Act and activities which have been completed. The Draft Act is waiting for debating in the National Parliament. The entire Draft was read out by JR Shahriar in order to familiarise Resource Person Kris Vehrs with it and a hard copy given to her for more clarification so that a meaningful discussion could take place later. Kris met with the Bangladesh participants several times during the meeting and worked on their Draft.

Bhutan

Group Members: Kuenzang Gyeltshen, Bhutan; Sarita Jnawali, Central Zoo, Kathmandu; Shiv Raj Bhatta, Dept of National Park and Wildlife Conservation, Nepal, Sally Walker (Facilitator).

Mr. Gyeltshen, Livestock Officer, Wildlife Rescue & Rehab Centre, Nature Conservation Division Department of Forest, Bhutan. He was the only person from Bhutan at the conference. In the legislation working groups Mr. Gyeltshen shared the table with the Nepal contingent. Mr. Gyeltshen related that Bhutan should start thinking about such legislation because a large number of rescued and confiscated animals were coming into captivity and they needed to be more organised about it. He will discuss with his department when he returns to Bhutan.

Nepal

Group Members: Sarita Jnawali, Central Zoo, Kathmandu; Shiv Raj Bhatta, Dept of Natl Parks and Wildlife Conservation, Nepal, Sally Walker (Facilitator).

Nepal group discussed the question of the working session, that is why we need zoo Legislation and suggested the following:

1. To provide the legal status to Zoos,
2. To define what is meant by "zoo",
3. To regulate number and quality of Nepal's zoos,
4. To establish population management in the zoos,
5. Animal rescue centre should be regulated under zoo legislation (zoo is assisting to rescue animal),
6. Animal (captive) welfare to be addressed,
7. To form minimum standards and criteria for zoos,
8. To set a minimum education standard,
9. To set a legal mechanism for zoo inspection,
10. Provision/mechanism for closing zoos,
11. To arrange a clear enforcement agent (DNPWC and Ministry)

India

Group Members: Dr. R.K. Sahu (Facilitator), Kamla Nehru Zoo; Vijay Ranjan Singh, Mysore Zoo; and Sri Rajpoot, Van Vihar Zoo.

The members of the Indian group earlier had identified some weaknesses in Indian zoo legislation, warning participants to beware of these lacunae. They were tasked with drafting Indian Zoo legislation that they felt were counter productive. In the end they concluded that the problems were not with the printed legislation as such but with the various ways it was interpreted by individuals.

Sri Lanka

Sri Lanka has a Zoo Act which established the Department of National Zoological Gardens which is responsible for all government owned zoos. Currently there is the zoo at Dehiwala and the elephant orphanage at Pinnawala. Two new zoos are under process as well, a Safari Park and another traditional zoo also at Pinnawala. It has been recognised that adding standards of care to the existing act as an amendment would be a good move. Much attention was given the zoos in Sri Lanka NOT under the Department which get around existing rules by holding only exotic (non-native) animals which are not covered under the existing act. Discussion was conducted on this and other matters.

Participant Presentations on Legislation

Zoo Legislation in Nepal : A Road Ahead

By Sarita Jnawali, Manager, National Trust For Nature Conservation/Central Zoo, Lalitpur, Nepal.

Background: The Central Zoo at Kathmandu, established in 1932, is the only officially recognized zoo in Nepal. The Government of Nepal entrusted KMTNC which morphed into National Trust for Nature Conservation with the management of the zoo for 30 years on December 29, 1995.

There are many other facilities which are holding wild animals in captivity and are open to public visitors however, no official records of such facilities exist. They are neither recognized nor authorized by concerned authorities.

The Problems include:

- Lack of legal provision to operate zoos.
- No legal status of animal facilities.
- Improper management of animals in captivity-animal welfare issues.
- Lack of coordination between such institutions within the country.

The Needs include :

- **Zoo legislation** - that recognizes a zoo as a place of *ex-situ* conservation where animals are managed in a state of excellence so that it provides recreation, conservation, education and research activities.
- What's being done: We, the Central Zoo, being the only national zoo of the country, have initiated work to prepare and endorse the zoo legislation in Nepal.

First Phase: Survey of all animal facilities in Nepal

- There are a least 9 facilities operating as zoos.
- Most are managed by municipality in the city park or by the community forest group in the forest.
- Collection by rescue of problem/orphan animals.
- List of animal facilities
- Survey methodology
- Site visit by team of experts from Central Zoo.
- Physical infrastructure, management structure , animal welfare and educational component were studied.

Survey Finding

- All these animal facilities are poorly managed with pathetic animal welfare.
- Keeper-staff without any formal training and education in this field.
- No record keeping system.
- No conservation education activity.
- Leads to bad image of what zoos should be.

Survey Report

- Report prepared and circulated to all concerned government authorities.
- Need for zoo legislation recognized.

Second phase: Meeting and discussions

- Series of meeting and discussions held with concerned government officials and legal experts.
- Need for a workshop involving all stakeholders identified.

Third phase: Workshop

- Workshop involving Secretary of Ministry of Forest and Soil Conservation, Director General, Department of National Parks and Wildlife Conservation, all concerned government officials and legal experts organized.
- Decision made to draft legislation and proceed forward to incorporate it in the National Park and Wildlife Conservation Act.
- Two me zoo legislation for Nepal.

Next Steps:

- Workshop to discuss the draft legislation involving all concerned authorities.
- Finalize the draft legislation and submit it to the government for endorsement.

Zoos in Bangladesh

By Md. Shafiqur Rahman (Dhaka Zoo) & Abdur Razzaque Mia (National Adviser, Dept. of Livestock)

Bangladesh currently has 10 zoos, e.g. Dhaka Zoo, Rangpur Zoo, Rajshahi Zoo, Comilla Zoo, Chittagong Zoo, Dulahazara Safari Park, Kurmitola Golf Club, Khulna (Banbilash), Savar (Aranyak), Sithesh Ranjan Dev Mini Zoo, Sylhet

Initially the Dhaka Zoo was started at Old High Court Area in 1947 but a Zoo Master Plan was approved in 1960 with instruction to be shifted at Mirpur. An Advisory Board was formed in 1961 and the zoo was opened for visitors on 23 June 1974 at Mirpur, Dhaka.

The purpose of the zoo was declared to be : To promote awareness among the people about wildlife conservation. Animal Welfare, Recreation & leisure for visitors, Education and Research, to donate/exchange animals and birds to the other Zoos in home and abroad.

The following sections were planned for carnivores, herbivores, small mammals & reptiles, birds, animal nutrition, veterinary, publicity, laboratory, and zoo museum. Major activities included breeding, feeding, care & management of tiger, lion, leopard, hyena, bears, deer, elephant, giraffe, zebra, water buck, hippopotamus, oryx, eland, kudu, wild beest, nilgai, tapir, spotted & sambar deer, horse, ass, gaunder etc. Special care to be taken for Endangered Hoolock Gibbon & Gharials.

Major birds included emu, rhea, ostrich, night heron, golden pheasant, vulture, peacock, flamingo, green dove, White dove, White peacock with special care for Critically Endangered Vulture.

Van Vihar Bear Rescue Facility

By S.S. Rajpoot, Director, Van Vihar National Park & Zoo, Bhopal

The Objectives of the Van Vihar Bear Rescue Facility

- Implementation of the Wildlife Protection Act by removal of illegally held bears
- Rehabilitation of the Kalandar community into alternative livelihoods
- Assist State Forest Departments to prevent poaching of cubs from the wild
- Current Objectives : To replicate this project in other states in India in collaboration with different state Governments

Kalandars

The Kalandars have been operating in India at least since Jhahangir's time. Today the Kalandar tribals entertain tourists around towns and other rural areas. They have lived disadvantaged lives for centuries, shunned by society for their nomadic lifestyle with animals. They have no education, social security, public health, toilets or water supply and no support for their unemployed.

With the support of a study conducted by Wildlife SOS a three pronged approach was evolved with the following

1. Rescue Centres

- Agra Bear Rescue Facility in U.P
- Karnataka, Chhattisgarh, Haryana
- Van Vihar Bear Rescue facility, Bhopal, MP
- Purulia Bear Rescue Facility, WB

2. Rehabilitation of Kalandar Community – 500 Bears removed (kalandars rehabilitated) and an **3. Anti-poaching** squad to prevent bear cub poaching

The rescue centres have a Wildlife Veterinary Hospital where they do rope removal, cleaning of infected wounds getting rid of pus and maggots. An assessment of the damage to muzzle and cartilage is done. Microchipping & Natural markings ID are done. The bears are kept in large, naturalistic enclosures which are enriched for the bears to have a variety of activities. As the bears are rescued and housed at rescue centres, also their former owners are rehabilitated by career counseling and loans to start a business. The project involves Kalandar tribal rehabilitation or helping people help themselves. Some of the preferred professions are : Welding, fabrication units, generator rental, auto-rickshaw, cool drink stalls, cycle repair shop, tea shop, grocery stores.

Why are Bears Poached ? Bears are poached because of market forces of demand and supply of the Kalandars. The mother bear defends her cubs fiercely and is often killed by poachers. The cubs are barely 4 weeks old. They are trained to dance with painful string through the nose. Their teeth are pulled and their nails broken. Our ultimate goal is : species conservation with our Sloth Bear Habitat conservation & protection and conservation education – school programs.

Lahore Zoo at a Glance

By Bushra Nisar Khan, Education Officer, Lahore Zoo, Pakistan

Lahore Zoo was established in 1872 A.D. It has an area of 25 acres with 3 million visitors annually. The zoo has 1086 animals of 121 species and 133 staff. The budget for 2008-09 is Rs. 3,66,77,000. Lahore zoo is a Self-sustaining Semi-Autonomous body run by Zoo Maintenance Committee (ZMC)

Mission Statement

To provide educational and recreational facilities to the general public and to actively contribute to Pakistan's International commitment in terms of the Convention on Biological Diversity by providing suitable opportunities for the *ex-situ* and *in-situ* conservation of species.

Achievements of the Zoo

1. Successful captive breeding of Emu, Chinkara, Zebra, Spotted Deer, Hog Deer, Peafowl, Bengal Tiger, Lion, Mouflon Sheep, Vervet Monkey, Fallow Deer, and Wallaby.
2. It is a financially sustained institution.
3. Provision of research facilities to students of national, / international institutions, / organizations.

4. Zoo Education Programme

Annual number of School / Colleges / Universities visited Zoo -- 15,000-20,000 and students -- 40,000-50,000. The education / awareness and research is the basic objective of any zoo. Lahore Zoo is running its Zoo Education Programme successfully since 2000.

Education facilities include: 1. Touch table (Taxidermy animals/birds/skin and horn are kept/displayed on table for education and information to visitors and students); 2. Awareness programme; 3. Adoption programme; 4. Internship facilities; 5. Naming ceremony; 6. Birthday ceremony. There are also Guided tour programme, Wildlife Week celebration, Animal Environment Day Celebration, Campaigns against use of plastic shopping bags/ vandalism against animals/Birds, Competitions.

Issues include :

- Early completion of Project Master Planning/ Development and Improvement
- Inbreeding among animals/Birds
- Proper sex ratio of animals/birds
- Timely disposal of surplus animals/birds
- Strengthening of manpower

Master Plan

Development and improvement of Lahore Zoo Remodelling and up-gradation of Lahore Zoo for the improvement of habitat and provision of recreational and education facilities.

Sri Lanka's Zoos

By Dammika Malsinghe, Deputy Director, Dept. of National Zoological Gardens, Sri Lanka.

The Department of National Zoological Gardens looks after the zoo in Dehiwala and the Elephant Orphanage at Pinnawala. The new zoological facilities coming up in Ridiyagama, Hambanthota and Pinnawala are also attached to the DNZG.

In the year 2008 the net income for Dehiwala Zoo was Rs.55,648,061 and for Pinnawala Elephant Orphanage was Rs.126,189,891

The Vision of the Department of National Zoological Gardens is stated as:

To create one of the world's outstanding zoological institutions that is a centre of excellence for conservation, research and education with the following objectives:

- Conservation
- Animal welfare
- Recreation
- Education
- Research & Breeding

Education

Educational programmes are conducted by the education section for different levels of students and general public.

Research

Research is being carried out by the Departmental staff, universities and other researchers on conservation breeding, behaviour, animal nutrition, etc.

Recreation

The Dehiwala Zoo is located in a highly congested urban area but able to manage its unique environment with a diverse collection of trees. The Zoo is landscaped with flower beds, water cascades, pathways, etc. to enhance the zoo experience.

Pinnawala Elephant Orphanage

By Dr. Chandana Rajapaksa, Veterinary Surgeon, Pinnawala Elephant Orphanage, Sri Lanka.

This facility is located in Kegalle district near the town of Rambukkana. It enjoys an annual average ambient temperature of 28°C and rainfall 39 mm.

The Elephant orphanage at Pinnawala (EPO) was established in 1975 with five orphaned babies. Earlier it was a coconut land of 26.6 acres. The aim of the Orphanage is take care of orphaned or displaced elephant calves in the wild. Currently, it acts as an elephant breeding and conservation centre. At the same time it is a good tourist attraction. There are 86 elephants and 120 staff members in Pinnawala Orphanage now.

Elephant herd structure consists of 39 Males, (3 Tuskless, 36 Tuskless), 47 Females, total 86.

Pinnawala daily activities

08.30 - Open to visitors

09.15 - Bottle feeding

10.00 - Herd leaves for the river

12.00 - Herd returns from the river

13.15 - Bottle feeding

14.00 - Herd leaves for the river

16.00 - Herd returns from the river

17.00 - Bottle feeding

Captive Breeding

Results -- 24m & 21f, Birth rate -- 1.95.

breeding elephants - 15m, 28f, Total 43

Average 1st calving at Pinnawala :- 14.5 yrs

Veterinary Care at Pinnawala consists of:

Disease prevention, diagnosis & treatments and elephant welfare.

Recently completed research results:

- Study of endocrine and metabolic profiles and behavioural patterns during oestrus cycle, gestation, parturition and postpartum period of Asiatic elephant in captivity.
- Developmental and endocrinological changes associated with puberty and sexual maturity in female elephants.
- Investigation of ecto-parasites on elephants in EOP.
- Development of the social behaviour of the Sri Lankan elephant in a group of some wild elephants:
- Importance of the group individuals in this developments and particular role of the mother.

Facilities for elephants include bottle feeding centre, water pond, free land, River Ma Oya, water tanks

Visitor facilities include car park, cafeteria, souvenir shop, safety zones, bank.

Major issues are limited space, reintroduction, supply more space, another (space) Orphanage.

Safari Park at Ridiyagama, Hambanthota

By Dammika Malsinghe, Deputy Director, Dept. of National Zoological Gardens, Sri Lanka.

The selected venue of the Safari Park is close to a famous hot water springs, new botanic garden under construction, Madunagala National Park, new harbour & Airport under construction. Enclosures are to be separated by two chain link fences and in between the enclosures, a forest patch will be preserved. Buses will be sent inside according to a time schedule on a one way route.

Objectives

- to conduct exchange programmes with other reputed international institutes to ensure the sustainability of genetic variation.
- to establish an Institute for education and research of endangered animals and promote collaborative

research with local and International Organizations.

- Set up an area for public recreation for spending a day with memorable experiences.
- Help to upgrade of the life standards of the residents of the area by providing direct and indirect job opportunities
- Provide an additional revenue for the country by promoting eco tourism.

Selected Animal Species

Carnivores -- African lion, Bengal tiger, Sloth bear, Sri Lankan leopard

Herbivores in African continent & Asian continent

Birds-- Ostriches & Birds in Asia

Barriers

- Outer-most electric fence
- Middle scrub forest
- Inner most wall and chain link fence on it.
- A service road in between the thorn forest innermost wall.
- Three security posts at the selected points on the wall.
- One emergency exit.

Design of animal enclosures

-Six enclosures will be designed. Four separate enclosures for carnivores, one for African Safari & one for Asian Safari. Size of the enclosures vary from 50 – 85 acres. Enclosures separated by two chain link fences and in between the enclosures, a forest patch will be preserved. Remote controllable double door gates at the entrance and exit of each enclosure.

Vehicle accessible pathway throughout each enclosure. Buses will be sent inside according to a time schedule in a one way route. All roads are to be tarred.

Abandoned tanks to be reconstructed.
Construction of small ponds for drinking purposes.
Construction of caves as animal shelters.
Some scrub forest patches have to be removed.
Large number of trees to be planted to provide shelters and cooler environment for the animals.
Trees suitable for the dry zone climatic conditions select from the Department of Forest.

Outer infrastructure will include:

Entrance complex with ticket counters, toilet complex, vehicle park, bus stand and bus park, veterinary section, animal quarantine cages, cafeteria, water sumps, stores, kitchen, employees resting area, quarters for employees.
Construction of roads to reach the Safari Park. No new constructions. Use of existing roads.

Waste Disposal: Small numbers of animals are in larger areas. Therefore fecal matter allow for natural decaying. Human garbage utilize for composting and recycling. Small incinerator to burn unwanted materials.

Waste water: No animal waste water will be collected. Water obtained from cleaning of ponds can be used for watering the trees. Human waste water from resident employees and other areas can be sent to the absorption pits. Reconstruction of the tanks to be designed with water purification system.

Pinnawala Zoo Development Project

By Renuka Bandaranayake, Assistant Director, Dept. of National Zoological Gardens, Sri Lanka

Site

The Maha Oya river flows by the side of the located site. This offers a unique riverine environment associated with low lying depressions that form into marshes.

Project team

Client: Department of National Zoological Gardens
Consultants: Environmental Management Lanka (Pvt.) Ltd.; Lead Consultant of the Project
STEMS (Pvt.) Ltd.; Design Group 5 (Pvt.) Ltd.; SHPL (Pvt.) Ltd.; Contractor State Engineering Cooperation – Sri Lanka

Objectives

- Sri Lanka will be able to actively contribute to the conservation of global biodiversity conservation efforts through enhanced knowledge on animal behaviour and their captive breeding potentials.
- The program will help to preserve and enhance the genetic pool.
- The research facilities that will be associated with the program will promote great opportunities to conduct collaborative research
- Exchange of animal among the zoos across the world
- Enhance the tourism potentials of the southern region thus improving the economic potentials
- Create more job opportunities for the locals hence bringing economic prosperity to the town
- Educating people about animal behaviour, habitat etc and enhance their knowledge on these aspects

The Pinnawala zoo will serve as a centre of excellence, sanctuary for breeding and survival centre for endangered species, community resource for cultural enrichment and environment awareness that meet highest conservation standards and socio-economics aspirations of the nation.

Proposed features of the Zoo

- A wide collection of animal
- Unique landscape
- Infra-structural facilities

Zoo management and operations
Project consist of 3 stages.

- Stage I- Pinnawala Zoo
- Stage II- Night Safari
- Stage III- Aquarium

Technical Presentations on theme of Zoo Legislation, including Standards, Accreditation, Assessment, Inspection, Ethics, Welfare, Conservation, Education, Research, WZACS benchmark, Definitions & CITES

Introduction

The Ninth Conference of the South Asian Zoo Association for Regional Cooperation focused for the 2nd consecutive year entirely on the need for zoo legis-lation and how to formulate it. A brief review of the history of SAZARC's interest and involvement with zoo legislation appears on page 3 of the section on SAZARC participant working groups and presentations on the subject or an aspect of same.

This section covers technical presentations which were delivered in Power Point by Dr. Miranda Stevenson, Director, British and Irish Zoo Association, Kris Vehrs, Exec. Director, American Zoo Association and Mike Jordan, ATMOS.

No attempt has been made editorially to turn these ppt presentations into "papers". Instead, the major points in the presentation have been included to remind participants of what they heard as well as to stimulate the interest of other readers. We hope authors and readers will forgive this time saving convention.

It is noteworthy that there are two major themes within this topic of zoo legislation and they are conservation (of wildlife) and captive wild animal welfare. Also within this thematic context, zoo associations (regional and national), institutions and individuals are enjoined to abide by the highest principles and ethics. This is of crucial importance for our zoos in South Asia, which had been outside the mainstream of the international zoo "movement", if you will, until the founding of SAZARC. Despite SAZARC annual conferences, monthly publications of international news from WAZA and other zoo associations in ZOOS' PRINT (the magazine published by SAZARC's host Zoo Outreach Organisation), visits to individual zoos within the South Asian countries, training, provision of educational materials either in print or camera ready copy, many of the zoos have not changed so much. Still zoos in South Asia, by and large, are stuck in the old ways in almost every area. Perhaps there has been improvement in the self-image of the zoos, largely due to the fact of their having an Association of their own and its becoming a member of the World Association of Zoos and Aquariums (WAZA).

WAZA, to its credit, has permitted regional zoo associations from all parts of the world to become members of WAZA even if there are zoos in their region which would not come up to the standard of individual WAZA member zoos. It is an enlightened policy which enables many, many zoos to become more familiar with international standards, zoo ethics in matters of running zoos and caring for animals, and modern zoo management. It also bring these zoos closer to WAZA

projects and training opportunities through their regional associations.

WAZA is, however, like SAZARC, an association, not a legislative arm. It has influence, as do the associations, through peer pressure and provision of information, education, training, etc. rather than an official legal system. So, it is up to the regional associations and to the movers and shakers in each country to move their government to establish zoo legislation which would provide a standard both for government as well as individual zoos which would lead to improvements of zoos in the regions such that they would qualify for individual WAZA membership.

The raison d'être and focus of Zoo Outreach Organisation always has been the improvement of zoos which inspired its organisation of the meeting going on a decade ago which resulted in SAZARC, as well as ZOO's own member as an NGO Affiliate in WAZA. We urge all our zoos to constantly strive for a higher standard in all respects so as to justify our membership in the world's nodal zoo organisation, WAZA. Sally Walker, Editor Emeritus, ZOOS' PRINT & Founder/Director, ZOO and SAZARC.

Zoo Definitions

Miranda and Kris led a discussion about the importance of definitions. Before zoo legislation is drafted, there needs to be clear agreement on what is intended to be covered by the legislation. For example, there are a number of definitions of what is a zoo. In some cases, zoo legislation has been written which only impacts larger zoos (of a larger spatial size) and/or zoos with larger numbers of animals in the collection.

In other cases, zoo legislation has been written which includes a definition for zoo and a separate definition for a mini-zoo and applies to both zoos and mini-zoos. Also, there are some definitions of a zoo that include the hours of operation such as "open to the public for at least 7 days a year" or open on a regularly scheduled basis. The group discussed the different elements that might be included in the definition of a zoo and the impacts of each element.

A second example that was discussed was the importance of the definition of animal. In some cases, zoo legislation has been written so that it applies to only native species and in other cases it applies to all exotic animals. The group discussed the pros and cons of what animals should be covered by zoo legislation.

BIAZA* United Kingdom approach to Legislation & Conservation

Author/Presenter: Miranda Stevenson, Director, BIAZA

Legislation

Law is a series of rules which govern society. Legislation is effective only if there is a means of implementation – laws that can't be implemented are 'bad legislation'.

Zoo Legislation is legislation particular to zoos. In Europe, which the UK is part of, this is an European Union Directive which covers animal welfare, education, conservation and research as well as safety, public amenities. The ZLA -- Zoo Licensing Act (1981) -- is the law which lays down the criteria for becoming licensed. Zoos must be licensed under this act to open to the public and operate.

Inspections are carried out on a regular basis by government appointed inspectors – using Standards, i.e., The Secretary of States Standards for Modern Zoo Practice. Enforcement is by the Local Authority. The zoo must pass inspection to be licensed and cannot operate unless licensed – it also can be closed if fails to earn its license.

ZOOS FORUM HANDBOOK lays out the various criteria and standard for review on the following topics:

- Ethical review process
- Conservation Education and Research
- Sustainability initiatives in UK Zoos
- Animal Welfare and its assessment in zoos
- Diving in zoos and aquariums
- Veterinary standards

Details can be found on: <http://www.defra.gov.uk/wildlife-countryside/protection/zoo/zf-handbook.htm>

The inspection process includes a pre-inspection audit. The zoo fills in a form which gives information on all aspects of the collection.

The inspections are carried out by approved Secretary of States Inspectors who cover the following :

Pre-inspection audit

- Details of institution
- Animal records
- Animal husbandry and care
- Health and safety, security
- *Ex situ* conservation
- *In situ* conservation
- Studbooks
- Education
- Research

Inspection covers

- Five freedoms - environment
- Animal public safety
- Education
- Conservation
- Research
- Animal records
- managed programmes

Inspection

The inspection process is what makes the legislation effective. In the UK we have an inspection every 3 years resulting in a written report available to the public containing conditions which must be carried out within specified time limits and recommendations which should be carried out.

Local authorities, the enforcers, check that the conditions and recommendation have been carried out. Recommendations tend to be upgraded to conditions in a subsequent inspection

Inspectors

Inspectors in UK are listed and include vets and zoo professionals. There need to be two per inspection. Inspectors undergo training every 3 odd years.

Zoo Closure

The Local Authority has the power to close zoos that do not comply with conditions within the time limits. Effective legislation should be clear and implementable. Those individuals who implement the legislation should be responsible and accountable with no vested interest in the institution.

Conservation and Welfare

What is important in considering the welfare of animals? They are :

- inputs from the environment
- outcomes in what the animal does
- the Five Freedoms are a good guide

Inputs that affect welfare may be negative or positive, such as Hazards which prevent achievement of an outcome; Opportunities of enriched and more spacious environment, and representations of an outcome in the animal due to avoidance of threats or positive aspects in design.

How to measure?

We measure by examining categories ... external categories are

- Physical environment -- enclosure, environment, noise, housing, shade
- External influence -- government standards, animal rights groups, visitor perception
- Knowledge base -- scientifically based info as opposed to 'we've always done it that way', records & their analysis –evidence based
- Animal Use -- research, animal shows
- Zoo management -- professional standards, organizational requirements, participation in managed programmes, contact with visitors, visitors feeding, etc.
- Animal management -- husbandry methods, contraception, part of managed programme, training, cage mates, adjacent enclosure occupants
- Animal -- behaviour, time budgets, breeding, stereotypy, control of breeding (or no breeding)

* **British and Irish Association of Zoos and Aquariums**

- Animal health -- coat condition, longevity, parasite burden, disease
- Animal physiology -- corticosteroids- measurements

Refined animal aspects for measurement

Animal Condition: physical

- Coat
- Condition (weight) & how do you measure this
- Psychological health
- Health and health checks & the benefit of training as a tool
- Annual review of health
- Stress levels
- Faecal measures of corticosteroids establish how often to collect & in establishing baselines

Animal behaviour

- Need to monitor stereotypies identify possible problems and then measure
- Posture, gait, abnormal behaviour, vocalisations
- What is normal,
- Time budgets – what do you take as norm - wild activity can vary with conditions
- Effect of public on behaviour and activity
- Ask what do you have in place to monitor behaviour

Measurement – the way forward

- Data needed on physical environment, external influences, knowledge base
- Remember also that animals are affected by aspects more difficult to measure
- Audit tick box questions: do you record weights, gait, condition? do you carry out annual health checks? do you record behaviour?
- Need to know species-specific behaviour, what is abnormal, & to what do you compare it
- Finally, measure

Process

- Zoos need to cooperate-regions work together on husbandry guidelines and audit processes, etc
- Framework to promote good welfare – i.e. the boxes to tick i.e. check list of what you do
- Need a process that can identify potential problem areas and then collect quantitative data on those species / individuals

Five Freedoms of Animal Welfare

Good zoo managers want to be “CARERS” ... looking after :

Conservation
Animal Welfare
Recreation
Education and
Research

and are constantly on the lookout for

Factors that affect animal welfare

- Inputs that affect welfare may be negative or positive -- Hazards/ restrictions which prevent achievement of an outcome, -- Opportunities of enriched more spacious environment
- Each represents an outcome in the animal due to avoidance of threats and positive aspects in design
- How to measure?

Five Freedoms

- Food and water
- Suitable environment
- Animal health care
- Expression of normal behaviour
- Protection from fear and distress

Animal Welfare

Animal Healthcare

- Health checked at least twice a day
- Problems assessed asp
- Health records must be kept & reviewed on a regular basis

Enclosure design should minimise the risk of injury, entry of predators etc – domination

- Isolation facilities for sanitation and control of disease
- Barriers not cause injury

Veterinary care

- Frequency of visits
- Facilities
- CPD of veterinary surgeon
- Training of zoo staff in health and hygiene
- Post mortems

Opportunity to express normal behaviour

Expression of normal behaviour

- Look at what is known from wild
- Enclosure design incorporate this needs to be large and complex enough
- Keep up to date with biology and husbandry of the species
- Needs of animals -- Bedding, branchwork, burrows, nesting boxes, branches, pools
- Provide enrichment to compensate and remember time budgets
- DO NOT BREED HYBRIDS!

Time budgets - examples

Dik-dik 30% of time feeding
 Giraffe 50% feeding
 Lion 4 hours a day active
 Muntjac 50% feeding
 Primates foraging time
 Elephants feeding and travelling time
 Elephant time budgets

Protection from fear and distress

- Group composition, sex ratios, number of animals in the enclosure
- Captive breeding & control of
- Allow for normal behaviour and allow for place to get away from other animals
- Avoid stress from conspecifics or other species
- Stress from contact with the public and must not be provoked by members of the public

Protection from the Public

Natural protection

Transport and movement

- Ethical acquisition and deposition
- Correct means of transport -- Catching and transportation techniques

- Measure what found for an effective inspection process

Significant work -- the World Zoo and Aquarium Conservation Strategy : WZACS as a benchmark

What is zoo conservation?

Is it only field work and support, or work in zoo grounds? Where do the living collections fit in? Is it only if breeding is part of an active reintroduction ? or does it include *ex situ* management, research, funding, fundraising, education and awareness ... all expectations for conservation.

ZLA – Directive defines it as having all these components...

- Research – with benefits for the wild
- Training
- Information exchange
- Appropriate captive breeding
- Appropriate Repopulation and reintroduction – where appropriate

WZACS - World Zoo and Aquarium Conservation Strategy ...

WZACS focus is on native species, and enhancing sites with native species conservation. WZACS emphasizes partnerships with other organizations, training, fundraising for the projects, Raising funds, with National / Regional associations implementing assessments of the conservation contribution of members.

Native species work

Members carry out significant native species work, both on site and in other parts of British Isles and Ireland. In 2007 there were 84 projects.

Training

Assam *Haathi* is an example of a project taken up by a UK zoo which provided training and capacity building in communities, and a schools awareness program with the Biodiversity and Elephant Conservation Trust BECT.

Partnerships and fundraising

BIAZA/WLT project in Brazil contributed £50K first year. BIAZA members are at the forefront of EAZA (European Association) campaigns (both EAZA and non-EAZA members) – 40 for Year of the Frog with BIAZA itself raising funds – promotions and raffle. There has been some brilliant work by members in the field and with native species.

Do we do enough? Or...are we just not good at measuring it?

How do you measure conservation input?

You can quantify

- Direct project expenditure -- Funds,
- In-kind spending and gifts directly on project -- Conservation breeding, - Equipment and facilities, - Direct staff support
- Overheads -- management and infrastructure costs, - Benefits of captive programmes

Are managed programmes really conservation?

- Only if the species is either -- Extinct in wild, - Critically threatened, - Rescue species, - Supplementation, - Conservation research
- Or, does conservation include -- Flagship species, - Fundraising for conservation, - Education about habitats and ecosystems, - And the fact that species go extinct in captive programmes unless managed

Conservation education and research Education

- Zoos must promote public education and awareness on -- Conservation of biodiversity, - Information about the species,
- Must have a written education strategy
- Suitable facilities should be available

How to do it ?

- Interpretation and animal information, • Should be up to date, • Check the written policy, • Check the facilities (proportionate to size and type of zoo)
- Trained staff (proportionate to size and type of zoo) • How do you check the quality of teaching and aids? • Is active-learning education taking place, • Can be presentations, -Use of websites

Other ways

- Outreach, • Links to local community, • Adult education activates, • Teacher training, • Support for off-site education activities e.g. links with field projects, • Conservation

Other ways ... participating in:

- Research from which conservation benefits accrue to the species, • Training in relevant conservation skills, • Exchange of information relating to species conservation, Where appropriate captive breeding, repopulation or reintroduction of species in the wild

So Conservation can be done in different ways ...

- Habitat & species conservation within the zoo grounds
- Conservation support to native habitat and species
- Financial contribution to conservation projects in proportion to the size of the organization
- Managed breeding of conservation sensitive species
- Provide data to the relevant studbook for the national/regional programme
- Provision of staff time for this

Conservation can be achieved also by

- Exchange of information, - Publishing in popular and peer reviewed, - Management and husbandry guidelines, - Reports on conservation projects
- Conservation/sustainability -- Make the zoo as sustainable as possible and, operated an environmental policy
- Walk the talk -- Communicate this to visitors.

Research which has conservation benefits

What is research?

Some of the work carried out by students in zoos is training

What happens to the research?

Is it disseminated?

AZA United States approach to Legislation and Conservation

Author/Presenter : Kris Vehrs, Executive Director, Association of Zoos & Aquariums

What are Ethics ?

I. Definition

1. Any set of moral (what is right and wrong in behavior) principles or values.
2. The moral quality of a course of action;
3. The rules or standards governing the conduct of the members of a profession.

Ethics – evaluation in light of rules of behavior

Accreditation/recognition – evaluation in light of standards adopted by a profession or by a governmental or quasi-governmental organization regulates that profession; behaviors that are inconsistent with the profession=unethical outlines specific & general categories of “behaviors”

The Code of Ethics is an :

- inspirational guide for members
- is a basis for disciplinary action
- and applies to members only

For example:

MANDATORY STANDARDS

Misconduct

- a. A member shall not knowingly engage in activities contrary to local, state, federal, or international laws as such laws relate to our profession
- b. A member will, to the best of his or her ability, cooperate with governmental agencies regulating animal welfare and animal transactions
- c. A member shall not engage in conduct that adversely affects, or is prejudicial to, the concepts and ideals of the AZA
- d. A member shall make every effort to assure that all animals in his/her collection and under his/her care are disposed of in a manner which meets the current disposition standards of the Association and do not find their way into the hands of those not qualified to care for them properly

Disclosure of Information

- a. member shall not knowingly misinform others regarding animal records or specimen disposition, professional information, and advice.
- b. A member shall not alter animal records or alter the facts concerning age, condition, or other material information about any animal in order to affect the sale, trade, loan or other transaction with respect to such animal.
- c. A member shall issue no statement to the public which he/she knows (or should know) to be false or misleading.

Animal Transactions

Make **every effort** to assure that all animals in his/her collection and under his/her care are disposed of in a manner which meets the current disposition standards of the Association and do not find their way into the hands of those not **qualified to care** for them properly

What does that mean ?

- Know where you're sending animals
- Check out the receiving facility yourself; talk to colleagues about their reputation
- The recipient must have the proper facilities to meet the needs of the animals
- The recipient must have the expertise to care for the animals.
- If you learn the recipient is not providing proper care, get the animals back.

Animal auctions - AZA members offering wildlife for sale at auctions attended by the general public are in violation of the AZA Code of Professional Ethics, specifically Mandatory Standard II.e. “do not find they way into the hands of those not properly qualified to care for them.”

Animal Acquisition

- Know where your animals come from – who is the seller, importer, broker or donor
- Check to make sure that all local, state, federal provincial, country laws are being followed
- Check to make sure that there are the proper permits
- You must have the space for the animal
- You must have the proper facilities
- You must have the expertise to care for the animals
- You must have sufficient finances; some animals are more expensive to keep than others (e.g., elephants, giant pandas)

What are some of the ethical debates in your zoos ?
Are ethics different in each country?
Do ethics change over time ?

Animal Welfare Act (AWA)

The Animal Welfare Act is the United States Approach to Zoo Legislation

It was enacted in 1970 and is administered by US Department of Agriculture, Animal and Plant Health Inspection Service

Purpose

- to insure that animals intended for use in exhibition are provided humane care and treatment
- to assure the humane treatment of animals during transportation in commerce
- to protect owners of flora and fauna from theft

AWA Regulates

- Transportation • Purchase • Sale • Housing
- Care • Humane Handling • Treatment

Who is regulated ?

Exhibitors = zoos, carnivals, and circuses
An “exhibitor” is a facility that is open to the public and displays animals.

Animals covered

- Secretary of Agriculture determines animals covered
- Non-human Primates — psychological well-being.
- Marine Mammals — specific space requirements.
- No standards for fish, horses, herps, farm animals.

- Preliminary regulatory work begun on rats, mice, and birds not bred for research.

Minimum requirements

- Handling • Housing • Feeding • Watering • Sanitation
- Ventilation • Shelter from extremes of weather and temperatures • Adequate veterinary care • Separation by species

Exhibitor's License

- Apply for the license annually • Pay the fee
- Must be inspected first by APHIS inspector and meet the standards

License Renewal

Submit the application and pay the fee
Submit an Annual report

- Number of animals owned, held or exhibited during the past year
- Any offspring listed
- Identification, names and address from whom animals acquired

Failure to comply

- List of deficiencies and corrective action
- 2 times to demonstrate compliance
- 3rd time, lose fee and can't apply for 6 months
- Can't operate as a zoo or be open to the public or exchange animals

Who are the Inspectors ?

- Veterinarians; veterinary technicians
- Specially trained on elephant care
- Specially trained on marine mammal care
- 100+ for 2700 exhibitors

Records

- Records of purchase, sale, transportation, identification and previous ownership must be retained
- All animals must be identified
- Records must be maintained for 1-year

Transportation

- Containers • Feed • Water • Rest • Ventilation • Temperature • Handling

Veterinary Care

- Attending veterinarian required
- Can be part-time; if so written program of care and regularly scheduled visits needed
- Appropriate methods to prevent, control and diagnose and treat diseases and injuries
- Daily observations directed by veterinarian
- Pest control

Handling of Animals

- No deprivation of food and water for training
- Minimum risk of harm to animal and to public
- Sufficient distance and barriers to protect animals and public

Food

- Wholesome and palatable
- Proper storage
- Protect against mold
- Protect against contamination by vermin

–Protect against deterioration

Waste Disposal

- Animal and food waste
- Bedding
- Dead animals
- Trash/debris

Facilities Indoor

- Temperature; protect from extremes
- Adequate ventilation
- Ample lighting
- Adequate drainage
- Sufficient space
- Adequate housekeeping
- Potable water

Facilities Outdoor

- Shelter from sunlight
- Shelter from inclement weather
- Sufficient space
- Potable water

Sanctions

- Authority exists to confiscate animals or destroy them in a humane manner if animals found suffering because of failure to comply with the AWA
- Civil penalties of \$2,500 per violation per day
- Cease and desist order
- If reason to believe a licensed exhibitor is violating the AWA, may suspend license for up to 21 days
- After hearing, exhibitor's license could be suspended for longer
- Opportunity for a hearing
- Size of penalties can vary
- size of business
- seriousness of violation
- history of violations

Investigations

- Complaint filed or phoned in
- Can be anonymous
- Investigation team sent to the zoo
- Team doesn't share the complaint with the zoo
- Investigation team writes up a report
- Zoo has to ask for a report
- Many times the institution is fined

Accreditation Overview

Accreditation (peer evaluation and review)

An assessment process using experts in a particular field to identify standards of acceptable operation or performance, and to measure compliance with them
Accreditation = recognition

Common Goals of Accreditation Programs

- Development of standards
- Assessment of compliance
- The improvement and continuing education of the applicant
- Promote an ongoing, long-term self evaluation of the applicant

Goals of AZA Accreditation Program

- Encourage institutions to develop superior facilities
- Establish standards

- Assess compliance
- Provide counsel

Why AZA?

- USDA would regulate, if not AZA
- Don't want the animal rights groups as inspectors
- We are the experts
- We want to differentiate ourselves from the "bad" zoos
- Desire to promote excellence within the profession

Mission

To establish, uphold, and raise the highest zoological and aquarium industry standards through self-evaluation, on-site inspection, and peer review.

Why Accreditation/Recognition Is Important?

- Binds the best of the profession together as one voice
- Sets us apart
- Promotes growth & improvement within each institution & the profession
- Increases ability to attract & retain high quality staff
- Eases animal exchange with other accredited institutions
- Increases eligibility for grants
- Exempts institutions from certain government requirements (primarily at the state or local level)

The Accreditation Commission

- 12-member Commission
- Experts in zoo & aquarium operations, animal management & husbandry, & veterinary medicine
- Representatives from small, medium, & large operations

Three Primary Areas of Expertise of Inspection

Team Members

Operations/Institution Management

Primarily Focuses On:

Governing authority, Staffing, Facilities, Finance, Guest services, Maintenance.

Animal Management/Curatorial

Animal collection, Animal records, Exhibits, Graphics & signage, Husbandry, Facilities

Exotic Animal Veterinary Medicine

Animal collection, Medical records, Veterinary care, Nutrition & Food Prep, Hospital facilities, Necropsies.

Criteria For Service As An Inspector,

Expertise to fill one or more of the three primary roles, Individual membership in AZA, Employment at an accredited institution- Minimum 5 years experience in the profession, professional experience, Thorough understanding of the accreditation process, its value, & related standards and policies; Ability to maintain impartiality, Good communication skills, Attend AZA Inspection Training Session once every three years

Criteria For Selecting Team Members

2-4 inspectors from accredited institutions, One for each primary role (operations, animal management, veterinary), Expertise in areas applicable to institution, One inspector from previous team, when possible; One inspector from similar size institution, when possible, One new inspector, when possible,

Located within reasonable distance of institution being inspected

Conclusion of Inspection

The Commission makes their decision

Team recommendation is only a part of what the Commission considers

Accreditation Commission makes the decision & bears the full responsibility ~ not the inspection team

What The Commission Considers when Making Its Final Decision

Six months of reviewing & evaluating documents, records, policies, & practices of the institution

The previous inspection report & concerns

2-5 day on-site inspection

The current inspection report & concerns

Recommendation of the inspection team

Investigation of comments from colleagues & outside sources (if any)

The number & nature of concerns

Institution's response to the concerns

Institution's hearing

State of the institution at present

Commission's Decision

- Commission will either
 - Grant Accreditation
 - Table Application – the institution doesn't quite meet standards but should be able to in one-year or
 - Deny accreditation
- Progress reports & follow-up inspections

In Conclusion

Accreditation is for five years & expires at the end of that period

Accreditation is based on state of institution at the time of the review (not on future plans)

Commission may rescind accreditation anytime

Commission may require follow-up or special inspections

Development and Application of Standards

Performance Standard (qualitative)

–The level of achievement considered to be minimally acceptable for a performance characterist

Example: All animal exhibits and holding areas must be secured to prevent unintentional animal egress

The animals shouldn't be able to get out of their exhibits.

• Engineering Standard (quantitative)

–A quantity or measurement; specific numbers

Example:

The walls in the tiger exhibits should be 16 feet high.

Guideline

A plan or explanation to guide in setting standards

Not a requirement per se

Developing and/or Revising Standards

- Consideration of commonly accepted best practices
- Seek input from related committees, colleagues, experts

- Assign a team to develop language

Does the standard meet the following:

- Is it accurate?
- Is it fair and reasonable?
- Is it reliable (will it evaluate the same thing in a variety of settings)?
- Does it represent good business practice?
- Does it conflict with other established standards?
- Does it contribute to the goals of the accreditation process?
- Is it assessable?

- Determine who has final approval authority of standards
- When will the standard become effective? Is there need for a phase-in period? If it involves new construction, the phase-in will need to be longer.
- Even if there is a phase-in period, institutions should take immediate steps to incorporate the standard.

Evaluation In Light of Standards

- Judgment based on “as is”, not future plans
- Consider all factors in each case
- Apply each standard without bias
- Assess the result, not the method
- Inspection team must discuss and agree

Accreditation/Recognition : Areas of Primary Focus

Animal Collection

- Living environments -- Temperature, - Shade, - Size of exhibit & holding areas, - Exhibit furniture, - Ventilation, - Lighting, - Construction & Nature
- Social & biological needs
- Enrichment program
- Nutrition
- Record Keeping
- Outreach animals & those used in public contact
- Acquisition & disposition, policy & practice
- Safety of exhibit & service areas -- Animals, - Public, - Staff
- Institutional Collection plan
- Water quality & access
- Food storage & prep.
- Pest Control

Veterinary Care

- Staff Veterinarians (qualification, number, experience)
- Hospital guidelines & medical programs of the American Association of Zoo Veterinarians
- Adequacy of Veterinary program & services
- Medical records
- Nutrition
- Food storage & prep
- Drug storage & authorization
- Medical & emergency policies & procedures
- Compliance with FDA guidelines
- USDA reports, & what has been done to correct concerns
- Medical alarm systems
- Quarantine -- Space, - Policies & procedures
- Necropsies

Conservation

- Key element in mission of institution
- Level of involvement in conservation programs
- Written plan or strategy
- Participation in Species Survival programs / SSPs
- Stud books managed by the institution
- Staff involvement in SSPs, AZA Taxon Advisory Groups, & other conservation efforts within AZA
- Contribution to local & natural conservation literature and programs
- Level of involvement with Schools & Universities

Education & Interpretation

- Key element in mission of institution
- Education & interpretive programs
- Staffing
- Funding
- Publication, brochures, printed materials
- Library & Internet
- Classrooms & teaching areas
- Exhibit graphics & signage
- Interaction with local Colleges & Universities
- Community outreach
- Volunteer training

Research

- Level & nature of research projects
- How projects are selected
- Publication of research
- Level of involvement with local & regional academia
- How research benefits animals & other institutions

Governing Authority

- Support for institution
- Relationship with the institution Director
- Depth of control in management of institution
- Process of hiring or firing personnel
- Line of authority in acquisition & disposition stock

Staff

- Qualifications & number
- Training & continuing education
- Salary levels
- Roles & responsibilities
- Working relationship between staff & management
- Lines of communication
- Clarity of lines of authority
- Involvement in AZA & other relevant organizations
- Supervision & training of volunteers

Support Organization

- Day-to-day role of the society
- Support & fund-raising efforts
- Financial reports and audits
- Relationship between society staff & zoo staff
- Consideration of whether an SO might be helpful, if one does not exist

Finance

- All financial records
- Solvency for next five years
- Budgeting process
- Adequate funding for required programs
- Contingency plan
- Strategic Plan
- Master Plan

Physical Facilities

- Condition of facilities *at the time of inspection*
- Preventative maintenance
- Adequacy of service areas
- Adequacy of plumbing, water, & ventilation systems
- Condition of walkways
- Condition of the buildings & structures
- Usage of buildings & structures
- General housekeeping
- Compliance with relevant Federal & State requirements for animal facilities

Safety & Security

- Safety procedures
- Emergency procedures
- On-grounds security
- Protocol & frequency of drills
- Adequate barriers
- Perimeter fencing
- Clarity & accuracy of signage
- Incidents that have occurred over the previous five years (what has been done to prevent recurrence)
- Storage & handling of flammables & hazardous materials
- Emergency alarm systems & life support systems
- Firearms training, storage, & access

Guest Services • Overall aesthetics of buildings and grounds • Housekeeping • Restrooms • Quality of food • Gift shops • Accessibility • Parking • Benches • Water fountains • On-grounds guest transportation • Trail maps & visibility of staff

Commonly Found Major Concerns

- Unresolved governance issues
- Unsigned/unconsummated agreements
- Low staffing levels
- Incomplete or lack of written safety procedures, manuals, protocols
- Inadequate policies, or failure to follow them
- Failure to conduct periodic emergency drills
- No duplication of older records, or failure to store duplicate set in separate location
- Lack of GFI circuits in wet areas

Commonly Found Lesser Concerns

- Peeling paint • Rusty or bent doors & fencing
- "Permanent" extension cords
- Cluttered yards & storage areas
- Rotted wood & fencing
- Potholes in asphalt & cracks in visitor walkways
- Dark work areas
- Insufficient safety barriers, ladders, fencing
- Missing, improperly mounted, or expired fire extinguishers
- Inaccessible MSDS sheets

Mentoring

Some institutions want their operations evaluated before applying for accreditation or before undergoing the process again

- Institution may contact the Accreditation Department requesting a "mentor".
- Mentor is a professional from an accredited institution
- Mentor is or has been an inspector, a Commissioner, or Commission Advisor

- Mentor is well versed in accreditation standards & fundamental AZA philosophies
- Mentor can be consulted throughout the preparation phase

Scope of duties of Mentor

- The mentor is available to perform an unofficial inspection.
- The mentor produces a list of areas that need work before submitting application, or before the official inspection.

FIRST-TIME APPLICANTS

- Any costs incurred by the mentor (expenses only) shall be borne by the applicant institution.
- Having a mentor *does not guarantee* an institution will be granted accreditation.

CITES -- CONVENTION ON INTERNATIONAL TRADE OF ENDANGERED SPECIES OF WILD FAUNA AND FLORA

PROBLEM

- Each year intl wildlife trade worth billions of dollars
- 100's of millions of plant and animal specimens
- Trade is diverse
- Exploitation of animal and plant species is high
- International trade + habitat loss can deplete populations
- Many wildlife species in trade are not endangered
- Trade in wild animals and plants crosses borders between countries

PURPOSE

- International cooperation to safeguard species from over-exploitation
- CITES = spirit of such cooperation to ensure the sustainability of the trade for the future
- Protection for 30,000 species flora and fauna

WHAT IS CITES?

- International trade treaty - 175 party nations
- Regulates import/export of species threatened **by international trade**
- Covers animal/plants, dead/alive, and all derived parts *any readily recognizable part or derivative*

BEGINNING

- Text of the CITES agreed to by 80 countries in Washington DC., USA, on 3/3/73.
- Treaty entered into force on 1 July 1975 CITES
- States (countries) that join CITES = Parties

TREATY

- CITES is legally binding on Parties
- CITES does not take the place of national laws
- Each Party must adopt its own domestic legislation to implement CITES

SAZARC CITES MEMBERS -Ratification dates

- Afghanistan-1985, • Bangladesh-1981
- Bhutan- 2002, • India- 1976 • Nepal - 1975
- Pakistan - 1976 • Sri Lanka -1979

CONFERENCE OF THE PARTIES

- The Conference of the Parties (CoP) = supreme decision-making body
- CoP comprises all member States; all 175 Parties
- CITES Secretariat to run the treaty

STRUCTURE

- CoP
- Standing Committee meets between meetings
- Animals Committee meeting
- Plant Committee meeting

STRUCTURE AT PARTY LEVEL

- Designate a Management Authority
- Designate a Scientific Authority
- Implement the decisions of the CoP or take a reservation

LISTING ON APPENDICES

- CoP agreed on a biological and trade criteria to determine whether a species should be included in Appendices I or II
- At CoP, Parties submit proposals based on the criteria to amend these two Appendices

CITES Appendix I

- Species imminently threatened with extinction due to international trade
- Requires both import and export permits
- Import of species must “not be primarily for commercial purposes”
- Removing species must be found not “detrimental” to survival of whole species

Import Permit: Importing country must decide:

- import will not be detrimental to the survival of the species involved
- the recipient is equipped to house and care for the specimen
- the specimen is not to be used for primarily commercial purposes

Export Permit. Exporting country must decide:

- the specimen was not obtained in contravention of the laws of that Country
- the export will not be detrimental to the survival of the species involved
- any living specimen will be prepared and shipped to minimize risk of injury, damage to health or cruel treatment
- the import permit has been granted

Primarily Commercial Purposes

- Commercial Activity - one whose purpose is to obtain economic benefit, including profit (whether in cash or in kind) and is directed toward resale, exchange, provision of a service or other form of economic use or benefit
- Commercial purposes – defined by country of import.
- Non-commercial aspects must clearly predominate the transaction
- Intended use of the Appendix I specimen in the country of import; not the nature of the transaction between the owner and the recipient

RESOLUTION ON CAPTIVE BREEDING

- Captive-breeding programmes: Importation of specimens of Appendix-I species for captive-breeding purposes raises special problems. Any importation of such specimens for *ex situ* purposes must be aimed as a priority at the long term protection of affected species as required in Resolution Conf. 2.12.
- Some captive-breeding operations sell surplus specimens to underwrite the cost of the captive-breeding programme. Importations under these circumstances could be allowed if any profit made would not inure to the personal economic benefit of a private individual or share-holder.
- Rather, any profit gained would be used to support the continuation of the captive-breeding programme to the benefit of the Appendix-I species. It should not be assumed that importation under such circumstances is inappropriate.
- As for imports of captive-bred specimens for captive-breeding programmes for commercial purposes, Article VII, paragraphs 4 and 5, eliminate the need to address the ‘primarily commercial purposes’ standard in Article III, paragraph 3 (c).
- In connection with captive-breeding purposes, it should be noted that as a general rule importations must be part of general programmes aimed at the recovery of species and be undertaken with the help of Parties in whose territory species originate.
- The profit gained that might result should be used to support the continuation of the programme aimed at the recovery of the Appendix-I species.

CITES Appendix II

- Species not imminently threatened, but trade needs to be regulated
 - Requires export permit
 - Export or re-export certificate must accompany each shipment
- Export Permit
- the specimen was not obtained in contravention of the laws of that Country
 - the export will not be detrimental to the survival of the species involved
- Exporting country must decide that:
- any living specimen will be prepared and shipped to minimize risk of injury, damage to health or cruel treatment
 - the import permit has been granted

CITES Appendix III

- Species regulated by country of origin for conservation reasons
 - Requires export permit
- CoP Meetings
- Every 2 ½ years
 - Next meeting in January 2010 in Qatar
 - Each Party sends delegates
 - NGOs send delegates
 - WAZA is an NGO; AZA is an NGO
 - Important to participate
 - Text of any draft resolution or any document for consideration at 15th CoP communicated to the Secretariat by **19 August 2009**
 - Text of proposed amendment to Appendix I or II for consideration at the 15th CoP communicated to the Secretariat by **19 August 2009**
 - If the proposed amendment to Appendix I or II concerns a species or a population of a species that occurs partly or totally outside the Parties territory and if the proposing Party does not intend to consult the other range States before the submission date to the Secretariat by **20 February 2009**
 - Follows the intent of international cooperation

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Miranda Stevenson, UK
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Thanks from CBSG/RSG and SAZARC participants

From Nepal

The Ninth SAZARC Conference and Sixth Conservation Breeding Specialist Group (CBSG)/ Reintroduction Specialist Group (RSG) meeting was held in Colombo, Sri Lanka between February 9 and 15, 2009. Ms. Sarita Jnawali, Project Manager from National Trust for Nature Conservation Central Zoo, along with Mr. Shivraj Bhatta, Ecologist from the Department of National Park and Wildlife Conservation (DNPWC) participated the Conference. The trip for both participants was fully sponsored.

The focus of the SAZARC conference this year *Zoo Legislation and Zoo Inspection* was very relevant in the context of Zoos in Nepal. So far, Nepal does not have legal provision for wildlife exhibition. The Government of Nepal has given overall management responsibilities to the National Trust for Nature Conservation (NTNC) since 1995. NTNC is a national NGO created by legislative Act 1982. In addition to Central Zoo, NTNC manages two conservation areas (Annapurna and Manaslu) and assists the DNPWC to scientifically manage Chitwan NP, Bardia NP and Suklaphanta WR through its Chitwan, Bardia and Kanchanpur based Biodiversity Conservation Center, Bardia Conservation Program and Suklaphanta Conservation Program, respectively.

The present Conference was an excellent forum to learn and share legal aspects of zoo management at regional level. All the lectures delivered on Zoo Legislation and Standard, Possible Impediments of Legislation-interactive Zoo Ethics, Animal Welfare Legislation, Zoo Assessment Tool, Conservation, Education and Research, and Marking/Individual Identification of Animals were very informative and broaden up our knowledge and skill in zoo management. In particular, the Zoo Inspection Exercise was extremely useful to learn the inspection mechanism. This will be helpful to assess different Zoos in Nepal. Moreover, presentations from other countries were also very useful.

Prior to SAZARC Conference, opportunity was provided to attend two-days CBSG/ RSG meeting, focused on Consideration in Releasing Animals: IUCN Fundamentals and reintroduction guideline. The group exercise, discussion and presentation were also very useful to understand the importance of the regional networking and the cooperation. This forum was not only helpful to share experiences but was useful to establish effective coordination and cooperation among experts engaged in *ex-situ* and *in-situ* conservation.

Finally, we would like to express our sincere thanks to Sally Walker, Founder Director of Zoo Outreach Organization, who made our participation possible in SAZARC Conference and CBSG/RSG Meeting. We, on behalf of DNPWC would like to extend deep appreciation for inviting government representative to participate in the Conference. As the Central Zoo in

close coordination with DNPWC is in a process of drafting Zoo Act and Legislation and its endorsement, the knowledge gained during the Conference has become instrumental to speed up the overall process. Sally's suggestions and guidance over the last one decade has helped the Central Zoo to build up capacity of its staffs and school teachers, and adopt science based conservation education program. The Central Zoo has been successful to launch membership based education program among 4000-5000 school children of Kathmandu valley every year through well trained staff and FOZ teachers.

Sarita Jnawali, Manager, NTNC - Central Zoo & Shivraj Bhatta, Ecologist, DNPWC, Nepal.

From India

Thanks are also due to the resource persons and team crew of Zoo Outreach Organization. We would also like to acknowledge the sponsors who provided costs for our travel and stay, our participation in such an important and interesting regional conference would not been possible without their support. We appreciate the National Zoological Garden and Ministry of Sports and Public Recreation of Sri Lanka for providing homely environment throughout our stay in Sri Lanka. Thanks for the review. I personally was benefitted a lot by both the conferences. Specially lectures by Mike Jordan were very good; I learnt a lot by his presentations as well as those of Kris and Miranda.

The contributions and efforts made by National Zoo Colombo and its staff to make the conference comfortable, exciting and memorable were commendable and deserve all comments written by you about them. Nonetheless, you and your whole team deserve to be congratulations also for making the events a memorable learning experience. All participants too took active interest and were also instrumental in making the meeting and conference successful by experience sharing and giving their valuable inputs. I thank you and your team once again for everything.

With regards, S S Rajpoot, Van Vihar National Park, India.

From Bangladesh

It was a wonderful 8 days with all SAZARC colleagues and resource persons. It was a very nice program to share knowledge and experience. All the programs, group work, presentations, etc. helped me a lot to update my knowledge and to realize the gap of our activities. Thanks again for giving me this opportunity.

Best regards, Dr. Malekur, Dulahazara Safari Park.

From India

We are thankful to every one those who participated in SAZARC and also to resource persons. Our special thanks to organisers and host, they have taken lot of pain for participants A to Z arrangements. Our sincere regards to Hon'ble Minister and Secretary, Addl Secretary and staff of Sri Lanka and also to Sally Walker and her very

special team. Once again thanks to every one and hope that you all will continue to tolerate me with the same tempo and patience.

Yours sincerely, R.K. Sahu, Ahmedabad Zoo, India.

From Pakistan

It was really like a dream come true to be with you in Sri Lanka. I 'd like to pay my best regards to all our donors, hosts, friends, ZOO, WILD and SAZARC Founder, (Sally), Latha, Daniel, Marimuthu, Miranda, Kris, Mike and all the Sri Lankan hosts to provide marvellous opportunity. Thanks Sally for provision of the learning platform to share and exchange knowledge. Thanks again to all donors.

Regards, Bushra Khan, Ed Off., Lahore Zoo, Pakistan.

From Sri Lanka

This is for saying thank you for you all. I participated on the second day and it was great opportunity for me (representing the Young Zoologists' Association). I shared your experiences and got valuable information from all the country representatives.

Iresha Harischandra, Sri Lanka.

From Bangladesh

First of all, I would like to thank you a lot for inviting me as well as giving me an opportunity to have a chance and access in a learning and knowledge & experience sharing conference the 9th SAZARC conference held in Colombo. As you know I have completed my doctorate in the field of Avian Breeding and I am deserving such an inquisitiveness regarding conservation breeding too. Undoubtedly, I can say that I got the right opportunity in RSG & CBSG meeting. After that, though I am working with Zoo for last 6 years, this is the first time I availed the opportunity to gather the knowledges on policies and legislations already existing and going to be passed in the SAARC countries. All the lectures of our honourable speakers were very informative to me. This is my pleasure to thank honourable speakers Mike Jordon, Miranda Stevenson, Kris Vehrs. I specially became fascinated with the presentation on breeding given by Mike and also learned a lot from Mike's talk on Marking of Animals and Kris speech on CITES as well as Miranda's on the Five Freedoms, etc. Along with learning a lot, I also enjoyed specially during post conference tour. I can't forget the memory of observing herd of wild elephants with calves from a very short distance. It was both a learning and amazing adventure for me. Though it was in night time, but I learned from turtles breeding programme. Sally you know, I have been graduated from Poultry Science and have a vast experience in hatching avian eggs both in natural and artificial means. But, it was first time for me to have a look on turtle eggs laying, collecting, placing for hatching and taking out of the hatchlings to rescue them from suffocation. It was really wonderful job. One mater is worthy to mention here that all the staff, officers, higher officials involved in arranging the conference were very very cordial, sincere and active. I have also learned from that how should arrange such

a successful multinational conference. Thanks to all the Sri Lankans involved over there. I cant remember all their names but thanks Sally, Sanjay, Daniel, Latha, Marimuthu, and thanks to all other participants from 6 other SAARC countries. I have captured many scenes and movies. Whenever, I shall get time, as soon as possible, I shall try to post over internet. Hope for the best. Have a good luck for all of us and every betterment in the path of wilds conservation, breeding and reintroduction.

Best regards, Md. Golam Rabbani, Rangpur Zoo, Bangladesh.

From Bhutan

Thank you for inviting me to an important series of meetings of the regional networks of IUCN SSC Conservation Breeding Specialist Group, (CBSG, South Asia), IUCN SSC Reintroduction Specialist Group, (RSG, South Asia) and the 9th Annual SAZARC Conference South Asian Zoo Association for Regional Cooperation (SAZARC) w.e.f 9th-15 February 2009 hosted by National Zoological Gardens of Sri Lanka. I'm extremely glad that wonderful experiences in the field of reintroduction, Zoo management, and Zoo Legislation are timely and useful. I didn't expect so much from the CBSG meeting and the SAZARC conference. It is worth attending. Once again, thanks to your marvellous team of Sanjay, Daniel, Marimuthu, Latha and the excellent Resource persons

Best regards, Kuenzang Gyeltshen, Bhutan.

From Sri Lanka

Thanks for all the hard work you and ZOO team did trying to organize the workshop in SL. We enjoyed having you here and learned so much during the workshop. Wish you best in HECx workshop in Nepal.

Best Regards, Ganga Wijesinghe, Vety. Surgeon, Sri Lanka.

From Sri Lanka

Hi. Good morning. I hope you would have finished your Nepal programmes. You must be tired of continuous Programmes. Hoping you all would have enjoyed the natural beauty of Nepal. I would like to thank you for bringing the excellent resource persons, participants from South Asia and your active working staff of Z.O.O. We had a good time during the session. I am sorry that I couldn't join with you all right through out the tour. Once again I take this opportunity to thank you all.

Good wishes, P. Arunthahty, Vety. Surgeon, Sri Lanka.

From Sri Lanka

We had very nice time with you and all other colleagues. The Zoo inspection form you gave us I turned to an evaluation guideline and make use to evaluate enclosures designed for Pinnawala zoo. The professor who is in the team told me that it is a really good document for us to build up the new zoo. Thanks to you Sally we got the knowledge. Thank you.

Best wishes, Renuka Bandaranayaka, Asst. Director, National Zoo, Sri Lanka.

From Sri Lanka

We learned lots of new information on SAZARC, CBSG and RSG. I would like to thank you and your staff. We hope to join your programs annually to increase our knowledge and share experiences from other countries. I participated in small mammals conservation and field technique program in 2004. We would like to have another program on conservation and modern technology. I would like to thank you again on the opportunity you have given.
Pubudu Weerathna, YZA, Sri Lanka.

From Pakistan

I would like to thank you for providing me opportunity to attend the CBSG workshop & 9th Annual Conference of SAZARC in Colombo Zoo, Sri Lanka. Inspection of different sections of Colombo Zoo was really an excellent experience for me. In the light of the observations of the honourable resource persons I would further improve different sections of Karachi Zoo. The format of inspection is also a very valuable document for the improvement and upgradation of any South Asian Zoo. It enabled the participants like me to understand the technicalities very deeply and how to sharpen skills of inspection or identify the mistakes which we do not consider in our daily routine work. The presentations of Mike, Miranda, Kris Vehrs, Sanjay & yours were very informative especially the presentation of Mike on Considerations in releasing animals – Some IUCN fundamentals, Reintroduction of Southern ground Hornbill and other species.

Presentation of Miranda on CBSG activities in the past year, were very worth while. Presentation of Kris on CITES also cleared so many confusions of our mind; she has given a detailed information about the functions & objectives of the organization. All the resource persons mentioned above deserve my heartfelt applause. Working group sessions held during the conference were also very useful & brain storming for a manager dealing with the wildlife. It represented the collective views of all the participants of different countries, which reflected a comprehensive & complete picture to solve the problem faced wildlife of this region. Convey our special regards and thanks to Hon'ble Minister, Secretary, Addl Secretary to the Ministry of Sports and Public Recreation & Colombo Zoo Director & his staff regarding organizing such a good workshop & SAZARC Conference at Colombo Zoo, Sri Lanka. The food & cultural activities were also very pleasing as well as schedule of conference cum shopping which we enjoyed very much. During the tour a ride in a glass bottom boat to see corals, turtles & colourful fishes was a unique experience of my life. The visit to Bundala National Park, where we saw wild elephants, crocodiles and many Sri Lankan birds, was remarkable and a memorable experience of my life. It was very amazing sight for me to look at the elephants freely roaming in their natural habitat. It is really another treasure of wildlife like Gir forest of India in South Asia. The people who are managing this treasure are very professional and praiseworthy & deserve all appreciation for their wonderful work.

Good wishes to the new SAZARC president, Sarita Jnawali who will organize the next conference. Thank you for arranging such an excellent workshop and conference for which you & your special team deserve appreciations from myself.

Qazi Muddassir, Director, Karachi Zoo, Pakistan.

Thanks ! The 9th conference of SAZARC which I attended in Sri Lanka was unforgettable. All the arrangements, lectures were very good. I'd like to pay my regards especially to Ms. Sally Walker and her team. **Muhammad Yousaf Pal, Director, Lahore Zoo, Pakistan.**

All the resource persons have delivered good and informative lectures. It was very good to see Sri Lanka and friends again. Thanks Sally for this opportunity as it will not be possible without you. Thanks to our host the Sri Lankan Zoo Staff.

Abdul Qadeer Mehal, Director, Punjab Wildlife & Parks, Pakistan.

From India

As a part of the ZOO team which hosts SAZARC and organises this annual event. I would like to give my profuse thanks to the Government of Sri Lanka, the Ministry of Sports and Public Recreation and the staff of the National Zoo for their excellent and unfailing patience, hospitality and courtesy throughout the CBSG/RSG meeting, SAZARC conference and tour. I must particularly focus on patience, because due to some administrative characteristics of nearly all the South Asian countries organising and funding this series of meetings is the most difficult job I have ever had, and I frequently lose patience which makes the job of hosts and co-organisers even more difficult. I thank the hosts for being so tolerant and accomodating. Being host, is also a very difficult job and often hosts and organiser both feel the stress. I show mine but the hosts normally don't show theirs !

It was a pleasure to have so many upper-middle and senior officers present at the conference. Sri Lanka is lucky to have had 21 M.Sc. and Ph.D. level graduates deputed to the zoo and it was great to have them at the meeting, even, for some of them, for a short time.

It is appreciable that the Hon. Minister, Ministry of Sports and Recreation and his officers, Secretary and Addl. Secretary (particularly...our President) for their immense interest in the meetings, conference and tour as they contributed their concern, ideas and time as well as a very generous financial grant to see the participants were treated well.

I would like to thank the sponsors from abroad for their interest and financial contribution as many of them have been contributing since the first meeting. These sponsors are all in the business of conservation and animal welfare. They have many demands on their resources and it is a hard choice for them to allocate such resources. We are thus hard pressed to insure that conservation and welfare principles are burned on our brains as a result of the conference. I hope we succeeded in that. Many thanks to all.
Sally Walker, ZOO/SAZARC.

Education Reports from SAN-IZE members on Animal Welfare Fortnightly and other events

Wildlife Welfare Programme at Chennai, Tamil Nadu

A one day awareness programme on Wildlife Welfare was conducted for the students of Grove School, CPR Ramaswami Iyar Foundation, Chennai on 22 January 09. Nearly 28 students participated in the programme. After the introductory talk the students were divided into two groups. While the first group was dealt with Monkey Manners, the second group observed and interacted with them. The educational packets supplied by Zoo Outreach Organisation were informative and very useful. They enthusiastically enacted a play and decided to share the information to all at school and at home.

The second group was given Elephant Etiquette kits from which they learnt many things. Though they have seen the fearful situation created by the elephants in T.V. and news papers the steps to be taken at the roadside, Temple and Zoo were very useful. A quiz program was conducted at the end in which Selvi A. Krithika and S.Siddharth won the prizes. A role play was enacted by the second group. At the end of the day's program they clearly understood that Wildlife Welfare is not for the benefit for the animals alone but also for the human beings too. Ms. Sujatha assisted the entire program and Krithika proposed the vote of thanks. **Submitted by: Jessie Jeyakaran, Email: jessiejey@rediffmail.com**



Animal Welfare Fortnight programmes conducted in Bhopal, M.P.

An attractive banner graced the starting of the program where supporting partners for the event were introduced and the importance of "Animal Welfare Fortnight" explained. After that an interactive session was conducted with students concerning



animals. We gave equal opportunity to students to share their views about animals. We organized the program in three schools of Bhopal in three different themes on bear, elephant and tiger.

A lecture on bears was presented to students at Govt. Naveen High School, Bhopal. The habitat, food habits and role in ecosystem were explained. The



threats to bears were also explained. Also a drama on bears was organized with students taking different characters. We involved all the characters mentioned in the kit about bears, which was explained to the students. The drama was based on

threats to the species. The students were fully involved in this activity and learned a lot from the drama. Another lecture on Elephants was given to Naveen Hr.Sec. School, Arera Colony, Bhopal. Fifty students participated in the program. The lecture consisted of important facts and figures about this mega species. A quiz was also organized after the lecture to find out the level of understanding of students. An elephant kit was given to the students and utilized to reach them. Two of the students played the roles of Eswari and Elango with finger puppets. They had a discussion on elephants in the wild. Students pledged to play important role in the conservation of elephant by tying Rakhi's on one another's wrist. Finally another lecture, this one on Tigers was given to the students of Govt. Middle School, Khanugaon, Bhopal. Initially the basic information about the tiger was given, after that a group discussion on tiger was held. The students were divided into four groups and learned basic information, threats to tiger and what we could do for conservation of tigers.



At the end of each lecture in all three schools we asked some basic questions about the species and for correct answers we rewarded them with amphibian calendars provided by Zoo Outreach Organization. **Submitted by: D. Chakravarty, Email: dilip.chakravarty@ceeindia.org**

Verve 2009-Youth Summit on Wildlife at Delhi

I had an opportunity to address a gathering of college students using educational materials provided to me by ZOO in January 2009. The 90 minutes session was conducted on the occasion of Verve 2009 - "Youth Summit on Wildlife" organized by Hindu College, University of Delhi. My session was on 7th February. I broadly covered issues revolving around Human Wildlife Conflict incidents throughout the country, reasons why they are happening and most

importantly explaining misconceptions about wild animals which result in them being killed whenever they enter human habitations. The material provided by ZOO which proved most useful in the interactive discussion was the one entitled "Monkey Manners" and a booklet on Bats which described myths and misconceptions associated with conflict issues with wild animal species. The session was very well attended and the other issues addressed during the course of my session with these young college students included: Leopards, Bears, Snakes and other Reptiles and a brief on Delhi's ecological concerns as of today. **Submitted by: Vasudha Mehta, Email: vasudha1907@gmail.com**

Report on Animal Welfare Fortnight Celebrations by APOWA

Poster and Banner Campaign (15-18 January): This programme was highlighted with materials prepared by organizations on animal welfare and environmental conservation and displayed in important places in the Kendrapara district.



Animal Welfare Rally-28th January: An animal welfare rally was organised at Kendrapara town on 28 Jan 2009 during Animal Welfare Fortnightly. More than 1000

participants from different religions were gave a message of animal welfare to the inhabitants of Kendrapara in a disciplined rally. They wore different type of animal masks and holding placards. Slogans were shouted throughout the procession and Karuna Club gave a demonstration on animal welfare. Brochures and cards were give to participants and bystanders in the rally.

Balmela, Exhibition-31 January: A poster and photo exhibition cum Balmela was organized at Keshpur M.E. School. More than 500 students and peoples of the near by schools and villages visited the exhibition. Activities and games were played among the participating students. All the students were given papers and they were asked to draw and colour animals that they find in the surrounding villages and forest. The children did their best and once the activity was over all the drawings were put up for display on selected spots at the venue.



Later, Karuna club members conducted a drama with animal masks and materials of Zoo Outreach Organization, which was the biggest hit. At the end of the mela the participants and the audience knew more about animal welfare; get a better understanding about the environment and wildlife conservation; get an opportunity to form more Karuna clubs in schools. **Submitted by: APOWA Team, Email: mail@apowa.org**

ZOO WATCH education programmes at Thiruvananthapuram, Kerela

On 24 Jan 2009 ZOO WATCH members used our own flex boards to conduct an Amphibian Crisis educational programme in the Thiruvananthapuram Zoo as part of the Animal Welfare Fortnight celebrations. One major change was that we decided to locate our display not at the entrance but just outside the exit of the new Reptile House; and attract the public by also using a Touch Table to display snake skins. Zoo visitors, especially school children and their teachers, were fascinated by snake skins so we could attract a good audience for our amphibian conservation message. Reporters for Jaya TV and Surya TV and Surya FM radio were present and interviews were conducted with our members who took this opportunity to spread the message of the amphibian crisis. Therefore, we feel that this was a very successful event because we could talk to so many teachers, school children and college students from different parts of India and we could use the media to make the message immediate and authentic. Our special thanks go to Zoo Outreach Organisation and to the Zoo Director, Curator and all the staff of the Thiruvananthapuram Zoo who really went out of their way to help us conduct our educational programme.



Following this, on 30 January, 2009, ZOO WATCH members held an Amphibian Crisis exhibition at the school science fair being conducted at the Bharathiya Vidya Bhavan School in Manvilla. This event also proved to be most successful. We would really like to suggest to other zoo – friendly organizations that they should try making their own materials and attracting audiences using Touch Tables with a variety of properly labeled snake skins. Making our own materials has proved to be very beneficial in educational terms. Without flex boards and snake skins it is far more difficult to make people actually stop and listen. Now people, especially children, stop to touch the snake skins and look at the boards and we have the time to influence them. ZOOWATCH members who conducted these events were Amy

Thomas, Mr. P Murali, Dr. Ravindran, Palayam Babu, Mr. Vava Suresh and Mr. Biju. **Submitted by Dr. Latha Thambi, Email: lathatampi@yahoo.com**

National Science Day & World Wetlands Day-2009 in Calicut, Kerala

On National Science Day 2009-Conservation of Nature Society along with Dolphin Protection Committee arranged a "Tiger Awareness Programme" on the National Science Day 2009 in Calicut to different participants in various locations. Forest officials, students and public participated in the programme. The programme was organized as per the training programme of the Wildlife Conservation Society, USA



Society, USA module. Model tiger census method was conducted by using dogs. The group discussed the dispute of the proposed Kakkayam Wildlife

Sanctuary whether it has tigers or not. Also the group discussed about the new Tiger Safari of Peruvannamuzhi adjacent the present Wildlife Rehabilitation Centre. Another subject was discussed about the forest fires now raging in the tiger roaming areas and the participants expressed their concern on tiger conservation in these areas.

World Wetland Day 2009 - The Wetland Day Programme was conducted on 2 February 2009 in Mavoor Road wetland area which once abundant with amphibians now became a concrete jungle. The decreasing wetlands and their effect on amphibians came up for discussions. Amphibian conservation was also one of the themes of the day. Scientists announced that the discovery of 10 amphibian new species in Colombia, +2 students participated in the wetland day programme commented about this discovery and another 50 species found which was thought to be extinct is a new hope.

The participants discussed various issues related to wetland conservation. Even though Kerala took keen interest in conservation of paddy fields and wetland bill for protection of implementation of the wetlands would take a long time. Wetlands became waste lands now, once seen the tortoises, fishing cats and wildcats in the city now disappeared. **Submitted by: VK Damodar, Email: sagarlt@rediffmail.com**

Zoo Education programme at Maitri Baag Zoo

Students of Shri Shankaracharya Vidyalaya, Amdi Nagar, HUDCO, Bhilai visited Maitri Baag Zoo on 10 January, 2009 for a half a day. In this programme 300 students aged 4 to 10 along with 14 teachers were attended. The Zoo education unit of Maitri Baag Zoo taught them about the bats and their role in the eco-system. Half of the group were taken to

the tiger enclosure and they were taught about the tigers and what they could do for tiger conservation. The Head Mistress Ms. Manisha Das commented about the visit that it was very interesting and liked by the children. She said the environment of the zoo was very nice. The cages were neat and clean and animals seemed healthy and well maintained. The zoo authorities were very cooperative. The zoo provided 'Tiger Masks' and 'Bat Books' for amusement and colouring. The visit to the zoo was educative also as it inspired interest in the children in wildlife. The school is grateful to the zoo authorities for their interest expression and kind cooperation. **Submitted by Dr. G.K. Dubey, Chief Veterinary Officer, Maitri Baag Zoo, Chhattisgarh.**



De Paul International Residential School, Karnataka EE Programmes

De Paul School is a unique campus to study daily life wildlife as it has rich floral environment. School nature club had organized field survey in the campus to find out different varieties of vegetation and record the student's observations. With the help of teacher coordinator Mamatha and Botanist Prof. Sadanand, students spotted many types of insects, amphibians, garden lizards, birds and mammals like mangoose, bat, hare etc and made a checklist. Students made the check list of the campus trees and teacher made the name boards' to fix the same on trees. The name boards has local name of the plant, biological name, habit of the plant and the medicinal/commercial or ornamental values of the plant.

A Survey of the Floral Environment: Save the mother earth from the clutches of the devilish human race who molest their own mother. This is the quote of Sai, Student coordinator of School Nature Club.



Human-elephant co-existence: This program was conducted on 13 March 09 for the 7th grade students in the campus as extended topic. These students are fond of Zoo Outreach Organisation tool

kits and would like to get associated with ZOO in any possible way, mostly by through their project works. Since their latest class room teaching was on content

"Interdependence of plants and animals", kids played WEB game to understand that food chains get connected with one another to form food web. Students sang Holi songs while tying friendship band. They themselves organized quiz session and there was tough competition among boys and girls group. They promised to contribute their service towards wildlife conservation. For example, one of the students Athena Rose said that she will not allow her parents or workers to scare the elephants in their coffee estate at Coorg. She also narrated some elephant stories which she got from her grand father with the help of puppets. Two students from Africa narrated morphology of African elephants with the help of finger puppets. Kids played grazing, browsing, giraffing, game and finally took oath foraging and said no to animal products.
Submitted by: Mamatha, Email: mamtha_57@yahoo.com

Amphibian Colouring Book programme at Mysore, Karnataka

I visited Kalivuya Mane 21 Feb 2009, where I had conducted activities with Ele-kit and primate colouring book. The previous visit fresh in the children minds made them eager to know what I had this time. I used the amphibian colouring book. Since we were familiar with each other, the session started with volley of question and answers. The children were asked when they did hear the frog croak? What was special about amphibians? What they thought about them, and if they had killed any? They were told about the importance of frog and their role in the ecosystem. They were given the colouring book and they enjoyed the colouring it. They also related the amphibian and the prey in the book. The group let go of me only after promising them to go back with some more material. **Submitted by: D.H.Tanuja, Email: tanujadh@gmail.com**



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COUNT DOWN 2010-Save Biodiversity Reports

Countdown 2010 is an independent alliance. It is governed by the will of its partners through its Advisory Board and Partners' Assembly. The Countdown 2010 Secretariat is based at the office of IUCN - The World Conservation Union in Belgium. Countdown 2010 is a way of reaching out and linking to partners all over the world and uniting them in the common goal of saving biodiversity.

The Overarching goal of the initiative is that all governments and members of civil society, at every level, have taken the necessary actions to halt or significantly reduce the loss of biodiversity by 2010. The Objectives are to :

- . Encourage and support the full implementation of all the existing binding international commitments and necessary actions to save biodiversity;
- . Demonstrate clearly what progress countries are making in meeting the 2010 biodiversity target;
- Gain maximum public attention for the challenge of saving biodiversity by 2010.

It is open to all organisations and institutions, city municipalities, state governments, etc. see the Countdown 2010 website www.countdown2010.net and read how your organisation can make a commitment to save or significantly reduce biodiversity loss by 2010.

Zoo Outreach Organisation made a declaration to Countdown 2010 last year and has joined up most of its partner organisations and networks with a commitment to do something, even a small thing, which would move in the direction of saving or reducing biodiversity loss for just one species, if not more. We also made two two-year calendars with Hoolock Gibbon and Amphibian themes. Countdown 2010 Secretariat was charmed by these projects and featured Zoo Outreach Organisation in an on line article. It is reproduced below :

Focus on: Zoo Outreach Organisation (Z.O.O.) ZOO, an Indian NGO was founded to provide educational, technical and moral support to zoos in India (and later South Asia), directing them more towards more effective conservation activities and better animal welfare. ZOO added its ngo sister, WILD and initiated regional networks for "neglected taxa", Invertebrates, Amphibians, Reptiles, Bats, Rodents, and Primates to bring together and support their field biologists and to link these taxa to zoos. ZOO/WILD also initiated thematic regional networks for IUCN SSC CBSG (Conservation Breeding) (CBSG, South Asia), RSG (Reintroduction), and for the International Zoo Educators Association as well as a



South Asian Zoo Association, SAZARC. ZOO/WILD use the tools of IUCN SSC CBSG to integrate taxon and thematic networks in conservation workshops, such as CAMPs (red listing exercises), PHVAs (conservation direction), and training in education, field techniques, taxonomy, etc. Over 1000 academics are members of these networks.

Because each of the networks is distinct, when ZOO and WILD signed the Declaration Countdown 2010, they decided to declare each network and its own commitment for biodiversity. ZOO is focusing on modest but "do-able" commitments. ZOO has developed attractive calendars for 2009-2010 each for the Amphibian crisis and for the highly threatened Western Hoolock Gibbon, a primate of North East India, Bangladesh and Myanmar. ZOO also brings CD 2010 into all of its educational material which has a very wide audience throughout South Asia. At the annual zoo association conference, a special session is planned on CD 2010. Each taxon network has committed to reduce biodiversity loss in one species by end of 2010.

Because of our commitment to Countdown 2010, we were particularly amazed and impressed by Ms. Jessie Jayakaran who conducted five education programmes based on the theme of Countdown 2010. Her reports are below :

Save Biodiversity Reports

SAN-IZE member Ms. Jessie Jayakaran conducted five programmes on "CountDown 2010-Save Biodiversity" using ZOO education materials in Erode, Chennai and Madurai in February and March 09. These programmes were conducted for Green Corps students at CSI Girls HS, Erode, school and college students, National Service Programme (NSS) officers who work in the colleges and polytechnics, teacher training and nursing students.

COUNTDOWN 2010-Reports

1. It is important to halt or significantly reduce the current rate of biodiversity loss by 2010; it is a commitment of the CBD. Countdown 2010 was promoted at C.S.I. Girls H.S.S., Erode, Tamil Nadu on 3 Feb, 09 to Green Corps students. Materials from Zoo Outreach Organisation about amphibians were used to



illustrate CD 2010. The programme was introduced to the entire school in the morning assembly. An interactive session was there to know more about the Biodiversity and its loss and students recognized the importance of frog in food chain, ecosystem etc. Other activities -- tying *rakhi*, wearing mask and sticker were part of the pro-gramme. Sponsors -- ANSA, ZOO/WILD, SAZARC, CHESTER, IZE, AARK etc. were introduced along with the calendar sheet. More information from the amphibian booklet was given on the decline of this groups of animals. Students came to know the various types of programme to be carried out to spread about the importance of the role of the amphibians in the lives of the human and the ecosystem.

2. During the refresher course of the twenty five NSS Program Officers from Colleges/Polytechnics in Tamil Nadu and Pondicherry, Countdown – 2010 Save Biodiversity was conducted on 25 February 09 at the School of Social Work, Chennai. Though the college students have carried out the camps in rural areas, this seems to be a new and urgent area, where immediate steps have to be taken to save the Biodiversity. Officers were divided into two groups according to the geographical situation and inputs. They were supplied with Frogs and Hoolock Gibbon education packets supplied by the Zoo Outreach Organisation along with the Countdown – 2010 calendar. Six technical sessions with the *rakhi*, placard, mask, stickers and the booklet on Frogs were dealt with. The A.V. session on India's Environment especially on Biodiversity had taken participants to know the essence of Biodiversity. They requested for C.D. on the information booklet for the follow up especially on Hoolock Gibbon as they are located only in few places.

3. Amidst the tight schedule of the regular school work, about 60 students from standard 8th of Satya Matric HSS.

Purasaiyakkam, Chennai attended a day's program on Countdown 2010 save bio-diversity on 4 March 09. The first session was of explaining and recapitulation of the environmental crisis – what they have learnt, witnessed and experienced. The audio visual session on India's environmental action program, highlighted on the



Indian resources, richness of our bio-diversity and conservation of eco-system. This was more informative and made the students aware of the richness of India.

After the session three students recapitulated the points they have learnt. They planned their future monthly programs as reaching the unreached, water management and tree plantation. The day's program ended with happy faces of the students who really had great fun and enjoyment amidst gaining great awareness and vital knowledge in this area. The day's program was published in Anna Nagar Times – Hindu.

4. Twenty eight first year zoology students of Lady Doak College,

Madurai underwent training on Biodiversity. The days program was divided into two major divisions namely on Gain & Goal i.e., Think Globally Act Locally –



Know your Environment/Step Down – Countdown. The environmental crisis prevailing around the globe, country and region was dealt with special emphasis on biodiversity. The richness of our resources under present conditions resulted in biodiversity loss were clearly explained. In a different angle the endangered



primates like loris, langur, macaque and hoolock gibbon were discussed. As they have already studied, they found it very easy to know more about the hoolock

gibbon. The students enacted a roll play on hoolock gibbon. Group discussions based on the local situations helped the students to know more about the apes. As step down and count down they have planned the following activities for the next academic year. To establish a nursery corner within the college campus; distribution of the sapling to the general public; Preparing a chart for raising the nurseries and its maintenance; distribution of sapling through forest department to hilly area; learning the names of the monkey in the near by hillocks with the help of the charts provided by Zoo; special guest lecture by the veterinary and



forest department; Prof. S. Nisha will coordinate the program; the day's program was published on Hindu on 16th March 09.

5. Countdown 2010 was conducted for twenty five NSS students of CSI Jeyaraj Annapakiam College of Nursing, Pasumalai, Madurai and fifty nine B.Ed. students of five different colleges at CSI College of Education, Pasumalai, Madurai with the able leadership of Mr. Edwin, Professor and NSS Program Officer and Mr. Victor, Coordinator respectively. Being the first year NSS students in the college of Nursing, knowing about the loss of biodiversity, its impact on human beings and the duty to save it, seems to be an interesting and thrilling experience to them. Though treating the patients suffering from water borne disease seems to be their prime duty, knowing about the declining number of frogs too has a role to keep a watch on it. Their excitement went aloft while receiving, reading and gaining knowledge about frog and hoolock gibbon. The formation of global guardian angels since the establishment of UNEP, the various global units under conservation program, the

sponsoring international agencies especially about ZOO have kindled their mind about their role as nightingale to save biodiversity. As the college is situated on the Pasumalai hill slopes they are witnessing the primates' movements under all conditions. For the sake of in-depth knowledge various sections like observation, mimicry, role-play etc were carried out. In order to spread the matter more copies of these educational packets are displayed on the notice boards/library/village health care unit. The NSS program officer acknowledged the successful program as he has already underwent training during the refresher course at Chennai last month. The B.Ed students of five different districts received inputs about Countdown 2010 on frog. Book marks and car stickers were distributed. Topics like know your environment, endangered species and amphibian ark were dealt with. Recording of the conditions of frogs in various places (both urban and rural) was allotted as vocational work which will be a stepping stone for the next academic year. **Submitted by: Jessie Jayakaran, Retd. Teacher & Volunteer Conservation Educationist, Chennai 600 092, Tamil Nadu. Email: jessiejey@rediffmail.com**



In Search of Hoolock Gibbons

Gawsia Choudhury*, Israt Jahan**, & Mayeen Uddin***

Wildlife Trust of Bangladesh (WTB) and Global Science Production (GSP) in association with national media partner Channel-i organized an expedition to the



northeastern part of Bangladesh. This expedition was planned when the GSP team came to Bangladesh last year on a filming expedition for a TV documentary especially on the plight of gibbons throughout all of Southeast Asia and was introduced to the Hoolock gibbons of NE, Bangladesh. This time the goal of the GSP team came to work on a TV documentary especially on hoolock gibbons of Bangladesh with special emphasis on important ecosystems (wetlands), cultural and natural heritage of Bangladesh. This TV documentary will be completed and broadcast over the international TV stations later in the spring or early summer. During this trip about 50 bird species were recorded from these wetlands, some are globally threatened.

Objectives

This programme was arranged with hopes that the national and international contribution to the fight to save the hoolock gibbons, will be the turning point for these animals on the brink of extinction here in Bangladesh.

The objective of the programme was also aimed to involve children, local people even the forest personnel who live in around Lawachara National Park in some awareness raising activities. It was to give the participants a good feeling towards the animals through



games, songs, paintings and some other cultural activities using hoolock as an example. Different important wetlands of national and international significance

were visited with a hope to design more awareness raising programmes to save natural heritage of Bangladesh.

In search of hoolock gibbons

Team members were divided into three groups led by Mr. Haque of WTB, Dr. Haimoff of GSP, and Mr. Pantha of Channel-i. Activities were coordinated by Dr. Islam, Chief Executive, WTB. This team work was designed to get great footage on hoolock gibbons (feeding, parental care and some other attractive activities) from different positions, and angles.

Two groups of hoolock gibbons with new born babies were filmed. In addition major threats to hoolocks and



some important activities of Bangladesh Forest Department were also documented.

WTB received a broadcast quality, high-definition Canon XL-H1 video camera as a gift from GSP which was also used in this activity. The goal of this event was to make

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a TV special on the plight of the hoolock gibbons of Bangladesh, an effort to save these animals and to educate people about the plight of their gibbons, before it is too late. This TV documentary will be completed in mid 2009 and broadcast over the international TV stations.

Save hoolock, protect forests

Ms. Ambalika Deb Barma, coordinator of *Tripura Kishori Nishorgo Club*, Dolubari, Srimangal organized all the students of Dolubari village who attended WTB's conservation education programme before. A few questions were asked to assess how the children remain involved in some conservation activities. Most of the students explained how they looked after the plants they planted in their school campus in June 2008 as a part of WTB's conservation education programme to save hoolocks.

Theme and materials: The theme of the programme 'Save Hoolock Gibbon, Protect Forests, Conserve Biodiversity' was explained to all the participants. All of them got a 'Hoolock Gibbon Packet' which includes hoolock masks, placards and some other education materials. The agenda was discussed briefly with the participants to make them understand the programme well and ready for the activity.

Hoolock Gibbons of Bangladesh: The objective of this activity was to attract the participants to the living world through a beautiful but threatened species, the hoolock gibbons - a globally endangered, but critically

endangered species of Bangladesh. Participants were requested to wear hoolock masks to feel for hoolocks.

Environment, biodiversity and hoolocks in art: An art competition was arranged. Participants expressed their creative ideas through it. Drawing books and colour pencils were distributed to the children.

Hoolock gibbon cultural programme at Dolubari Members of *Tripura Kishori Nishorgo Club*, Dolubari, Srimangal have organized a cultural programme where they came up with their traditional dresses, dances, songs and some other activities. This was to express their love towards the natural resources they have around them.

Hoolocks in Song: A hoolock song has been developed by the Wildlife Trust of Bangladesh where the singers express their love for Hoolocks. Students wore hoolock masks where the caption "Save Hoolock Gibbons, Protect forests, Conserve biodiversity" has been inscribed. The participants also held a placard where similar caption has been inscribed.

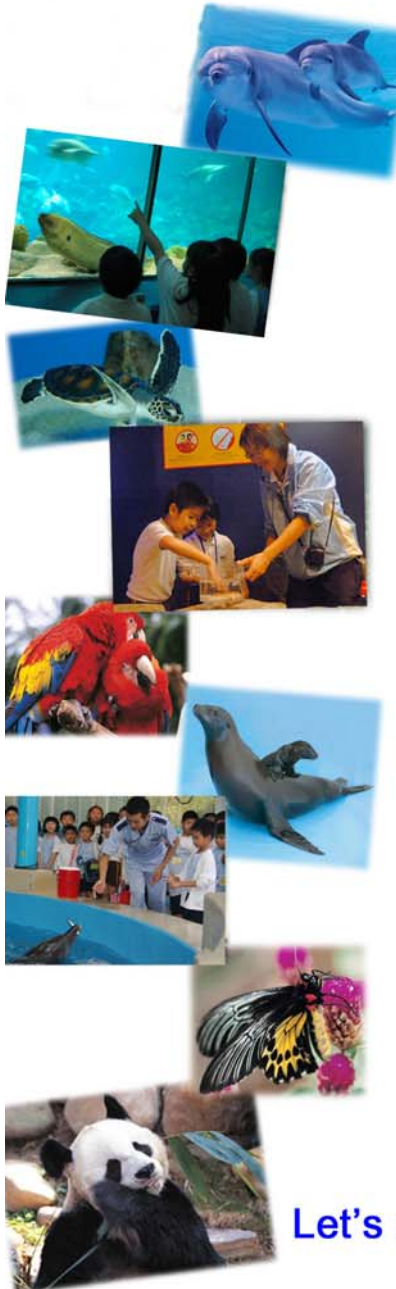
Hoolock Gift: All the students and other participants of the cultural programme have received hoolock gibbon conservation education materials as gift, designed by the Zoo Outreach Organization, India. Community leaders and the teachers of Dolubari village received a bunch of hoolock gibbon conservation education materials designed by the Wildlife Trust of Bangladesh and Zoo Outreach Organization, India for their future use.



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11-16 October 2009

Saving the melting earth with limited resources but immense ideas



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