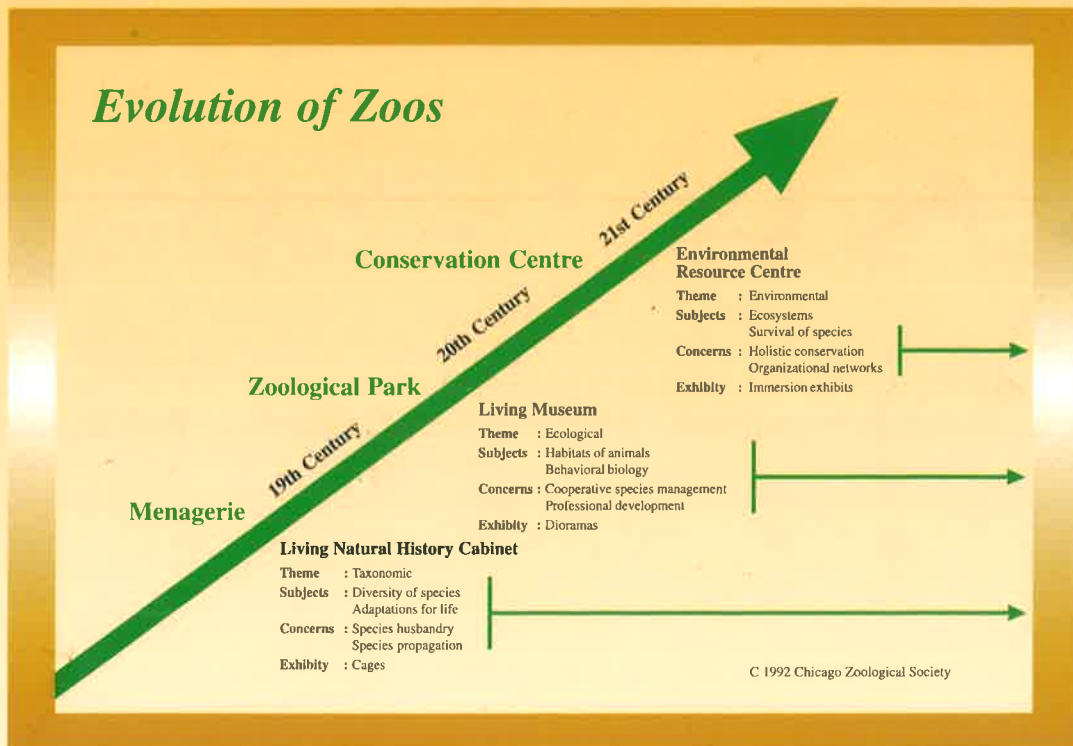


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ZOO S

CENTRES OF CONSERVATION

***Vision Evolved at Strategic Future
Search Workshop
Hyderabad***



***3-5 December 1999
WORKSHOP REPORT***



केन्द्रीय चिड़ियाघर प्राधिकरण
Central Zoo Authority

ZOOS

CENTRES OF CONSERVATION

*Vision Evolved at Strategic Future
Search Workshop,
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WORKSHOP REPORT

केन्द्रीय चिड़ियाघर प्राधिकरण
Central Zoo Authority

(STATUTORY BODY UNDER THE MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

Bikaner House, Annexe-VI, Shahjahan Road, New Delhi-110011

Tel.: 3381585, 3073072

Fax: 011-3386012

E-mail: cza@ndf.vsnl.net.in.

Website: <http://www.envfor.nic.in/cza>

**WITH APOLOGIES TO
GURUDEV RABINDRANATH TAGORE**

Where the animals are free and the birds on song

Where Mother Nature is resplendent echoing the delightful roar of its denizens

Where the zoos are not mere picnic spots for dreary pursuit of leisure

Where the future of humankind is linked to the future of animal kind

Where everybody cares and everybody shares and the rights of animals are respected

Where there is no need for a Noah's Ark as all species, faunal and floral have a pact of harmony with man

Into that world of habitation, zoos and conservation centres

My master and mistress, may I awake!

— Shri R. Rajamani

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I. INTRODUCTION:

A strategic future search workshop was convened by the Central Zoo Authority at the campus of MANAGE, Rajendranagar, Hyderabad from 3rd- 5th December 1999. The theme was "Visioning the ideal Zoo of the future- a new role for education and conservation". This was to sub-serve the main objectives of Zoos laid down in the National Zoo Policy in the 1998 i.e., complementing and strengthening National efforts in conservation of the rich Biodiversity of the country, particularly the Wild Fauna.

On the 9th November 1999 the Central Zoo Authority invited 43 persons drawn from various fields in service Zoo Directors, Veterinarians, Retd. Zoo Vets, Wildlifers, Animal Welfare People, Press, Non Governmental Organizations, Industries and others linked with Wildlife Conservation in the country. 41 persons participated in the Conference. 36 participated uninterrupted.

The Conference began with an introduction by Shri S. C. Sharma, Addl. Director General of Forests (Wildlife) Government of India, who referred to the various developments in conservation and education through Zoos in India. He emphasized the need for looking at the future, setting priorities and milestones which will help the Wildlife Wing of the Ministry of the Environment and Forests, Central Zoo Authority, individual Zoo Authorities, State Governments and Experts, etc. A vision on this could be developed in a Workshop of this kind, where experienced Professionals stay closely together away from their routine chores and exchange experiences of the past and vision of the future, thereafter evolve a long-term plan relating to the role Zoos would play in conservation of the wild fauna and as education awareness centers. Shri S.C. Sharma introduced the Facilitators Dr. Francis Westley, Prof. Of Strategy at McGill University in Montreal and Dr. Harry Vredenburg, Director of Environmental Management and Sustainable development programme at University of Calgary, Canada who have a vast experience in conducting and facilitating such kind of Workshops for the Conservation Breeding Specialist Group (CBSG) and International Union of Directors of Zoological Gardens (IUDZG).

After the brief introduction of Shri Sharma, the two facilitators explained the manner in which the workshop would progress, the participants would review the past milestones in the evolution of zoos, the external and internal forces shaping the Zoos, idealize the future of the Zoos in 2010, map the path from the present state to the future and putdown steps for action, which could be realized by responsible persons in the Central Government, State Government, Non Governmental Organizations and individuals. The final product of this workshop would be in the form of a guiding vision for the future and routes for reaching the goal.

A workbook which was prepared by the facilitators were circulated to all the participants. A copy is appended to these proceedings. The participants were asked to write events of importance in the history of Indian Zoos pre 1950's to the present under the category of personal, National and Global milestones. These were later transferred to the timelines on the flipcharts.

These events were later discussed by Five groups formed out of the participants and were analyzed for patterns. The discussions were on a no holds barred basis and intended to bring out the underlying harmony conducive to strategy formation and action.

Next, a discussion on the trends impacting Zoo Conservation and education in India prepared individual participants for a group exercise of creating a "mind map" of these trends

The participants prioritized the various trends which had been written on a large piece of paper by putting coloured dots beside the trends, they considered most important and thus ranking them as follows:

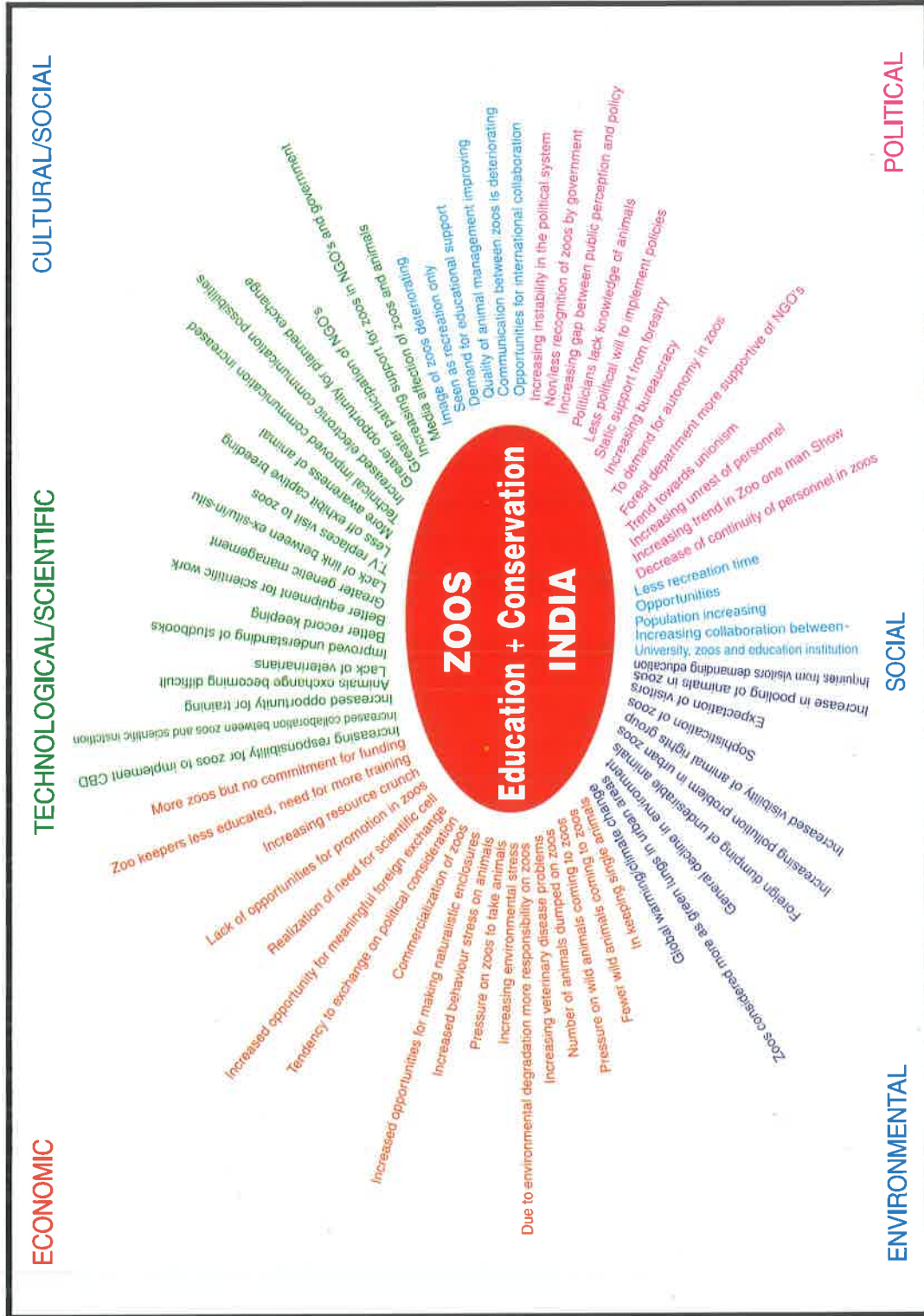
1. Pressure on Zoos to take animals due to increased Environmental Stress
2. Increased need for staff education
3. Improving quality of animal management
4. Increasing opportunities for non-commercial naturalistic Zoos
5. Less political will to implement policy
6. Greater unionism plus unrest among Zoo personnel
7. Deteriorating image of the Zoos (Recreation only)

On the same day it was time to begin dreaming of the ideal zoo, a theme which was carried to the next two days. The participants were asked by the Facilitators to forget the past, problems and obstacles and imagine their ideal Zoo. Working groups were formed among the participants to put these dreams in to a form- some a news story, some a magazine report and some a play with symbolic illustration of their dream.

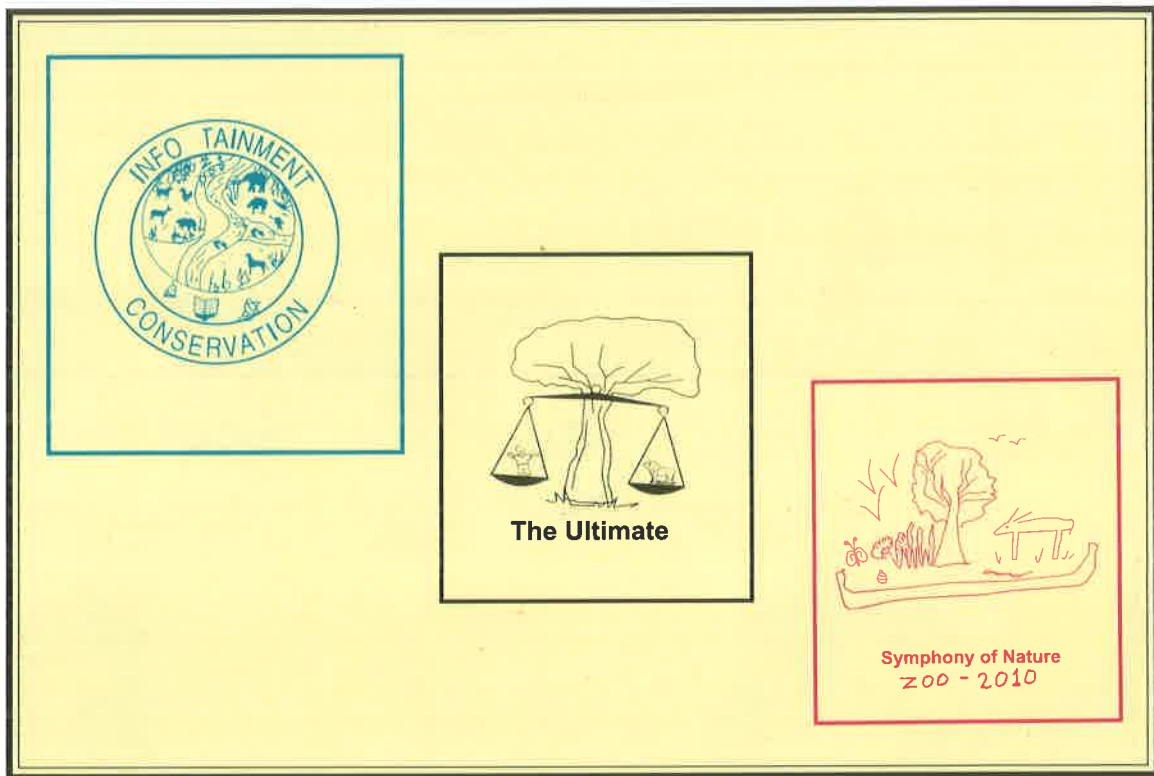
Later on these symbolic illustrations were combined into one to represent the whole group's vision. A strategic vision for 2010 was developed.



Participants writing events in the history of Indian Zoos against the timelines



Perception of Participants – The Mind Map



Symbolic illustrations of an ideal zoo

STRATEGIC VISION - 2010

"Our Zoo will have healthy animals in eco-system based naturalistic enclosures, supportive to in-situ conservation with competent and contented staff, good educational and interpretative facilities, the support of people and be self sufficient".

The remainder of the Workshop was devoted to investigating ways and means of meeting the dream and realizing the strategic vision for 2010. Participants from various groups viz., collection and exhibit planning, animal management, conservation and research and Zoo Education and Sponsorship were invited to make commitments as to what they would as individuals do to improve the Zoo as centers of education and conservation.

II. STRATEGIC FUTURE FRAME WORK FOR ACTION:

In order to achieve the vision of 2010, participants to the workshop were divided into following groups

1. Collection and exhibit planning group
2. Animal management group
3. Conservation and Research group
4. Education and Sponsorship group



Plenary Session

1. COLLECTION AND EXHIBIT PLANNING GROUP :

The purpose of this group was to deal with collection and exhibit planning in the Zoos. The following areas were identified

- a) The Zoos will exhibit animals as per regional, national and international demand
- b) Zoos will be theme based to conserve animals of local biosphere reserves, with emphasis on conservation of endangered species
- c) Enclosures will be large and eco-system based.
- d) The animals will be displayed in Social groups
- e) Periodic redesigning of the enclosures will be taken up as per the needs of the animals
- f) Proper waste and effluent disposal system will be in place.

The obstacles which were identified by the groups were lack of land and infrastructure, lack of funds, viable group size of animals, excess number of animals of prolifically breeding species, animals of unknown lineage/hybrids, lack of political will and negative press coverage of zoo, lack of trained manpower,

possessiveness of individual zoos/State government regarding their animals and price tags, frequent transfer of personnel in the administrative and supervisory level and lack of Indian personnel for drawing up master plans of Zoos.

The solutions which were proposed by the group were

1. Phase out excess animals of common and domestic species
2. Adopt population control measures.
3. Release excess herbivores, primates, small animals in such reserves which have low or nil population of the species
4. Exchange animals between zoos to accomplish socially viable groups
5. Lobby with individual zoos/state government to abolish price tags on animals
6. Provide environmentally enriched ecologically compatible exhibits for the animals.
7. Use of invisible barriers
8. Putting to use modern gadgets for feeding the animals and cleaning enclosures. Reduced human imprinting
9. Services of Non Governmental Organizations to be taken for lobbying with the politically influential people and the press to gain support for the Zoos.
10. Train personnel with help of Wildlife Institute of India, Conservation breeding Specialist group, species survival commission.
11. Ensure continuity of personnel in the supervisory and administrative level
12. Train personnel for drawing up master plan and management plan for Zoos.

In order to achieve the above solutions, support of Central Zoo Authority, concerned Government departments, National and International policies and legislation should be taken. The action steps and time lines to achieve the objectives were drawn up by the group and are presented as below:

Action Steps	Objectives to be achieved	Time frame
1. Training and Technical know how of preparation of collection planning and master planning	Viable group size from now to two years : Zoo Directors (ii) prepare standards/ guidelines for master planning: Central Zoo Authority (iii) Zoo outreach organizations/ CBSG India will compile material from Zoos in other regions and collection plannings and master plannings (iv) Zoo Outreach organization will provide information on status of wild animals (Indian) for use in collection planning	6 months
	To prepare management plan for Kanpur Zoo the Wild Life Institute of India (WII) will help develop guidelines for Zoo Master plan and Management plan. Zoo outreach organization will write articles for Press and for zoos that need help justifying regional display or lack of exotic.	1 year
	Assess training in preparation of master plans: Central Zoo Authority, Zoo outreach organization/ CBSG, India will plan organize a course on Master Planning and Collection Planning involving resource persons from India and abroad	1 ½ year
	Zoo Outreach Organization will help create an ideal model and maintain upto date conservation directions	2 years
2. Alternate area for Zoos which are congested at present.	Site inspection/ selection	6 months
	Acquire area	1 to 1 ½ years
	Master planning layout planning infrastructure designing and preparation of a master plan: Central Zoo Authority	2 years
	Start implementation	5-7 years
	Action complete	10 years

Action Steps	Objectives to be achieved	Time frame
3. Phasing out excess animals of common, hybrid and domestic species	Population control measures, gift and exchange, feed to Zoo animals build public support : Zoo Outreach Organization will support any Zoo in its effort to phase out excess animals by writing favourable articles explaining to the public about it.	6 months - 1 1/2 year
4. Designing of enclosures	Zoo Outreach Organization will collect materials from old Zoos that have been renovated in recent times for use by the Central Zoo Authority consultants and Zoos. Assist in planning of enclosures : Central Zoo Authority.	6 months
	Assist in designing of enclosure, modern cages with gadgets for cleaning and feeding: Central Zoo Authority	1 year
	Provide financial assistance for new enclosure : Central Zoo Authority	2 years
	Action Complete	10 years
5. Signages	Data collection, selection of materials, allocation of funds. Center for Environmental Education will support signate effort, Zoo Outreach Organization will collect and distribute example of good but do able signage from both Indian and foreign Zoos into a book for use of Zoos.	6 months to 1 year
	Action Complete	10 years
7. Stake Holders	Identify lobby, theme work and training, identify relevant groups, create effective awareness. Zoo Outreach Organization will create theme work training modules for different size and budget and approach with Zoos.	6 months to 1 year

LIST OF PARTICIPANTS:

Mr.P.R. Sinha, Dr.J.H. Desai, Ms. Sally Walker, Mr. A.V. Joseph, Ms Satnam Ahuja, Dr.R.K. Sahu

2. ANIMAL MANAGEMENT GROUP:

The purpose of this group was to deal with the animal management in Zoos. Following areas were identified.

Better Animal Management:

- a) Permanent trained and experienced Veterinarians and support staff need to recruited
- b) Adequately equipped hospitals, mobile clinical quarantine facilities, and diagnostic labs.
- c) Linkage with research institute and veterinary colleges locally and globally through Med-Arks.
- d) A workshop/Conferences Computer networking for exchange of knowledge
- e) Polyclinic approach whenever feasible with backup panel of experts
- f) Training of interns of veterinary graduates.

Animal Friendly Care:

- a) enclosure enrichment
- b) regular screening for Zoonotic diseases and maintenance of hygiene

Bio-Technology

- a) Application of Bio-technology in conservation including surplus population control
- b) Advance breeding practices artificial insemination, embryo-transfer, DNA fingerprinting for species characterization and selected planned breeding.
- c) Avail services of qualified nutritionist for qualitative and quantitative evaluation of animal diet.

The Action and timelines to achieve the above said objectives were drawn up as

Action Steps	Activities	Time Period
Better Animal Management, animal friendly care bio-technology and nutrition.	Till such time regular veterinarians are arranged in Zoos, to optimally utilize resources, the Chief Wildlife Wardens of all the states will convene a meeting to ensure linkages and develop mechanism for veterinary support to the Zoos.	6 months
	Major Zoos will make arrangements for support, improve the Hygienic conditions and establish linkage with veterinary colleges and other institutions	3 months
	Zoo Outreach Organization will compile briefing books of appropriate Zoo nutrition material and provides training opportunity to Zoo Veterinarians and Curators	1 year
	Veterinary Council of India, Indian Veterinary Research Institute and WII , India will develop a package to extend support to major Zoos and smaller facilities	3 months

LIST OF PARTICIPANTS:

Dr. M.A. Salam, Mr. R.S. Badhoria, Mr.M.G. Gogate, Mr.A.K. Das, Dr. V. K. Sharma, Dr. R. L. Singh, Dr. L.N. Acharjyo, Dr. B. M Arora and Ms Geetha Seshamani.

3. CONSERVATION AND RESEARCH GROUP:

The Purpose of this group was to deliberate on the issues of conservation of wild fauna and research needed in providing better upkeep facilities for the animals and for their further growth. The following areas were identified for drawing up an action plan.

- a) Linking of Zoos with conservation of species and their habitat through education, documentation/dissemination of information, in-situ information input from Protected Area Management and Wildlife Researchers and designating qualified personnel in Zoos.
- b) Prioritize species or a habitat for rational selection.
Ex: Primates, Hornbills, Pheasants, Raptors, Turtles, High attitude Zones and Grasslands.
- c) Recovery team of experts and Zoo Staff, Simulation of Habitat, appropriate enclosure, coordinated collaborated and network with other Zoos.
- d) Identification of animals and procurement, quarantine facilities, breeding plan, marking, population control in captivity.
- e) Use of advance reproductive techniques
- f) Establishing genome banks
- g) Simulation identification of habitat for reintroduction, collaboration with relevant groups and habitat restoration and preparations.
- h) Plan re-introductions based on IUCN/SSC guidelines, develop a monitoring protocol, research and collect data on related aspects (In Zoos and In-situ).

An Action plan with the timeframe was suggested by the group to achieve the identified objectives, which is as follows:

Strategy		3 months	6 months	9 months	1 year
Partial autonomy of Zoo in Andhra Pradesh.	Conceptualize	Submit proposal for legislative change, if required. Share proposals, experience and motivation with other zoos.	MOU with participating corporate bodies Share experience with other Zoos	Achieve goal	
Sponsorship/ Adoption by corporate sectors in Chennai Zoo and Zoos in Andhra Pradesh	Get government order	Contact corporate bodies Organize workshops		Initiate process on the similar lines efforts in Andhra Pradesh	
Autonomy of Zoos Mysore Zoo, Darjeeling Zoo	Gather information on how autonomy was achieved and disseminate it to other zoos through Central Zoo Authority (2 months)				
Sponsorships in Trivandrum Zoo	Prepare proposal (1 month) as the state Govt. has already approved	Get permission (4months)			
Gift shop at Nandankannan Zoo	Permission sought. Establish shops through registered societies.		Designing of Products	Establish shop, begin sale and monitor progress (1 year) report status (2 year)	
Share information on international cooperation with other Zoos.	Pass on the information to Central Zoo Authority for distribution to all Zoos.				
Share information on collaborative Zoo research with all Indian Zoos	Disseminate the information to all Zoos				
Wildlife Institute of India training workshops for producing project proposals		Conducting Workshops	Project document to reach different agencies	Financial and logistical support to Wildlife Institute of India for a workshop by Andhra Pradesh	
World Pheasant Association		Proposals to go out		Workshops in Zoos/	

Strategy		3 months	6 months	9 months	1 year
Avicultural workshop			Raise funds and setup the Website	Request zoos to provide information for the site	captive animal collections
Setting up a Website for awareness about Indian Zoos by Zoo Outreach organization					Create Zoo database as information becomes available
Distribution on database, galliformes bibliography on pheasant conservation to Central Zoo Authority		Pass it on to Central Zoo Authority for distribution			
Durrel Wildlife Conservation Trust - Pigmy Hog Conservation Programme International programme for specialized training on conservation and breeding on endangered species		Conceptualized and send information to Central Zoo Authority and Zoo Outreach Organization for dissemination			Conduct the programme for two trainees at a time on response (duration to be decided on basis of awareness and experience of the trainee)
Full income tax rebate for donors to Indian Zoos.		Proposals to be mooted, approach CBDDT		Decision and action by CBDDT to be relayed to the Zoos.	Zoo to take up the issue with local authorities.
Ploughing back revenue collected from Zoos in Andhra Pradesh		Submit proposal	Get order from State Government		
Research in Zoos-ongoing project of Wildlife Institute of India					Make research reports available to different Zoos through Central Zoo Authority
Development animal selection protocol for Indian Zoos			Complete and develop protocol via Central Zoo Authority and Zoo Outreach organization		
Institute of Zoo Science		Propose concept paper to general body of CZA		Follow u with Ministry of Environment and Forests	
Central Zoo Authority award for best managed Zoo			Established award		

Strategy		3 months	6 months	9 months	1 year
Problem of air transport of Zoo animals	Write to Civil Aviation Ministry concerning safe and timely transport of Zoo animals, with copies to Indian Airlines and Central Zoo Authority				
Help Nandankannan Zoo, devastated by cyclone, in rebuilding enclosures and in landscape planning	Now to two years				
Indian Zoo Director Association compendium	Publish and distribute				
Document on issues related to inherent problems of preparing a collection policy and in animal exchanges	Submit a 2 page document to Central Zoo Authority for follow up with Ministry of Environment & Forests (1 month) Central Zoo Authority will follow up Ministry of Environment & For. and Forest Commissioners/ Secretaries of States (3 months)	Get order from State Government			
Moot proposal for inclusion of Zoo directors in technical and design committees	Submit proposal to Central Zoo Authority about meetings in different region				
Information on institutes specializing in artificial reproductive techniques by Zoo Outreach Organization	Gather information				Submit the gathered information to Central Zoo Authority and publish in Zoos Prints
Workshop on possibilities of re-introductions in collaboration with Kerala Government	Submit proposals (1 month) conduct workshop				

Strategy	3 months	6 months	9 months	1 year
Zoo Outreach Organization will organize workshop on reintroduction with Mark Stanley Price.		Publish the Article in Zoo's Print.		Workshop will be conducted in less than a year.
Compile reintroduction stories in India				
Zoo Outreach Organization will focus its next 10 year zoo support activities towards objectives outlined in futures report				

LIST OF PARTICIPANTS:

Mr. B. C. Choudhary, Mr. Sanjay Molur, Mr.N. Krishna Kumar, Mr. N. C. Bahuguna, Dr.Rahul Kaul, Dr.Goutam Narayan, Mr.Bipul Chakraborty, Mr.C.S. Yalakki, Mr.Pushp Kumar, Mr. S. K. Patnaik, Mr.N. Rajashekhar, Mr.T. Ramakrishna and Mr.R. Rajamani.

4. EDUCATION AND SPONSORSHIP GROUP:

The purpose of this group was to deal with the Zoo education and awareness among the visitors and Garner support for Zoos through sponsorships. The identified themes for deliberations by this group were

- a) Signage
- b) Interactive live interpretation (Keeper Talks), Interpretation centres
- c) Performing arts
- d) Guided tours
- e) Special activities for schools, distribution of subsidized literature, audiovisual programmes
- f) Use of mass media
- g) Library and Website
- h) Zoo outreach activity (Eco-clubs)
- i) Observing of special days and weeks
- j) Income Tax exemption, publicity, special bonus to sponsorers.

An action plan with a timeframe was suggested by the group to achieve the said objectives.

Action Steps	Activities	Time Period
1. Signage	Outdated signage to be replaced, rewriting of existing signage, interpretative package. Zoo Outreach Organization will compile a book of successful innovative signages. Environmental Education Centres will work with the Zoos according to their demand	3 to 6 months
	Preliminary review and evaluation - Central Zoo Authority	1 to 3 years
2. Interpretation Centres	Locating, identifying and creating a database on expertise available - Central Zoo Authority Kanpur Zoo, Chennai Snake Park Trust (CSPT) and Zoo Outreach Organization will compile the information and ideas for mini centres (single exhibit interpretation centres). Training and capacity building - Central Zoo Authority- Kanpur Zoo- CSPT	1 to 3 years

Action Steps	Activities	Time Period
3. Guided Tours	Training programmes for guides and certification: Training for Zoo educators, Kanpur Zoo, CEE and CSPT. Zoo Outreach Organization will compile material on how to train Zoo guides. Development of site and situation specific infrastructure- Kanpur Zoo/CSPT	3 months to 1 year
	Arignar Anna Zoological Park, Chennai will produce Student Education kit and circulate to all Zoos	1 to 3 years
4. Special activities for Schools	Training of Zoo educators by CEE, manual for teachers bringing kids to Zoos by CEE and technical expertise to be provided by Central Zoo Authority. Links with State education departments and conduct training- Kanpur Zoo/ CSPT and Central Zoo Authority. Zoo Outreach organization will prepare model study sheets for Bio-diversity study for schools.	3 months to 1 year
5. Sponsorship	Interaction with corporate	3 months to 3 years
	Income Tax exemption - on donations to Zoos - follow up action by Central Zoo Authority	3 months
	In kind sponsorships - CSPT/Kanpur Zoo	3 months to 3 years
	Strengthen Quid Pro Quo - CSPT/Kanpur Zoo	3 months to 3 years

LIST OF PARTICIPANTS:

Mr.S. C. Dey, Mr.B. Vijaya Raghavan, Dr. Rama V. Kumar, Ms Meena Raghunathan, Ms Mamta Sharma, Mr.Brij Kishore Gupta and Mr.R.C. Bhattacharya.

Future Search Workshop

*VISIONING THE IDEAL INDIAN ZOO OF THE FUTURE:
A NEW ROLE FOR EDUCATION AND CONSERVATION*

WORKBOOK

**Hyderabad
December 2-5, 1999**

CZA STRATEGIC SEARCH WORKSHOP

December 2-5, 1999

PARTICIPANT'S AGENDA

Thursday, December 2

18:30 pm: Opening and welcomes

Introduction to participants and agenda

Ice-breaker

Friday, December 3

9:00 am: Workshop begins

- Plenary — *where have we been*: individual, National and Global Milestones in Zoo Conservation and Education.
- Small Groups — *Analysis of patterns*
- Plenary: Group presentations

12:00-14:00: Lunch

- Small Groups — *Exploring the Present*: Discussion of trends impacting on Zoo conservation and education in India.
- Plenary — *Creating the Mind Map*
- Stakeholder — *groups-Prouds and sorries*.
- Small groups — Personal relationship to emerging issues. (if not done Thurs. pm)

18:45-20:30 Dinner

- Plenary — *Themes for an ideal future*.

Saturday, December 4

9:00 Workshop begins

- Small groups — *Scenarios for the ideal zoo of the future*
-

-
- Plenary — Group reports
 - *Selection of Task force themes/Workstations*

12:45-14:00 Lunch

- Stakeholder groups — *Needs for the future*
- Plenary — *Group reports*
- Task groups — *first planning meeting*

18:45-20:30 Dinner

- Plenary — *Group reports*

Sunday, December 5

9:00 Workshop begins

- Small groups — *second planning meeting*
- Plenary — *groups report back*
- Small groups — *final implementation meeting*

12:45 Lunch

- Plenary — final group reports
- Wrap-up-Plans for continuity

16:00-Workshop concludes

FUTURE SEARCH WORKSHOP

FRAMEWORK FOR A FUTURE SEARCH WORKSHOP

The WHOLE SYSTEM participates — a cross-section of as many interested parties as practical. That means more diversity and less hierarchy than is usual in a working meeting, and a chance for each person to be heard and to learn other ways of looking at the task at hand.

Future scenarios — for an organization, community of issue — are put into HISTORICAL and GLOBAL perspective. That means thinking globally together before acting locally. This feature enhances shared understanding and greater commitment to act. It also increases the range of potential actions.

People SELF-MANAGE their work, and use DIALOGUE — not “problem-solving” as the main tool. That means helping each other do the tasks and taking responsibility for our perceptions and actions.

COMMON GROUND rather than “conflict management” is the frame of reference. That means honoring our differences rather than having to reconcile them.

WORKING AGREEMENT

Conference Facilitators: Frances Westley, Harrie Vredenburg.

ROLES

Facilitators:

- Set time and tasks
- Facilitate large group discussions
- Keep the purpose of the workshop clear
- Maintain the integrity of the workshop design

Participants:

- Manage their own discussion groups
- Provide information and create meaning
- Imagine futures and propose ideas for action

GROUND RULES

- All ideas are valid
- Everything is written on flip charts
- Actively listen to each other
- Observe time frames
- Seek common ground and action
- Differences and problems are acknowledged — not “worked”

SELF-MANAGEMENT LEADERSHIP ROLES

Each small group manages its own discussion, data, time, and reports. Here are useful roles for self-managing this work. **Leadership roles can be rotated for different tasks.** Divide up the work as you wish.

DISCUSSION LEADER — Assures that each person who wants to speak is heard within the time available. Keeps the group on track to finish on time.

TIMEKEEPER — Keeps the group aware of the time left for each of their tasks. Monitors report-outs and signals time remaining to the person talking.

RECORDER — Writes the group's output on flip charts, using the speaker's words. Asks people to restate long ideas briefly so they can be captured accurately.

REPORTER — Delivers the group's report to the large group in the time allotted by the facilitators.

WHY ARE WE HERE?

Purpose — To introduce participants to each other, including motivations for attending and hopes for the outcome of this workshop.

1. Each of you was asked to bring an article, artifact, object or picture to this Search. Using what you brought, take some time now to share something of your own history with your group. What is your relationship to zoos? How did you get involved? What have been the frustrations and satisfactions which you have experienced in your relationship to the issue which is the focus of this search. Why did you agree to participate and what would you hope to achieve through your participation?
2. Record each person's contributions. What surprises do you find when you compare the experiences of different group members?
3. Prepare a brief report back to plenary.

Your reports are due at _____ o'clock

UNDERSTANDING THE PAST — INDIVIDUAL TASK

Purpose — To develop a collective, global picture of the social, economic, cultural, political and scientific history of Indian zoo and the role fo CZA

Task:

1. Alone, make notes on memorable **personal, global, and national** milestones, key events or turning points in the history of zoos in the world, the country and the individuals in the room over the past 50 years.
2. Use a magic marker to transfer your notes to the time lines on the wall.

PERSONAL

What you did? (Why important?)

1940s

1950s

1960s

1970s

1980s

1990s

GLOBAL COMMUNITY

What Happened? (Why important?)

Pre-1950s

1950s

1960s

1970s

1980s

1990s

INDIA

What Happened? (Why important?)

Pre-1950s

1950s

1960s

1970s

1980s

1990s

UNDERSTANDING THE PAST — GROUP TASK

Reports are due at _____ o'clock

Purpose: To identify themes and patterns in the search for the ideal Indian Zoo and the CZA's role. To establish a context for our shared future.

Task:

1. Establish the group's self-management process. Decide on roles for your group.
2. Each table will view the historical picture from a different perspective.
3. Discuss the time lines using the questions below and write your summary on flipcharts.
4. Prepare a 5-minute summary report.

Table assignments:

1. **Tables** _____
 - a. Looking at the **Personal** time line, what story can you tell about us — the people in this room?
 - b. Look at the Personal time in relationship to the other two. What connections do you see?

2. **Tables** _____

- a. Looking at the **Global** time line, what story can you tell about zoos in the last century? Focus on cycles and trends over time as opposed to individual decades.
- b. Look at the Global time line in relationship to the other two. What connections do you see?

3. **Tables** _____

- a. Looking at the India time line, what story can you tell about the last 50 years? Focus on cycles and patterns over time as opposed to individual decades.
- b. Look at this time line in relationship to the other two. What connections do you see?

EXPLORE THE EXTERNAL PRESENT

The Forces Affecting our Ability to Create an Ideal Indian Zoo with a new Role for Education and Conservation.

Purpose — To build a shared context of our concerns and priorities.

Task — This is a four-part task.

PART ONE — Take a few moments to jot down cultural, political, social, environmental, economics or technological trends which are impacting on zoos today and their role as agents of education and conservation in India.

CULTURAL/SOCIAL

POLITICAL

ECONOMIC

ENVIRONMENTAL

POLITICAL

TECHNOLOGICAL

EXPLORE THE EXTERNAL PRESENT

The Forces Affecting our Ability to Create an Ideal Indian Zoo with a new Role for Education and Conservation

PART TWO — The total group creates a “mind map” of all the trends affecting the topic of our search right now. All participants approach the wall where the mind map is posted.

Ground rules for mind-mapping:

- This is a group brainstorm — no evaluation, no censorship.
- The person who names the issue says where it goes on the map and how to phrase it.
- The person who names the issue gives an example. Speak in terms of *who* and/or *what*. (“More cellular telephones” is an example of the trend towards “better communications.”)

PART THREE — Each person has a strip of 5 colored dots — the colors denoting different stakeholder groups. Individuals study the completed mind map and place their dots on the trends they think are most important for the objective of the conference. They may put all five in one place, or distribute them any way they see fit.

PART FOUR — Participants meet in their stakeholder groups and look at the response of their sector to the forces affecting our ability to create the ideal Indian Zoo. Talk over the trends of concern to your stakeholder group.

1. What you are proud of: *what are your organizations doing right now* in response to these trends to further the objective of this search? Secondly, note what you regret: *what you would want your organizations to do* that you aren't doing right now
2. Prepare a 4 minute report.

Reports are due at _____ o'clock.

CREATING THE FUTURE

PART TWO – Image of the Ideal Zoo

In your mixed groups create an image of this imagined ideal future. Use no more than one flip chart sheet. You may create a symbol, drawing, diagram or emblem but you may not use more than two words. Put your table number in the corner. Post this on the wall reserved for this purpose.

PART TWO – Senario for the Ideal Zoo.

The date is November 2010. You are there. What does the zoo of the future look like? What kinds of technologies, designs, practices and processes characterize it. How does it interact with the community, other zoos, other conservation and education organizations? Who are the important stakeholders? What has been the contribution of each stakeholder group? Impact on each? What is the ideal role for CZA?

Group Task:

1. On a flip chart sheet list all the images or elements you would like to see in this ideal zoo. On a separate flip chart list all the ideas for projects, initiatives or ways to achieve these goals.
2. Then prepare an 8 minute presentation. You are aiming for a narrative-like report (some visuals are also helpful) such as one you might give at an international conference on conservation, a minidocumentary for television summarizing accomplishments, a grant proposal for a major grant from an international foundation or a skit for a school. Be as detailed, informative and engaging as possible. Some things to consider:

What do you do now that you didn't do 10 years ago?

What does the model zoo in India look like? How does it partner with other organizations, stakeholder groups?

What assumptions did you have in 1999 that are no longer valid in 2010?

What programs or initiatives is it possible to implement now that you couldn't in 2010?

What innovative reward systems, human resource policies and procedures, communications system and tech-

nology support your efforts?

What critical values, orientations have you preserved from 1999?

Which have changed?

Which parts of the progress you have made were easy, which hard?

Do not consider cost or degree of difficulty. This is an exercise in creative dreaming. Include anything if it is possible, viable, and motivating.

Your presentation is due at _____ o' clock

STAKEHOLDER NEEDS

Purpose — To make sure that stakeholder needs are understood and recognized in the design of the ideal future zoo.

Individual Task — You now have before you a number of images of the ideal zoo of the future. Your present task, however, is to begin to turn that dream into a reality, by considering the particular needs which your group has. What are the essential elements which you would need to see built into the ideal zoo to ensure your support and continual collaboration.

What we need to ensure our support?

1.

2.

3.

Why?

1.

2.

3.

Group Task — In stakeholder groups (**B groups**), list as many needs as your group has. Prioritize these to select the top three. Under each indicate why this need is important. Please use full sentences, i.e. we need this because...

Prepare a 5 minute report back to plenary.

Your report is due back at _____ o'clock

COMMON GROUND FOR THE FUTURE — INDIVIDUAL NOTES

Purpose: To discover common ground for the future.

Task:

1. As scenarios are being presented, take note of desired themes — **what we want**. This is our potential common ground as we move forward tomorrow to think about how to build the world of 2010, starting from the world of 1999.
2. Collect examples, projects, ideas that groups use as ways to get there — **how we may do it**.

COMMON THEMES (WHAT): _____

PROJECTS, IDEAS, EXAMPLES (HOW): _____

COMMON GROUND FOR THE FUTURE — GROUP TASK

Reports are due at _____ o'clock

Purpose — To confirm the principles of the future desired by the whole conference.

Task :

1. Determine the roles for your group.
2. Prepare a list of themes that make up our 1) **common ideas about the future (what)** and a second list of 2) **examples of ways to work toward it (how)**.
3. Make a third list of **unresolved differences** (things not agreed to).
4. After half an hour, you will meet with group — to merge your lists. This will be repeated once again in between four groups. Finally, as a whole conference, we will merge the lists into one .

Note: We need to grasp the key elements of our future vision for the ideal Indian Zoo but we do not need to agree on everything. Examples are just that. Our purpose here is to take advantage of the deep knowledge and creativity in the room that informs these future scenarios.

Notes.....

WORKSTATION ASSIGNMENTS

There will be three workstation assignments. You will chose the one in which you wish to participate. You may move between groups if you wish to contribute to more than one. Choose the assignment where you feel you have most to contribute. Report backs will occur tomorrow morning .

Workstation 1 — A group is needed to complete the process of integrating lists of common themes, projects and unresolved issues. With the help of a facilitator this group will organize the items on the remaining four lists into related groups, removing redundancy in the process. Give each group of items a title or name. Items which the workgroup can not agree on how to place will be put in the unresolved list. This is the final step in finding theme groups for building action framework's tomorrow. The results of this list will be presented back to plenary in the morning.

Workstation 2 — A group is needed to integrate the vision statements on the wall, into a statement of the ideal Indian zoo of the future. The final statement should be a maximum of three paragraphs in length (two is better) and should capture the diversity as well as the commonality of the goals put forward by participants. This statement can serve as the broad based goal or vision statement, which will accompany this report. It should be evocative, strong, clear and meaningful, as well as inclusive. The result will be presented to plenary tomorrow.

Workstation 3 — A group is needed to integrate the images produced by the vision group. With the help of a facilitator this group will capture in an integrative image or sets of images, with an accompanying text if necessary, the spirit and unifying elements of the individual images. This integrated image will also be integrated into the final report. The result will be presented to plenary tomorrow.

A FRAMEWORK FOR ACTION — GROUP TASK

Purpose — To gather insights and ideas for how to begin creating the desired future, working with the resources and opportunities of today.

Task — This is a three-part exercise.

PART ONE — Brainstorming Possibilities

1. Determine the roles for your group.
2. As a group, come to an understanding about how the items grouped under your topic relate to *building the ideal Indian Zoo of the future*.
3. Brainstorm a list of current initiatives which show promise of building towards the desired future. Brainstorm a list of new ideas for changing in the desired direction. *Remember that in a brainstorming all ideas are valid. Just list them without debate or censor.*
4. If time permits, prioritize your ideas. You need to select two or three ideas to develop more completely in terms of actions. In order to prioritize groups generally need to agree on criteria for decision. Some criteria might be:
 - the degree to which the idea would be welcomed by all stakeholders
 - the degree to which the idea is based on sound educational principles
 - the degree to which the idea is sensitive ecological/conservation issues.
 - the degree to which the idea seems most promising or most exciting .

The plenary facilitators can help you to create matrices or other tools for prioritizing ideas. Just ask.

5. Prepare a 3 minute report.

Reports are due at _____ o'clock

A FRAMEWORK FOR ACTION — GROUP TASK

PART TWO — Develop action strategies for selected ideas.

1. Determine the roles for your group.
2. If you haven't completed prioritizing ideas, do so now. Then taking each idea in order of priority develop it into a strategic action plan. Your action plan should deal with the following questions:
 - what kinds of obstacles or barriers do you need to overcome and how can you do it?
 - what kinds of opportunities are currently available for supporting action on this idea?
 - what action steps would need to be taken to implement this idea? When? By whom?
 - what resources would be needed?
 - what additional information or scientific analyses would be useful for developing and acting on this idea?
 - how would other stakeholder groups respond to this plan? How can you gain their acceptance?
3. Prepare a 3 minute report.

Reports are due at _____ o' clock

A FRAMEWORK FOR ACTION — GROUP TASK

PART THREE: Creating timelines and securing commitment.

1. Select the roles for your group
2. Arrange your plans into action steps and place these along timelines, at intervals between three months and three years. Now is the time to make commitments as to which of these steps you are prepared to work on personally. In the final report back, your group should only make recommendations for which someone in your group is personally taking responsibility.
3. Prepare a final 5 minute report.

Reports are due at _____ o'clock

RECORDING OF MEMORABLE EVENTS OF IMPORTANCE / MILESTONES IN THE HISTORY OF ZOOS BY PARTICIPANTS

I. PERSONAL MLESTONES

1940

Kheda operations of Elephants, Keonjhar, Orissa .

Observed death of captive Myna and Parakeet.

Construction of Zoo for education on Wildlife.

Loved Mynas, horses, dogs as child.

4 years old admiring animals, dogs, dung beetles, etc.

Was fond of animals as a child. Death of a pup gifted by uncle induced me to become a vet. My father was dog lover. I kept all sorts of animals at home.

1950

Saw a number of captive python and leopard rearing with friend and relatives.

I was born. No idea about wild animals.

Impressed by teaching/deeds of Buddha Mahavira, Ashoka, Sibi, Paarion on animal welfare saw people in park in Madras and wondered about trapped feelings of animals.

Visiting Borivilli National Park, Mumbai to admire animals/Birds/Met Dr. Salim Ali.

Got interested in ornithology.

Joined Forest Service.

1960

Joined Forest Service. Interacted for Zoo Management.

Flood Rescue Operations, Lucknow Zoo

Rescue tiger and bear cub

Incharge Dudhwa + Chandra Prabha sanctuary.

Treatment of injured wild Rhino and Tiger and death of captive elephants.

Started developing sympathy for animals. Liked stories of Buddha and Valmiki. At the same time liked hunting stories.

Saw some sanctuaries + impressed with freedom of animals, birds etc. travelled + worked in forests districts, admired animals from a distance.

Passed Ornithology sincerely. Joined Forest Service

Saw zoos

Joined Zoo

Development of zoo

Started photographing wildlife, specially birds.

Started reading books about wildlife found myself observing animal behaviour with more attention than human behaviour and was well rewarded.

Had to treat a black buck of Hisar Deer Park which put me in the frame of mine to treat wild animals.

Got opportunity to join the zoo service.

Born in 1966. Admired animals since childhood.

First visit to zoo gave the impression that animals should perform for me.

1970

Spent most of vacation in Mysore Zoo

Did not understand role of zoos. Exposed to nature in school – camps trekking, mountaineering, water

sports, bird watching.

As three years old was taken by my parents to Nandankanan Zoo. Was fascinated to see large carnivores at close range.

In official and unofficial capacity promoted the cause of wildlife and forestry in Tamil Nadu. Gave support and assistance to the work of BNHS in point Calimere. As Forest Secretary to Govt. of Tamil Nadu had a role in separating wildlife from forestry (1976) in order to give focussed attempts to wildlife. Succeeded in influencing Govt. to prevent large scale conversion of Vedanarayaran Swamp to Industrial use.

Started enforcement of Wildlife (Protection) Act 1972.

Was a member of wildlife youth club – saw many sanctuaries and National Park.

Influenced by Wildlife and conservation issues.

Joined zoo as zoo veterinarian and knew nothing about zoo animals, started learning animals their social behaviour and habits etc.

Worked as wildlife warden, Dehradun during 1966 – 68 Wildlife conservation had just started.

Came to know about conservation Wildlife Act enacted. Began to study birds and liked them. Started feeling bad about hunting of animals.

Saw more zoos and was even more unhappy about cloistered of animals.

Saw many zoos, development of zoo

Saw no. of zoos abroad and in the country. Development of zoos in the country.

Saw trees and urban wildlife disappearing right around me – caused me concern but watching the development of zoos wasn't too consoling either. Started an animal rescue/shelter facility.

Zoo administration. Visit other zoos in India. Research publication.

5 years old, fond of pets at house

First batch of wildlife training (1969 – 70) designing and settings up of a modern large zoo (600 HA) at Visakhapatnam reintroduction of captive bred black bucks, cheetal, sambar, four horned antelope and crocodiles.

Involved in first tiger census and conservation of black bucks – census of fresh water turtles for conservation.

First tiger census – Director Kanpur Zoo

Involved in breeding of Gharial for the first time in the world.(1982) breeding of white tigers cubs from normal coloured tigers. Research on breeding, management, disease and parasites.

Trained in Wildlife Institute, FRI – Dehradun with Saroj Raj (1972).

1980

Setting up of 3rd Large Zoo at Tirupati. Setting up of India's first safari park for tigers bears and Indian bisons (1984-85). Taking conservation education to rural mases by mobile zoos.

Worked with Ms.Indira Gandhi and started appreciating need for (or inevitably) of exsitu conservation.

Visited Bronx zoo, Jersey Safari Park and London Zoo and got Idea of open zoos.

Found an interesting number of animals /birds that qualify as wildlife were being bought to our shelter. Feeding immediately them was a new area of study. Began visiting national parks. Met Sally Walker and began my Zoo education

First capture and translocation of tiger, elephant.

Development of zoo and protected area. Associated with development of zoo in India. Member of number of committees and advisory boards on zoos and wildlife.

Began work of endangered birds under influence of Dr.Salim Ali (black necked Stork in Ladhak)

Chose zoology for higher studies. Obtained Masters. Set priorities for my career.

Conducting research and training programme on zoos at wildlife institute. Zoo consultancy project.

Focus on endangered Fauna of the highly threatened tall and wet grass lands of Brahmaputra valley terai areas.

Joined Forest Service. Posting in Haridwar gave a chance to observe animals in their natural habitat in adjoining Rajaji National Park.

Advisory group National Zoo Park – New Delhi.

Joined Forest Service in 1982 worked in a few forestry areas.

Didn't spent much time in zoos but didn't have opinion for or against them. Chose zoology to work towards wildlife studies as a career.

Trained in forestry and wildlife and started working with and thinking of wildlife (insitu). Actively associated with protection and enforcement. Not had much idea about exsitu.

Had the opportunity to see many zoos was convinced enough to take up graduation in zoology.

Wildlife conferences, interaction with WPA, research. Interaction with animals, problems of local community, participation in Galliform action plan formation.

Continued as in 1970's

As field director of tiger reserve initiated environmental education. Got in touch with Zoo-Outreach. Did comprehensive study of tiger conservation-particularly tiger in zoos.

Had the opportunity to visit chambal and appreciate the wealth. Floral and faunal for many times and did my graduation in biology.

Trained in zoo management from jersey wildlife trust.

Created shelter for rescued animals.

Joined BNHS for rescued animals.

Was instrumental in founding of first ' Friends of zoos in Mysore'.

Organised first vasectomisation of lions in India- in Mysore zoo.

Founded zoo Outreach organisation(1985).

Visited Hyderabad zoo and Delhi zoo. Wondered why animals are kept in cages. They can as well be kept in open area.

Introduction of rhinos captured from Assam and Nepal in Dudhwa N.P and created 3 N.P's and 8 sanctuaries and 12 bird sanctuaries in U.P.

Worked as director Prince of Wales zoological Park.

K.B.R national park formation, Hyderabad 1982.

Formation of mythological zoological park at pilgrim town Tirupathi, Andhra Pradesh-1987, Director zoo parks(1989-92)

Capture of tusker, joined as zoo director. Elephant workshop, cat specialist group, handled problem

animals, capsule course in wildlife management, director of zoos.

1981- Wildlife investigation officer A.P.State development of Mahavir deer park, Mrigavani park, Jawahar Park Hyderabad. Field Director Project Tiger Sri Sailam Nagarjun Sagar (1982-89) development of Great Indian Bustard Sanctuary Rollapadu. Formation of 14 Wildlife Sanctuaries.

1990

Work on conservation biology of Bengal Florican under USFWS/ MoEF sponsored project of BNHS. Also worked for Ph.D. thesis on the subject.

Realized no Noah's Arc possible but saw hopes in Jersey Trust etc CZA under Wildlife Protection Act linking ex-situ versus in-situ (not successfully)

Posted in Darjeeling zoo . Followed the original objectives of the zoo on the conservation of Himalayan animals. Bred snow leopard in 1993 and red panda in 1994 for the first time. Developed skill for red panda breeding.

Got diploma in captive management of animals

Started work with two tribal/nomadic groups one of hunters (specially of reptiles, hedgehogs etc) and one the *kalandars* who dance the sloth bears. Began a society for animal welfare based study of sloth bears in captivity. Began another small NGO for wildlife education and rescue trying to learn more about construction of zoos .

Worked on larger conservation issues as conservation officer of BNHS. Also organised training programme for zoos.

Posted to the zoo as director. Attended endangered species management course at Bhubaneshwar. Attended summer school at JWPT. Conducted three keeper training courses.

Helped number of zoos as member central Zoo Authority 1995. Got Post graduate diploma in Wildlife Management at WII Dehradun 1997. Posted to zoos as Director, 1998 attended summer school at JWPT and attended WZO conference at Pretoria in 1999.

Training at ITG, JWPT motivated by efforts of Gerald Durrel.

Started Pigmy hog conservation programme with William Oliver a successful breeding programme in close collaboration with forest department and Ministry of Environment.

CZA consultancy symposia and seminar

Eco development through peoples participation in conservation/park management

Got interested in wildlife education, involved in this area, working in sanctuaries and national parks.

Completed MSc in Zoology

I was influenced most by the Gulf war and the impact on the environment. After doing M.Sc shifted my interest from Zoology to Wildlife conservation. Joined zoo and am working now on zoo conservation.

Started working in zoo as manager, trained in India and abroad in zoo management, visited many zoos all over. Serious about positive roles of a zoo.

After graduation took up my post graduate study in Wildlife science, had an in built commitment to do something for wildlife.

Doctoral award, opportunities to work further on Galliformes.

Contributed to research in ornithology as member of governing council of Salim Ali Centre for ornithology and natural history. From 1993 Chairman of Chennai snake park.

Initiated research studies as research conservator, established tiger safari in Mumbai. WII consultancy on staff training/ eco-tourism.

Had an opportunity to take up my PG in Environment zoology and got engaged in survey of bird of prey in India, then got into upcoming zoos, non-profit marketing and fund raising activities and conducting education programmes. Bred amphibians in captivity also under went international training on endangered species management, wildlife conservation and environment education.

Joined conservation breeding specialist group SSC IUCN.

Draft Wildlife Act amended

Joined as Chief Wildlife Warden and in that capacity functioned as administrator of zoos in the state.

Training on wildlife management –orientation towards wildlife conservation.

MSCZA

Scientist in CZA engaged with rescue centre in 6 states and education programmes, evaluation of mini zoos.

Organised zoo training chairman IZDA newsletter, Zoo year book compendium publication, planned breeding of tigers, zoo evaluation team, many papers contributed.

Edited Zoo year book vol. 1 (1996) and vol. 2 in 1997 Compiled compendium on publications from Indian zoos vol. 1 1997 and vol. 2 1998.

TODAY

Scientist in CZA trying to make the zoos in our country to be more scientific oriented

The significance of zoos as institutions of conservation being appreciated.

Supervision of research projects, Ph.D. studies, Red data book, species accounts, birds to watch contributions, galli form action plans.

Director zoo trying to implement the positive attributes in the zoos.

CZA active interest in designing and remodeling of zoos, Veterinary education included in Wildlife studies, Public awareness of conditions of animals in zoos, animal rights and welfare, awareness of needs of animals, respect for animals, procurement of new species by Bombay zoo specially foreign species stopped. Change in enclosures of Bombay zoo, conservation urgently needed. Habitat also to be preserved.

Was instrumental in setting up a mini zoo at Jegarupadu power plant and presently working on setting up a mini zoo near Hyderabad.

Director zoo participated in formulation of zoo outreach strategy for states zoos. Involved in implementing the state zoo outreach strategy.

Introduction to zoo management as Director.

Infirm Bharat the Tail less tiger is shifted to shelter from Bombay zoo. Hybrid lions in Lion safari in Borivali National park sterilised.

Intensified application of Biotechnology for wildlife conservation and propagation

Now zoos in India are scientific institutions not the recreation centres/ organisation.

Of course the workshop

II. MILESTONES IN INDIAN ZOOS

- 1801 Barrackpore Indian Natural history Museum evolved into first zoo in India, "Barrackpore Park-closed in 1879".
First animal facility – an early attempt to conservation education.
- 1853 First animal exhibited to public for educational purposes at Madras Government Central Museum-First Zoo Visitor Survey done.
- 1854 First zoo in the country at Marble Palace, Calcutta
- 1855 First zoo in the country-Chennai-Many Zoos came into being.
- 1947
- Hardly there were 15 zoos in the country.
 - Private animals for personal pleasure and recreation fish tanks as a means of food sustenance.
 - Zoos managed as menageries, some publications made by individual zoos, no emphasis on education., cages – large number of animals in small place.
 - Introduction of African lion to Shivpuri (MP).
 - Zoos maintained as menageries.
 - Zoos as major recreational sources.
 - Many zoos established as menageries, Barrackpore, Junagadh etc.
 - Establishment of IBWL.
- 1955
- First meeting of zoo superintendents at Madras.
 - Some conservation, education but largely neglected
- 1956
- Zoo wing of IBWL was formed giving emphasis to zoos.(Facilitated detailed Studies on animal requirements.
 - First meeting of zoos wing of IBWL
 - Reintroduction of Asiatic lion to Chandraphaba Wildlife sanctuary(U.P)
- 1957
- Assam State Zoo established basically for entertainment.
 - Towards end of 50s, spacious open air zoos were started being built.
-

-
- Larger zoos on the anvil.
 - Little knowledge about handling and treatment of animals was known. Small close enclosures.
 - Modern Zoological park at Delhi setup.
 - Formation of first zoological park at Hyderabad with moated enclosures.
 - Creation of Darjeeling Zoo for conservation of Himalayan fauna.
 - National Zoo established to provide a model for states.
 - Establishment of large number of zoos.
 - Haphazard reintroduction of many endangered species.
 - First zoo publication "Indian Zoo Bulletin"
 - Establishment of National Zoological Park in Delhi.
 - Modern zoological park established at Hyderabad and at Nandankanan.

1967

Open zoos and scientific management. Attempt for captive breeding/avoid collection of specimen from wild. First systematic attempt to have wildlife trained managerial cadres and wildlife management courses. (1969-70).

Many modern and spacious zoos added. Observation recorded.

1. Establishment of a snake park for the first time in the country.
2. Captive breeding, rearing and management of three species of Indian Crocodylians in Zoos.
3. Appointment of zoo expert committee in 1973 by Govt. of India.
4. First publication titled Indian Zoo Bulletin in 1973.

Still many people think zoo as a centre for recreation.

Large open enclosures and modern zoos started and idea to have safaris in the zoo.

Concept of Safari Park where animals were kept open and human entered in cages.

Wildlife Protection Act enacted, without any reference to zoo management

UNDP/FAO Crocodile Breeding Project.

Zoo realized as centre for conservation.

Project Tiger in place. Tiger and conservation catch public fancy. Conservation becomes a "hot" topic for discussion. Zoos still looked upon as places of entertainment.

Project Tiger in place. Wild Life (Protection) Act 1972.

Zoo Expert Committee reports on standards for zoos. Training course on tranquilization of zoo animals. Crocodile Breeding Centre at Hyderabad.

Wild Life (Protection) Act, 1972. Project Tiger 1973.

Concept of sanctuaries. Rules and regulations for protection of wildlife. Developed awareness among public about importance of wildlife conservation. New strategy for zoo management captive breeding taken up.

First safari park for Indian lions at Hyderabad 1974. Mumbai 1976.

Nature conservation included as directive principle in Indian Constitution.

Safari Park concept.

1977

Modern zoological parks set up at Kanpur, Chandigarh, Patna, Guwahat, Chennai and Bhunaeshwar.

Zoo Outreach Organization was established at Mysore Zoo. Concept of networking, record keeping, stud-books, cooperation, coordination, zoo population control was introduced. Zoo's Print, monthly magazine was initiated. Zoo Zen – monthly technical help for zoos. Publication of Zoo's Print from 1986.

First breeding of Gharial in an Indian Zoo. (Nadankanan Zoo). In 1980.

A new strain of White Tiger (Nadankanan strain) was produced, helping in saving of white tiger.

US Fish and Wildlife Service evaluates five important zoos. Zoo personnel exchange course with Germany. Bio Park concept evolves. Zoo consultancy project starts.

More and more contact between zoos through Govt. of India. Emphasis on education, documentation.

Many new zoos got established in India. Zoos started becoming centres of conservation education.

Zoos expanding mainly for recreation. Establishment of Wildlife Institute of India, Dehradun, 1982. Emphasis on gene pool conservation.

National Wildlife Action Plan – 3 points of captive breeding

Specialties like nocturnal zoo, reptile houses (First 1982, Hyderabad).

1987

Modernization of old zoos continued.

1992 onwards

Conservation strategies emerged and zoos becoming conservation centres. Establishment of Central Zoo Authority.

CZA, IZDA, training of directors, middle level, keepers, frequent meetings. More publications, news letters, zoo yearbook, compendium, marking of animals, planned breeding, participation in international meetings, inspection of zoos, funding by CZA.

Amendment of Wild Life (Protection) Act, 1972 in 1991 and framing of Zoo Rules in 1992. CZA establishment in 1992. National Zoo Policy 1998. Publication of Indian Zoo yearbook Vol. I in 1996.

CBSG, India started (Conservation Breeding Specialist Group first regional net work).

Creation of CZA. Breeding of Red Panda and Snow Leopard.

Training and re-orientation programmes for zoo manager by CZA & WII.

Wild Life (Protection) Act amended to add a chapter on zoo management. Zoo started functioning as breeding centers for important species rather than displaying exotic species.

CZA comes into being. Studbook maintenance, details of founder animals.

Realization of consequences of inbreeding and hence plan to apply modern management strategies.

CZA was established. Formal networking of zoos, evaluation and recognition to zoos. More focus encouraged.

More emphasis on breeding of endangered species.

Increased interest in captive breeding of animals by forest departments.

Zoo training programs by WII. Indian Zoo Directors Association. Master Plan for National Zoo. Parliament Sub-Committee evaluates 5 zoos.

Sale of zoo animals to circuses stopped. Mobile zoos banned.

Scientific institutions of Govt./CZA join efforts for conservation of wildlife.

Mobile zoos and small zoos closed.

CZA in place. Started work with legal force/financial assistance. World Bank assisted project in Maharashtra gave support to Wildlife enforcement.

TODAY

Approval of Veterinary Council of India. Minimum Standards of Veterinary Education in which zoo and wild animals' health care and management was gazetted. National workshop on Zoo and Wildlife Management at Mukteswar. Internship with collaboration with CZA in all Vet. Colleges.

New Delhi (Vigyan Bhavan) Workshop on Zoos in which animal welfare peoples participated for the first time.

Zoo Strategy meeting for zoos in the next ten years.

Greater emphasis on role of zoos is considered. Renewed efforts for animals rights activities group. A decline in emphasis on role of zoos as centers for recreation/entertainment.

PHVA's on important species-LTM, Sangai, Rhino, Swamp Deer, Asiatic lion. Breeding workshop-Red Panda. Management workshop of LTM.

Urgent need to conserve animal rights and animal welfare movements. Need of animals.

National Zoo Policy, 1998.

Central Zoo Authority to provide rescue **facility for circus** animals/entertainment animals.

Jegarupadu CCPP – **India first IPP Power Plant sets** up a mini zoo in its power plant in the middle of 1999.

Zoos are being managed as per the guidelines of Central Zoo Authority.

Zoo Manning Policy under preparation.

Financial aid to zoos by CZA.

Pygmy Hog reintroduction programs in collaboration with Jersey Wildlife reservation Trust, IUCN, SSC, CBSG, is being watched as lesson for successful reintroduction programs for difficult species.

Stress on conservation of local zoos in preservation of endemic species.

National Diploma in Zoo Health care management at IVRI/CZA, with effect from 1995.

III. MILESTONES IN ZOOS - GLOBAL

Founding of Jarden Des Plantes.

Founding of Schonberg Zoo

Founding of First Scientific Zoo

World war destroyed human values and that adversely affected zoo upkeep and maintenance.

Scientific studies at London Zoo.

Small Zoos, menageries – main purpose recreation.

Animals supplied by animal dealers/animal collection exhibitions.

1947

Menageries for recreation

Zoos mere menageries

Zoos suffered due to world war as they were mostly owned by Govt.

Zoos started providing healthy recreational facility to world war torn citizens.

Zoos mainly as recreational facility.

European zoos on Hagenback system enclosure.

1957

Recreation continued and no changes in design-cages.

Hagenback concept of modern zoological park spread.

Jersey zoo established with the vision of education, awareness and breeding of endangered species from different parts of the world.

Not much emphasis on conservation.

Publication of International Zoo Year Book

Zoos role in conservation recognized. Objective modified/change from procreation to conservation,

breeding, education.

Safari Parks new concept.

1967

Change in zoo design concept. – Open zoos/large moated enclosures. (No/Bars Zoos).

Modern Zoos Set up.

Zoo design more naturalistic. IUCN.SSP.CBSG Zoo Animals through exchange.

1971-73

Project Tiger

Emphasis on conservation due to Stockholm Conference.

Stockholm declaration and Indian participation. Heard of Stockholm Conference.

Handled forestry.

1977

Zoos as centre for Ex situ conservation (rearing and rehabilitation), zoos for research and education.

Setting up of modern zoological park continue.

IUCN set up Captive Breeding Specialist Group.

Better regional cooperation among zoos.

Sharing of information-ISIS

CBSG efforts to regulate procurement of exotic animals from Western zoos.

Felt zoo as recreation centre but did not like the way animals are kept . CITES.

Better kept zoos more emphasis on record keeping.

Scientific management, Insemination techniques in zoos and modern techniques in handling of wild animals.

Global Record Keeping System set up. International Species System set up.

Coordinated species breeding programme, Species Survival Programme.

JWPT/ITC Training programme focus on local fauna.

Hands on experience in PMO, Forestry department and started appreciating needs for global exchange

Activity related understanding. Biology of wildlife taken up.

Studies on wildlife reproduction research came up.

Importance of understanding of reproduction was realized.

Scientific technique for breeding endangered species, AI, embryo transfers, frozen zoos.

1987

IUCN/SSC guidelines on captive breeding issued.

PHVA

Role of animal ethology in wild animal management.

Intensified activities in understanding the biology and behaviour came up. Reintroduction of application molecular biotechnology to identify species was done.

Wildlife conservation, education started in zoos.

Environmental, enrichment of enclosures. (hangers in design).

Thematic zoos concept evolved.

Began to realize the importance of conservation breeding.

Guidelines to captive breeding. Shift in focus of zoos to conservation/research/fund raising/education for research abroad.

Trade in zoo animals faced out.

Rio Conference.

Article 9 of convention of biological diversity.

Much more closer regional, global cooperation. Regional and global meets, more emphasis on education.

London zoo controversy, World Zoo Conservation Strategy.

Future Strategic Workshop for CBSG and WZO.

Captive Breeding Specialist Group became Conservation Breeding Specialist Group.

Zoos as conservation centres.

TODAY

Shift in zoo management strategies.

Importance given to lower vertebrates, Amphibians, Reptiles and invertebrates. Research fund disseminated to outside with emphasis on local needs/priority.

First night zoo in the world-Singapore.

Crucial turn in successful reintroduction programme of endangered species of couple of species and lesson learned for reintroduction.

Animal rights and animal welfare movements. Public is aware of environment need to conserve.

Shift from zoos to biological parks, more safaris, back to wild.

More population of smaller number of species than lesser population of large number of species has become the main objective of today.

Animals are seen as future stock for conservation objective.

Effective reintroduction of species, improved management strategies, global concern about loss of biodiversity,

Old zoos are being modernized and research and breeding programmes in progress.

RECORDING OF THE STAKE HOLDER GROUPS

I. ADMINISTRATIVE / ZOO DIRECTOR

1. Resource crunch
2. Lack of qualified staff.
3. Improving quality of animal mgt. + naturalistic zoos
4. Pressure on zoos to take rescued animals and the resulting envt. Stress
5. Less political will to implement policy
6. Greater unionism + unrest among zoo personnel
7. Deteriorating image of zoos . (not a fact)

1. Meeting the Resource Crunch

Ploughing back the revenue
Collection planning (animal)
Perspective plan – short term / long term
Seek public funding – national / international
Seek cza funding
Provide paid public facilities

2. Lack of Qualified Staff

Increase technological and scientific input
Minimum educational qualification for first level entry
In-situ promotional avenues.
Long and secure tenure for deputationists
Refresher courses/ in-service training
Encourage academics in zoo sciences.

3. Improving Quality of Animal Mgt. + Naturalistic Zoo

Improved animal enclosures.

Training programs for zoo vets.

Greater exchange of information among zoos

Zoo based research

LIST OF PARTICIPANTS

Mr. R.S.Bhadauria, Mr.Pushp Kumar, Dr.R.L.Singh, Mr. S.K.Patnaik,
Mr. T.Ramakrishna, Mr. S. C. Sharma, Mr.A. V. Joseph, Dr. B.M.Arora and
Mr. B.Vijayaraghavan

II. WORKING DIRECTORS

1. Less Political Will To Implement Policy
2. Increasing Resource Crunch.
3. Increased Need For Staff Education
4. Improving Quality Of Animal Management
5. Pressure On Zoos To Take Animals Due To Increased Environmental Stress
6. Greater Unionism And Unrest Among Zoo Personnel
7. Deteriorating Image Of Zoos (Only Recreation). Counter Trend à Media – Love Of Animals
8. Increasing Opportunities For Naturalistic Zoo (Now Commercial).

1. Less Political Will to Implement Policy

- Use NGO's as a tool
 - CZA Influence Over Political Master
 - Have A Master Plan For Management And Policy
 - Politician's First Hand Exposure And Experience through Zoo visit.
 - Influence Politician's Through Public Pressure / Press
 - National Zoo Policy As A Tool
 - Zoo Management's , Positive Rapport With Politicians And Enlisting Bureaucratic Support.
 - Involving Politician In Zoo Good Will Programs
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2. Resource Crunch

- Building Up Public Pressure – On Funding Agencies
- Looking For New Resources Sponsoring Program's / Addition.
- Ploughing Back Of Revenue Earned.
- Reducing Unplanned Animal Collection / Breeding Policy
- Contractual Working In Certain Areas (Eg Security Etc)
- Resource Mopping Through Educational Programmes
- Life Membership / Donors.

3. Increased Need For Staff Education

- Regular Keeper's Training And Zoo Visits And Evaluate Training (In Service)
- Zoo Keeper's Technical Course (Future Recruitment)
- Minimum Qualification For Keepers

LIST OF PARTICIPANTS

Mr.C.S.Yalaki, Mr. A.K.Das, Mr. Krishna Kumar, Mr. M. Rajasekar, Ms. Mamta Sharma, Mr. R.C. Bhattacharya, Mr. K.N. Benarjee

III. WILDLIFE VETERINARIANS

1. Improving Quality of Animal Management

- A. Housing – Near Natural Relevant to The Species With Ventilation Light , Etc. Carrying Capacity
- B. Nutrition – Good, Feeding And An Environment To Eat.
- C. Sanitation + Relevant Hygiene
- D. Day To Day Management, Reporting, Responding, Attending
- E. Planned Breeding (No Incidental Or Accidental)
- F. Health Care (Health Verification , Nutritional Health Care, Preventive Vaccination
- G. Disease Reporting + Therapy (Therapeutic Hazard Vs Disease Hazard)

2. Increased Need for Staff Education

- A. Periodic Training Of All The Personnel Connected To Zoo Including Public Man And Administrators
- B. Update + Retrain On Modern Trends Of Handling And Training
- C. Routine Checkup Of Zoo Personnel (Health Verification Specially Zoonotic Disease)
- D. Only Scientifically Trained Personnel Be Appointed On Sr. Position

3. Pressure on Zoo to Take Animal Due to Increased Environmental Stress

- A. No Zoo Can Be Compelled Under Law To Introduce Stray / Rescued / Impounded Animals
- B. For Introduction Of Inmates Proper Quarantine Facility At Safe Location Be Ensured

4. Increasing Resource Crunch

During Resource Crunch Upkeep And Health Care Of Animals Should Receive Top Priority

5. Greater Unionism And Unrest Among Zoo Personnel

Working Environment Should Receive Top Priority At All Levels

6. Deteriorating Image Of Zoo's

Improvement Of Health And Appearance Of The Animal Will Positively Improve Image Of The Zoo (Minimal Stress).

7. Increasing Opportunity For Non Commercial Naturalistic Zoo's

- A. There Is No Zoo In The Country That Is Commercial
- B. However, The Trend To Open Zoo's Without Taking Into Account The Sustainable Natural Resources Should Be Sternly Discouraged.

8. Less Political Will To Implement Policy

Education, Awareness + Lobbying Need To Be Done, Among Administration & Public Men.

LIST OF PARTICIPANTS

Dr. M.A.Salam, Dr. V.K.Sharma, Dr. R.K.Sahu, Dr. Ram Kumar and
Dr. L.N.Acharjyo

IV. SCIENTISTS

1. Improving Quality of Zoos

Exists (but all need considerable improvement)

- Networking
- Distribution of technical information
- Health care / facilities for better reproduction
- Improving living conditions of the animals
- Focusing on threatened species occurring in the area
- Training of zoo personnel
- Appointment of veterinarians
- Check unwanted proliferation of stock
- Regulatory mechanism in place to ensure proper standards



Stake holders group (Administrative/Zoo directors) in session

What is needed?

- Better environmental education tools
- Improvement in enclosure design to meet biological needs of animals
- National network for zoos
- Better record keeping
- Better nutrition and health care
- Training on advanced techniques for animal management
- Collection planning and rationalization; conservation breeding
- Research on animal behaviour / health /genetics

2. Increased Need for Staff Education and Training

Exists

- Training programmes for managers, animal keepers and veterinarians

What is needed?

- Specialized training on some species of concern
- Training for record keeping, studbook maintenance



Stake holders group (Working zoo directors) in session

3. Deteriorating Image of Zoos

Exists

- Some natural exhibits

What is needed?

- Stress on environmental education with specialized staff
- Visitor friendly and interactive exhibits
- Better signage
- Use of media for proactive outreach activities
- Better visitor facilities

4. Increasing Resource Crunch

Exists

- Inadequate grant to zoos

What is needed?

- Assistance from industry and commerce



Stake holders group (Wild life veterinarians) in session



Stake holders group (Scientists) in session



Stake holders group (Non governmental organisation) in session

5. Less Political will to Implement Policy

What is needed?

- * Creating awareness for decision makers
- Lobbying for better zoos by projecting their conservation values

6. Pressure on Zoos to Take Animals

Exists

- Plans of rescue centres
- Guidelines for animal adoption

What is needed?

- Well planned, scientific reintroductions
- Euthanasia
- Sustainable utilisation

7. Increasing Opportunities for Non-Commercial Natural Zoos

No comments

8. Greater Unionism

No comments

LIST OF PARTICIPANTS

Dr. Rahul Kaul,, Dr. Goutam Narayan, Dr. J. H. Desai, Mr. Sanjay Molur, Mr. Bipul Chakrabarty, Dr. M. G. Gogte,
Dr. Suresh Patil

V. N.G.O.S

1. Lack Of Political Will For Policy

Doing	Not Doing
1. Closing Down Non-Viable Zoos	1. Not Doing Much for Creating Awareness Among Politicians 2. Implementing Agencies Not Always Advising Politicians Appropriately

2. Deteriorating Image of Zoos

Doing	Not Doing
1. Increasing Coordination with other organization Viz Ivri, Wii, Cemb etc.	1. Not doing Enough Proactive Media attention
2. Planned Breeding Programme Initiated	2. Inadequate Attention to Signage
3. Animal Exchange Programme Rationalised	3. Inadequate Population Control Measures of Proficially Breeding Species
4. Zoos Identified As Rescue Centres	4. Not Involving Animal Welfare Activities (AWA) Properly

3. Increased Staff Education

Doing	Not Doing
1. Training Programmes for Various Functionaries Started	1. Inadequate Visit Programme of staff to other Zoo
	2. Lack of specialised Training for keepers (Eg Mahout Trg.)
	3. Orientation Course in India and Abroad.

4. Increased Resource Crunch

Doing	Not Doing
1. Incremental Assistance by Central Zoo Authority	1. Inadequate Funding by State Govts.
2. Recycling of entry fee for Zoo Development	2. Procedural Inadequacy and Delay in Fund Releasing Process
	3. Hardly Any contribution Forthcoming from Private Sector for Existing Zoos.

LIST OF PARTICIPANTS

Mr. R. Rajamani, Mr. S.C.Dey, Mr.P.R.Sinha, Mr.K. Srinivas & Mr. N.C.Bahuguna

FUTURE SEARCH WORKSHOP

LIST OF PARTICIPANTS

S.NO.	NAME OF THE PARTICIPANTS
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1. Dr. Harrie Vredenburg, Associate Professor, University of Calgary, Canada
2. Dr. Frances Westley, Associate Professor, McGill University, Canada.
3. Shri S.C Sharma, Addl. IGF (WL), Ministry of Environment & Forests.
4. Shri P.R. Shnha, Member Secretary, Central Zoo Authority.
5. Ms. Mamta Sharma, Director, Kanpur Zoological Park, Kanpur.
6. Mr. R.C. Bhattacharjee, Divisional Forest Officer & Director, Assam State Zoo, Assam.
7. Mr. A.K. Das, Director, Alipore Zoo, Calcutta.
8. Mr. C.S. Yalakki, IFS. Director, Zoological Gardens, Museums and Zoos, Kerala.
9. Shri N. Rajshekhar, Executive Director, Sri Chamarajendra Zoological Garden, Mysore, Karnataka.
10. Dr. R.K. Sahu. Zoo Supdt. Kamla Nehru Zoological Garden, Ahmedabad.
11. Dr. V.D. Sharma, Director, M.C. Zoological Park, Chhatbir, Punjab.
12. Dr. M.A. Salam, Asstt. Director, Jawaharlal Nehru Biological Park, Bokaro, Bihar.
13. Dr. B.M. Arora, Head, Div. Of Epidemiology, IVRI, Bareilly, U.P.
14. Dr. L.N. Acharjyo, M.V.Sc.(Retd.) Zoo Veterinarian, Nandanankanan Zoo, Orissa.
15. Dr. Rama Kumar V., Secy. General, Veterinary Council of India, Delhi.
16. Mr. Pushp Kumar, Zoo Consultant, Hyderabad.
17. Dr. J.H. Desai, Ex-Director, National Zoological Park, New Delhi.
18. Mr. S.C. Dey, Global Tiger Forum.
19. Mr. Meena Reghunathan, Programme Co-ordinator, Centre for Environment, Ahmedabad.

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20. Dr. Geetha Seshamani, 271 & 272, Defence Colony, Jangpura Side, New Delhi.
 21. Ms. Sally Walker, Zoo Outreach Organisation, Coimbatore.
 22. Mr. R.S. Bhadauria, Retd, PCCF, Lucknow, U.P.
 23. Ms. Sanjay Molur, Zoo Outreach Organisation, Coimbatore.
 24. Shir Biswajit Roy Choudhury, Secy. Nature Environment & Wildlife Society.
 25. Mr. B.C. Choudhury, Wildlife Institute of India, Dehradun.
 26. Shri S.K. Patnaik, Chief Conservator of Forests (WL), Government of Orissa.
 27. Shri T. Ramakrishan, Chief Wild Life Warden, Government of Andhra Pradesh.
 28. Dr. R.L. Singh, Chief Wild Life Warden, Government of Uttar Pradesh.
 29. Shri M.C. Gogate, Chief Wild Life Warden, O/o of the PCCF, Maharashtra State, Nagpur.
 30. Shri A.V. Joseph, Conservator of Forests, Wildlife Management, Hyderabad.
 31. Shri N.C. Bahuguna, Conservator of Forests (Northern and Wildlife Circle) Jaldapara, West Bengal.
 32. Dr. Rahul Kaul, Regional Coordinator, (South Asia), World Pheasant Association, South Asia Regional Office, Delhi.
 33. Dr. Gautam Narayan, Pigmy Hog Conservation Programme, Guwahati, Assam.
 34. Dr. Satnam Ahuja, Hon. General Secy., AHYMSA, Mumbai.
 35. Shri B. Vijayaraghavan, I. A. S. (Retd.) Chairman, Chennai Snake Park, Madras.
 36. Shri R. Rajamani, Ex,-Secy, (Ministry of Environment of Forests), Hyderabad.
 37. Shri N. Krishna Kumar, Director, Arignar Ann Zoological park, Chennai.
 38. Shri Bipul Chakrabarty, Scientist, Central Zoo Authority.
 39. Shri Suresh B. Patil, Scientist, CCMB, Hyderabad.
 40. Shri K. Srinivas, Asstt. Manager (PD), GVK Industries, Hyderabad.
 41. Shri Brij Kishor Gupta, Scientist, Central Zoo Authority.
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