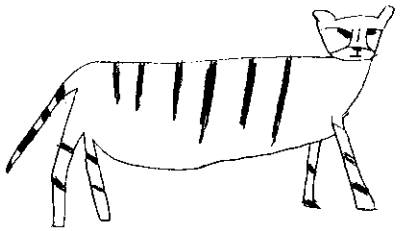

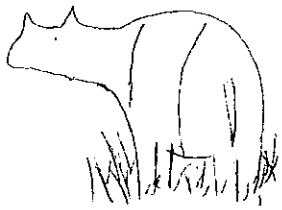

Masterplanning Zoo Education in South East Asian Zoos

Report

South East Asian Zoo
Educator Training Workshop

Compiled by Sally Walker, Zoo Outreach Organisation
Sponsored by the International Zoo Educator Association

ZOO OUTREACH ORGANISATION

Asia

Report

Masterplanning Zoo Education in South East Asian Zoos

South East Asian Zoo Educator Training Workshop

Credits

Organised by	ARNIZE, Singapore Zoo and Zoo Outreach Organisation
Hosted by	Singapore Zoo
Sponsored by	Ministry of Foreign Affairs, Singapore
Compiled by	Sally Walker and Zoo Outreach Organisation Staff
Report sponsored by	International Zoo Educator Association

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Part I

Welcome, Orientation, Introductions

Vietnamese participants, MFA Representative and Director, Singapore Zoo at the inaugural function for the South East Asian Zoo Educator Course

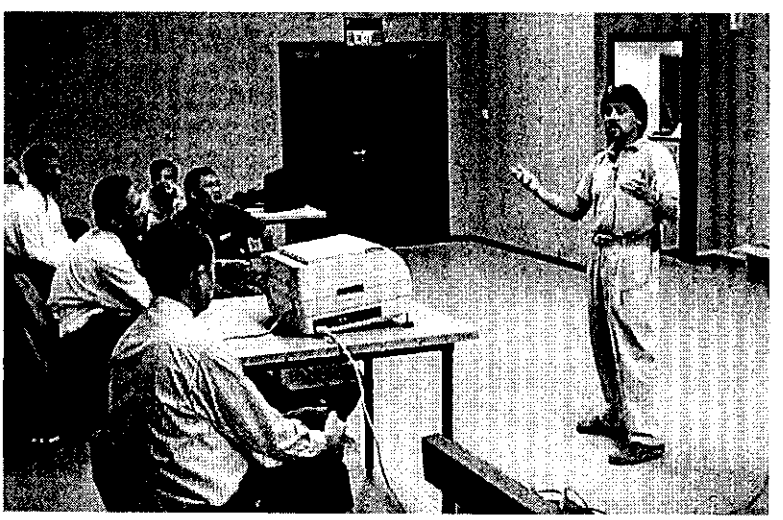
Singapore Zoo Educator Course- 12th March 2001
Day 1 -- Welcome and Introduction

Participants, Sponsor, Singapore Zoo Staff and External Resource Persons in a dignified group photo at the MFA Cooperation Programme Offices (left), but with the aid of kids' animal masks it didn't take long for the situation to deteriorate (right).

The first day of the Singapore Zoo Educator course was devoted to Welcome and Course background. Participants, Sponsor, Singapore Zoo Staff and External Resource Persons met at the Ministry of Foreign Affairs building for a well organised Inaugural Function, with welcome, introductions and tea. MFA personnel explained the MFA training scheme and wished participants well in their course.

Participants went to Singapore Zoo for lunch and gathered in the Education Building auditorium for a series of introductory lectures, introductions, and exercises.

Bernard Harrison, CEO, of Wildife Reserves, Singapore gave an excellent presentation on the importance of zoos. Mr. Cheung, Executive Director, gave a presentation on the Singapore Zoo and its commitment to Education and Training. Kit Sun, Curator, gave an overview of the course(overleaf).



Bernard Harrison gave an excellent presentation on importance of zoos in conservation.

Participants introduced themselves, country by country, some with brief, funny skits. Seven countries of South East Asia were represented by 23 participants, e.g., Malaysia, Vietnam, Philippines, Laos, Cambodia, Thailand, Indonesia. They represented both large and small zoos, rescue centres, bird parks, and other facilities. Some participants were professional zoo educator and others were directors, veterinarians, public relations persons. All came for the purpose of learning how to implement zoo education in their country and institution. The day ended with an exciting tour around the Singapore Night Safari followed by dinner at the Safari.

Wildlife Reserves Singapore

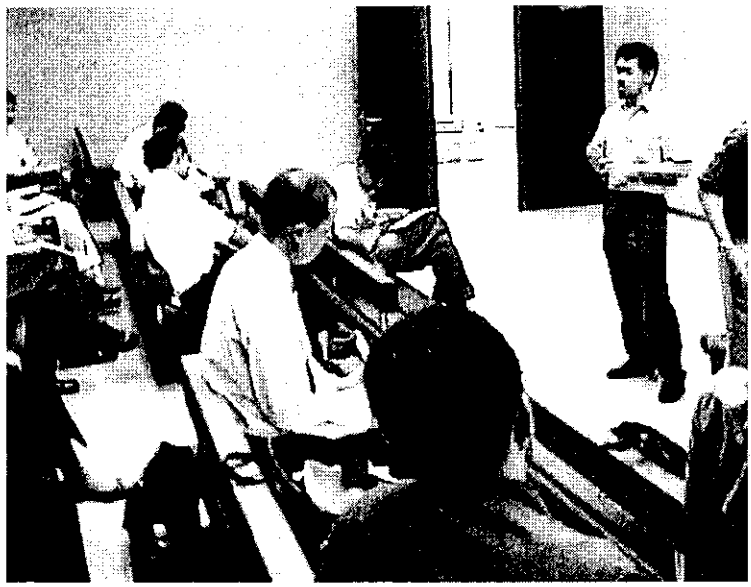
WRS Mission

"We Inspire Through Exciting and Meaningful Wildlife Experiences."

"... Wildlife Experiences"

This refers to engaging all the senses of visitors during their contact with WRS and any subsidiary. The intent is to expose them to experience that will make them appreciate the wonders, beauty, majesty, danger and quirkiness of wildlife.

The caution here is that WRS should be wary of swinging to the extreme to graphically depict the gory or brutal aspects of wildlife.



Dr. Cheung, Director, Singapore Zoo explains some of the values of the Wildlife Reserves, Singapore.

WRS Core Values

"We Respect and care for Animal and plant life and the Environment"

This value represents the core of what WRS and its subsidiaries stand for.

"Respect and Care"

We do not humiliate and debase animal and plant life during our encounters and workings with them. We show concern for maintaining, nurturing and conserving flora, fauna and the environment.

"Animal and Plant Life and the Environment"

These are the parametres outlining the focus of WRS' conservation efforts.

WRS Core Values

"Pride of a Pro!"

This value focus on pride of belonging to WRS and subsidiaries. This will reflect in the way we behave to our internal and external customers and partners.

"Pride"

Pride of attachment and association to WRS because it's a great organisation, its values and beliefs, its people, its achievements. Pride Does Not mean arrogance.

"Pro"

Skilled, competent in area of work, experienced, knowledgable and well trained.
Behaviours and ethics governed by a code of conduct that defines professionalism.
Respect and support for colleagues, partners, and general staff because we are working towards the same cause.

"Think Creative! Think Innovative !!"

Think Creative! Think Innovative!! Is about initiating an open, receptive, can-do environment

which fosters creative and innovative thinking among staff. This is critical if WRS is to stay relevant and competitive in today's fast changing business and social environment.

The focus is on empowering creative and innovative thinking in All Staff (not just CDT) in overcoming problems, helping the business, improving processes or ways of doing things, etc.

"Focus on the Customer"

To put yourself in the shoes of the customer and view things from their P.O.V.!!
For example, in setting up a new exhibit or display, think in terms of what appeals, what surprises (The Rabbit), what makes them smile, want to come back, inspired to do something. This value focuses on the people who keep WRS and its subsidiaries running.... the Customers who pay for goods and services.

Why Singapore Zoo ?

Why Singapore ? for the first South Asian Zoo Educator Course ... because of the number and quality of easily accessible scientific and naturalistic leisure facilities in the country.

Why Singapore Zoo ? because of the "over the top" professionalism and perfection. Literally everything at Singapore Zoo carries a conservation message. Education is everywhere ... even the loo !

Toilet at Singapore Zoo ! Even the restrooms at Singapore Zoo are decorated in a naturalistic style. Basins are set in artificial tree trunks. The room is open to the landscape outdoors. Even the toilet cubicles are decorated with attractive educational graphics with an environmental theme or biodiversity message.

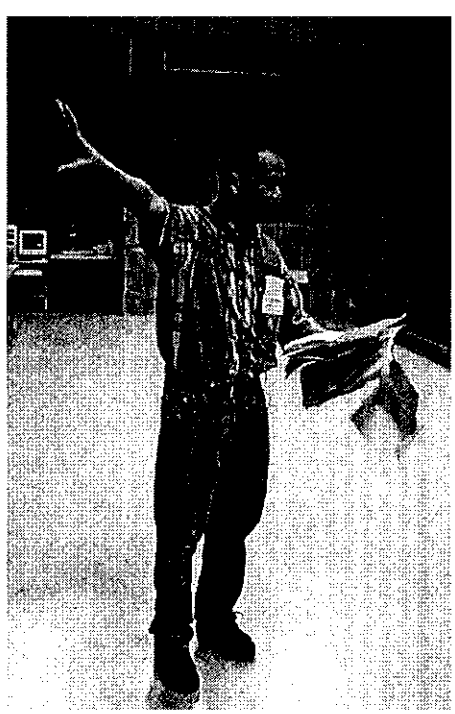
Indonesia had the largest number of participants with seven persons from as many zoos in Indonesia.

Outline of SEAZA / ARNIZE Zoo Educator Training Course – 2000

1st Day — 12th March 2001 Theme : Orientation Day
Opening ceremony
Welcome address by MFA
Welcome address by SEAZA President, WZO VP and WRS CEO
Briefing, icebreaker and introductions
Travel to SZG
Lunch and tour of Singapore Zoo (derailed by rain)
Welcome to SZG and Back ground - includes Mission of SZG
House Keeping, Overview of the Course
Tour of Night Safari and Welcome Dinner

2nd Day — 13th March 2001 Theme : Introduction to subject and syllabus
Address from SEAZA Training Committee and SEAZA Education Committee
Address from WRS Education Department; Words from IZE / ARNIZE
Evolution of Zoos – history of zoos of SEA
Importance of Zoos – World Zoo Conservation Strategy
WZCS and SEAZA Futures Report on Zoo Education — components
Introduction to course project – Making a Masterplan for Zoo Education at your zoo
"What is Zoo Education?" ZOO as teaching resource
SWOT analysis – to identify the problems and potential of South East Asia zoos

3rd Day – 14th March 2001 – Theme : (from SEAZA Futures Report)
Providing visitors with comprehensive, accurate information on environmental conservation
"What is Environmental Conservation?"
Environmental Education in Zoo Education
Targeting your audience – planning
Visitor Surveys



Philippines participant, Mani, introduces himself with a drama.

Variety of teaching methodologies. Evaluation of education programmes
Day's field visit — Discovery Centre

4th Day – 15th March 2001 — Theme (from SEAZA Strategic Futures Search) : Develop environmental and biodiversity messages
Teaching Biodiversity in the Zoo with visit to Fragile Forest
Cage labels using Fragile Forest as a case study
Brochure and poster design
Interacting with Media
Public presentations
Day's field visit — Underwater World, Sentosa Island Subject : Marine eco-system,

5th Day — 16th March 2001 — Theme for day :
(from SEAZA Strategic Futures Search *Special days to heighten public awareness, create publicity events, promote environmental conservation and animal welfare on designated days.*
"How to be Creative"
Practical hands on - Designing cage labels
Reporting; evaluation by resource persons
Practical hands on - design a brochure, sticker or other promotional material
Day's field visit — Visit to Bukit Timah Nature Reserve
How to organize a Nature Trail followed by Nature Walk through preserve
Cultural animal Stories from each country

6th Day – 17th March 2001 – tour of Singapore
7th Day – 18th March 2001 – Free day

8th Day — 19th March 2001 — Theme : Zoo - Public school Education Programmes
Linking Zoo Education to School Curriculum
Teachers' training workshops
Educational packets & designing worksheets
Hands on trial packets
Day's field visit – Jurong Bird Park
Teaching session at JBP including Outreach Programmes and Jurong Bird Park Birdshow

9th Day 20th March 2001 Volunteers & docents
Touch tables
Tips on making a presentation for groups
Hands on making a touch table and demonstrate
Keeper Talks
Presenting with live animals
Day's field visit — Singapore Botanical Gardens and Orchid Centre
Visit and teaching session followed by tour from Education perspective

10th Day — 21st March 2001— Animal Welfare
Enrichment, Ethics and Welfare
Visitor behaviour
Animal Trade
Fund raising from International and local source
Master Plan Project Working Groups complete their Reports

11th Day – 22nd March –
Working group presentation of Masterplan and discussion
Evaluation of Zoo Educators' Course
Farewell luncheon and certificate presentation

The derailed and rained out Singapore Zoo tour took place the following day.

Introducing -- The Participants !

Mr Sun Hean, DD, Wildlife Protection Office, Cambodia

Ms Doan Thi Thanh Tuyen, Zoo Educator, Saigon Zoo & Botanical Gardens, Vietnam

Mr Marta Amnan, PKBSI Education Division, Zoo Association of Indonesia

Mr Emmanuel Belmonte Tangco, President, Malabon Zoo & Aquarium, Philippines

Mrs Nguyen Thi Thu Hien, Proj Asst, EPRC, Vietnam

Ms Sharmy Prastiti, Animal Curator (Hospital Staff), Taman Safari Indonesia

Mr Dennis J.I. Salvador, Executive Director, Philippine Eagle Foundation

Ms Lee Yoke Kuen, Biological Research, Penang Butterfly Hous, Malaysia

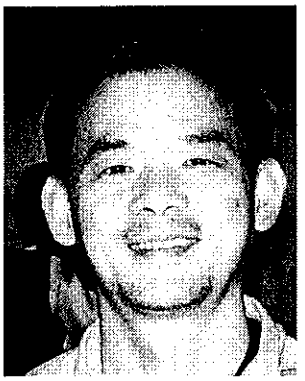
Ms Litasari, Veterinarian, Surabaya Zoological Garden, Indonesia

Mr Angelito A. Cereno, Program Manager Philippine Eagle Foundation

Mr Musnarizal Bin Abdul Manap, Education Officer, Taiping Zoo, Malaysia

Ms Endang Budi Utami, Head of Div. - Gen. Affairs,TMII, Jakarta Indonesia

Ms Yanni Puspitaningsih, Animal's Recorder,
Bandung Zoo , Indonesia



Dr. Chatri Khoohathapharak, Veterinarian
Chiangmai Zoo, Thailand

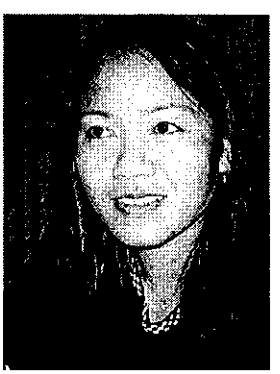
Mr Saikham Bouathongthip, Acting Office
Chief, Ministry of Defence, Laos

Mr Lim Pak, Animal Health Officer
DeptAnimal Health & Production, Cambodia

Mr Attapon Srihayrun, Zoo Educator,
Khao Kheow Open Zoo, Thailand

Mr Maskana, Environment Department,
Ragunan Zoological Park, Indonesia

Mr Chea Sopheak Makara, Official, Ministry
of Agriculture Forestry and Fisheries,
Cambodia



Mrs Phetsamon Soulivong, Technician
Ministry of Agriculture and Forestry, Laos

Mr Mohd. Fuzi Bin Zulkifli, Wildlife Assistant,
Zoo Melaka, Malaysia

Sakpasueth Sixanone, Veterinarian,
Vientiane Zoological Gardens, Laos

Survey of Facilities in Participant Institutions
South East Asian Zoo Educator Course

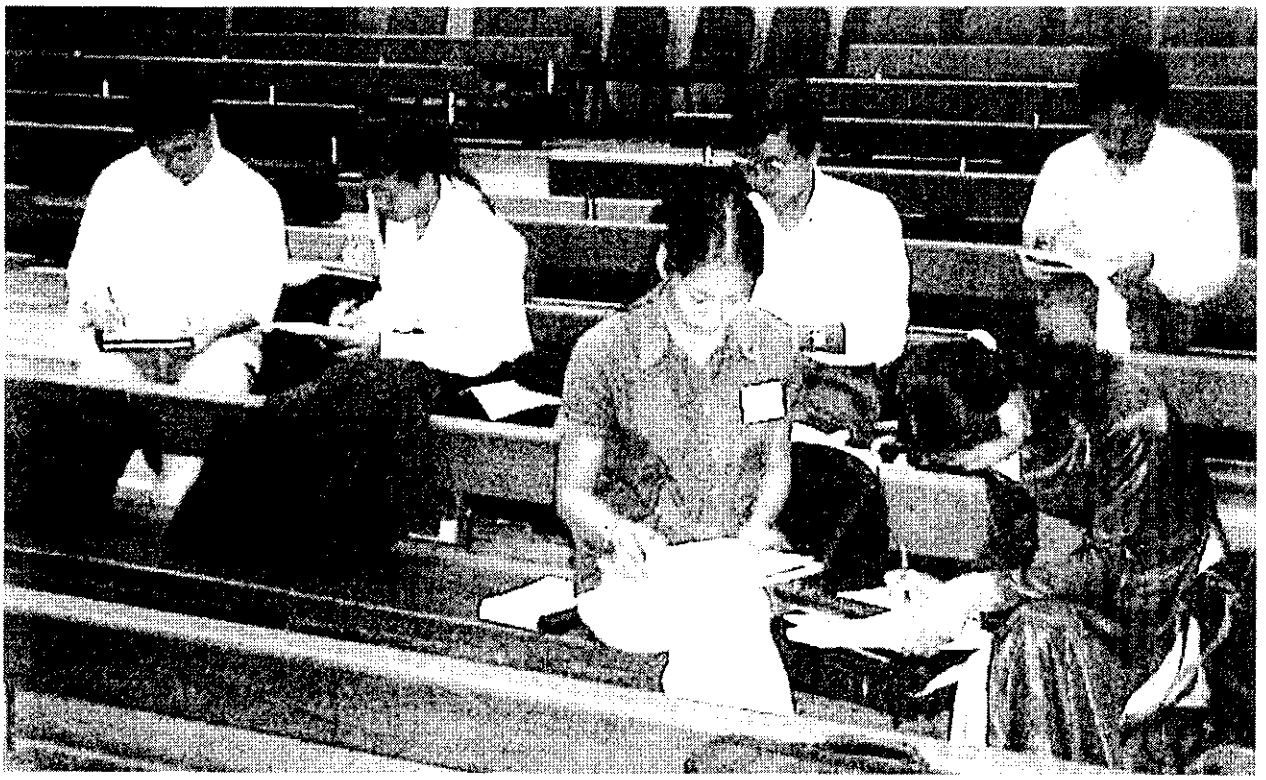
The first day of the SEA Zoo Educator course being devoted to introduction and orientation, participants were asked to fill out a long, tedious form to collect information about their zoo situation and what they required from the course. The answers give some insight into the South East Asian zoo scenario overall, although the zoos which participated represent a biased sample of the best or the only zoos in a particular country. The Table below illustrates the number of countries and the number of participants and number of facilities from each country.

Country	No of Participants	No of Institutions
Cambodia	3	2
Indonesia	7	6
Laos	3	2
Malaysia	3	3
Philippines	3	2
Thailand	2	2
Vietnam	2	2
Total	**23**	**19**

Status of designated posts for education officers: questions included whether there was a designated Zoo Education officer in their zoo? If there were other staff for education and their pay scale. Cambodia had 1 education officer out of 2 institutions attending the course, Indonesia has 2 education officers out of 6 zoos attending, Malaysia had 3 out of 3, Thailand 1 out of 2, Vietnam 2 out of 2 and Laos listed none.

Additional Education staff : the Ta Mau Zoo, Cambodia listed 15, some or all of which may be volunteers. The Wildlife Department, Cambodia, Tamin Mini, Bandung Zoo in Indonesia; Philippine Eagle Foundation, Khao Kheow Open Zoo, and Thailand have 2. The Saigon Zoo listed 5 additional persons for education in their zoo. Participants wrote "unknown" for salary mostly but those who listed gave the amount in a range from $20 – 350 per month.

Volunteers : At least six of the 14 institutions reported using volunteers in some way, not all specifically for education. In Cambodia 2 institutions use volunteers who care for animals, give treatment and help in examination. The Taman Mini in Indonesia uses volunteers for guiding Kindergarden students. Vietanne Zoo in Laos has 3 volunteers who teach people at the zoo how to care for animals. Penang Butterfly House uses 20 volunteers. The Philippine Eagle Foundation help with tours and assist in module implementation. Khao Kheo zoo has 12 volunteers who lead groups and teach them about animals.



Participants answering questions about the education programme and their needs in their institution and country.

Reported Problems with Volunteers: Volunteers can't respond to many of the questions visitors ask; they are students so they need more training. Lateness, scheduling difficulties, language problems, insufficient time and interest were other complaints. There were no complaints of destructive behaviour and criticism of the zoo, as has sometimes happened in other parts of Asia however.

Budgets : Budgets for education are normally small in Asian Zoos. We asked how much was allocated specifically for education and what help, if any, participants wanted to try and address this issue. Most participants answered "unknown" but apparently meant that there was no budget specifically set aside for education. The budget of the Ta Mau Zoo, Cambodia for education is $1500; they wanted help to explain the need for more funds to the Ministry of Agriculture. Another participant from Cambodia said, however that his zoo had no budget to support education activities and that activities have been carried out by NGO contributions. In Cambodia some local NGOs get contributions from business, e.g., mobile phone companies etc). In Indonesia, the Taman Mini devotes 6% of the total budget -- the park has financial constraints; it is difficult to increase the park education subdivision budget. The Philippine Eagle Foundation listed one million pesos which is less than it sounds in Philippines currency and commented that this amount does not permit expanding programme needs. The Khao Kheow Zoo listed $30,000 as adequate for what they wanted to do and listed the following publications, projects and activities: Handbook for schoolteachers, leaflets, newsletter, TV slots, slide presentation. The Saigon Zoo reported $7000 US as the education budget for their zoo.

External funding : Five participants reported no external funding. Others listed Friends of the Zoo, sale products, "Friends of the Zoo" funding, Foreign donations, donations from business and Biodiversity Foundation to head workshops for schoolteachers of biology sciences.

Identifying signage : Eleven institution answered that they had identifying signage on every enclosure and all but one of these reported it was changed regularly. Ten institutions get their signage done "in house". Materials used were metal sheets, painted wooden boards, and laminated sheets. Dimensions included from 15 X 20 cm, 30 X 20 cm, 40 X 20 cm, and 24 X 30 in. Resources used for signage included books, other zoo personnel and scientists outside the zoo, web and internet and others. Some participants reported that they had no resource materials to help them. Help was wanted from the workshop on signage included "good messages", funding support for making signage, instructions on how to standardize signage, choosing slogans and identifying information which people want to know, how to design signage which conveys message without the aid of tour guides and how to design signage which elicits good behaviour from visitors (to make them follow rules and regulations).

Presentations as educational techniques: Nearly all participants reported that presentations were given both inside (14) and outside (13) the zoo. Six participants had had some formal training in giving presentations. Twelve institutions reported presenting with "props" but we feel the survey may have been defective using the word "props". Nine institutions reported presentations using live animals and 7 with "artifacts". Thirteen institutions use videos in their education programme and nine use slides.

Printed material : Printed material has been produced and is utilised by many of the zoos. Thirteen have produced a brochure and two of these sell it. Eight zoos have produced a map. Six zoos have published guidebooks, 2 of them for sale. Participants were asked what they wanted from the course with regard to printed matter and presentations and their answers included - how to design conservation education posters and brochures, as well as worksheets, stickers, booklets, signage, map and guidebooks; how to develop inexpensive materials for educating visitors. Some participants were also interested in general zoo knowledge.

Formal training : Eight out of 22 participants had had some formal training in zoo technical or related environmental training. Only one had had training in environmental education or zoo education.

Membership in IZE and ARNIZE : Among course participants, there were no members of the International Zoo Educator Association. There were 7 members of ARNIZE at the beginning of the course and 22 at the end.

Reference materials : Eleven participants reported that they did not have access to reference materials and this was a problem to them in planning zoo education. Almost all participants requested books on some subjects, most (but not all) related to education, e.g. technical references, including zoological, tropical animal management, waste water management in the zoo, zoo education for all levels, wild animal behaviour, guidebook about zoo education, animal classification and animal behaviour, books that specifically teach people and change their behaviour towards animals and wildlife, animal identification handbook, especially regarding arthropods and reptiles, encyclopaedia of animals of the world, environmental enrichment, game for zoo, etc., materials about animal welfare.

Why they wanted to attend this course : Most participants replied that they wanted to learn how to conduct an education programme for their zoo. Many said they hoped to learn more about conservation in general and its relationship to zoos. A number of participants, selected by their governments, were not zoo educators but employed at the zoo in another capacity and

wanted technical training. Some other comments were to know more about Singapore Zoological Gardens and all the zoos in ASEAN, and to increase relationship and zoo development. One participant commented "because my zoo still does not have an "official" education programme, I want to increase my knowledge, ability, so that I can start an education programme. I want to introduce animals to the public by taking them to schools, etc." Others said "I came to learn to educate the public at large, both for educated and uneducated people". " I would like to improve my knowledge about wildlife, to get some good experience from you or other countries to develop my zoo and national biodiversity conservation areas in my country."

What do you need from this course: Most participants replied in various ways that they needed to acquire skills and knowledge in zoo education. They also mentioned : Practical lectures on zoo education; some educational materials to take home; instructions on standard zoo education from child to adult; Information about animal behaviour to explain to others importance of conservation; examples of the kind of programmes which I can apply in my zoo in order to do successful zoo education; current techniques; technology for expertly educating the public on wildlife, experience in doing some zoo education techniques; and information about education activities which had been done in other zoos.

What are your biggest problems in zoo education ?
Most of the participants listed finance, trained staff for education and the lack of a planned programme or Master Plan for their zoo. Several listed lack of public participation as a problem. Other comments were :
- Different concerns or opinions from people about the zoo; they think it is very poor; different social and economic and educational level of visitors
- I do not have a person who can take any responsibility with this education department.
- My biggest problem is that I do not speak or write English well
- Handling a huge crowd and one which means I can't make them stay interested with what I want to educate them about.
- Staff development — primary reason why I also wanted my colleagues to participate was so that we can meet "eye to eye" on concepts and projects meant to educate the general public.
- Visitors attitude towards animals - disrespectful; low level of discipline

For the most part, the modules we had planned for participants covered their requests and problems in that they were given information or material which would help them solve their own problems. The theme of the course, creating a Master Plan for Education was intended to solve many problems as participants could know what they were going to do for a specific period and request funds, materials and staff to carry out the work. As most of the institutions represented were government, a printed document such as a Master Plan is very effective (and absolutely necessary) in getting financial and staff support from the government. Additional educational material was copied and given as a response to the lack of resource material.

Address List – South East Asian Zoo Educator Course Participants

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Department of Animal Health
& Production, Cambodia

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Ms Yanni Puspitaninsih
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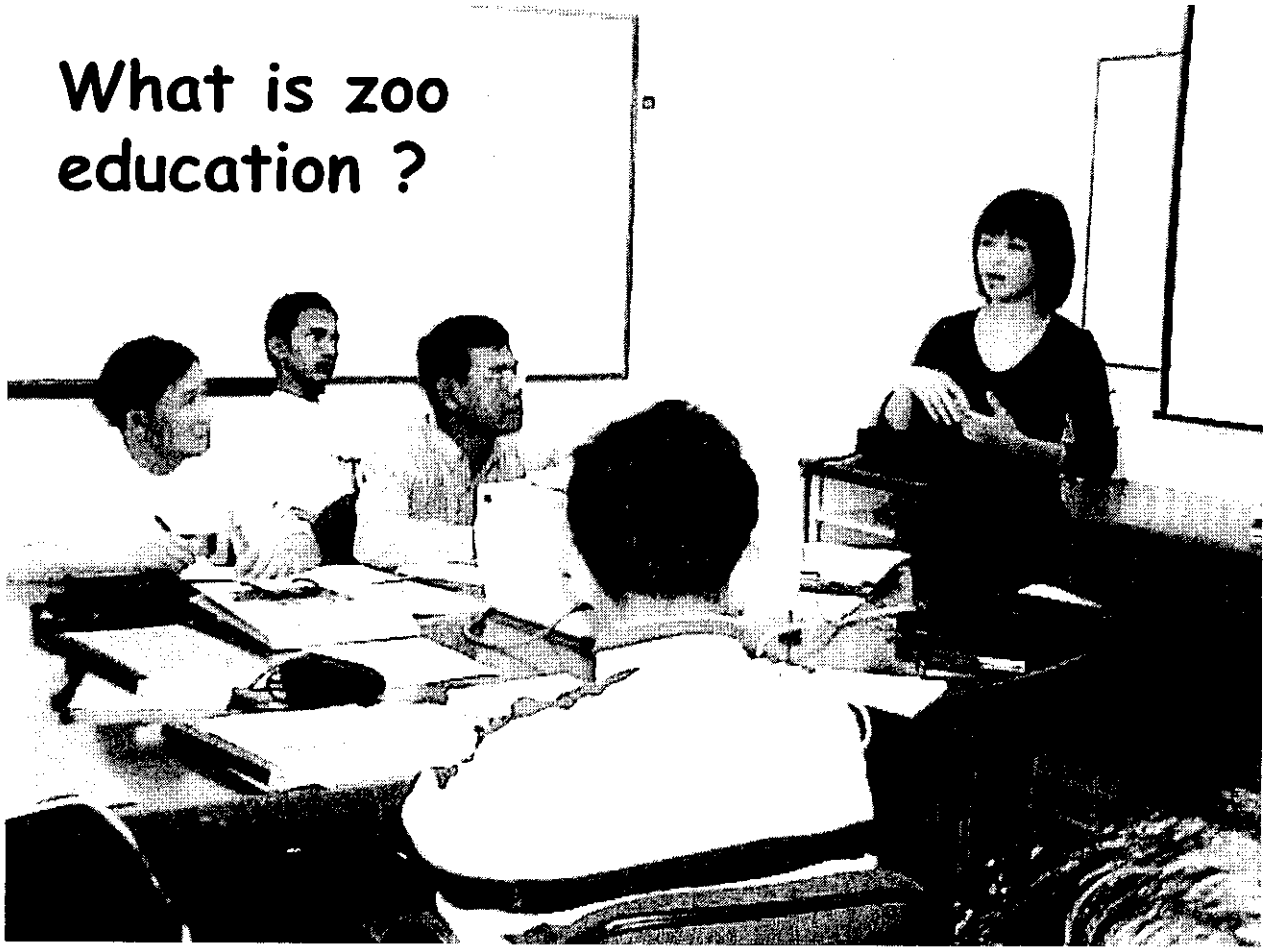
Part II

Background material and overview

First class at the Singapore Zoo -- What is Zoo Education ?

What is zoo education ?



May Lee, Director of Education, Singapore Zoo gave participants a good background and orientation to zoo education in one of the first lectures of the first instruction day.

The second day of the South East Asian Zoo Educator course was devoted to background and basic information.

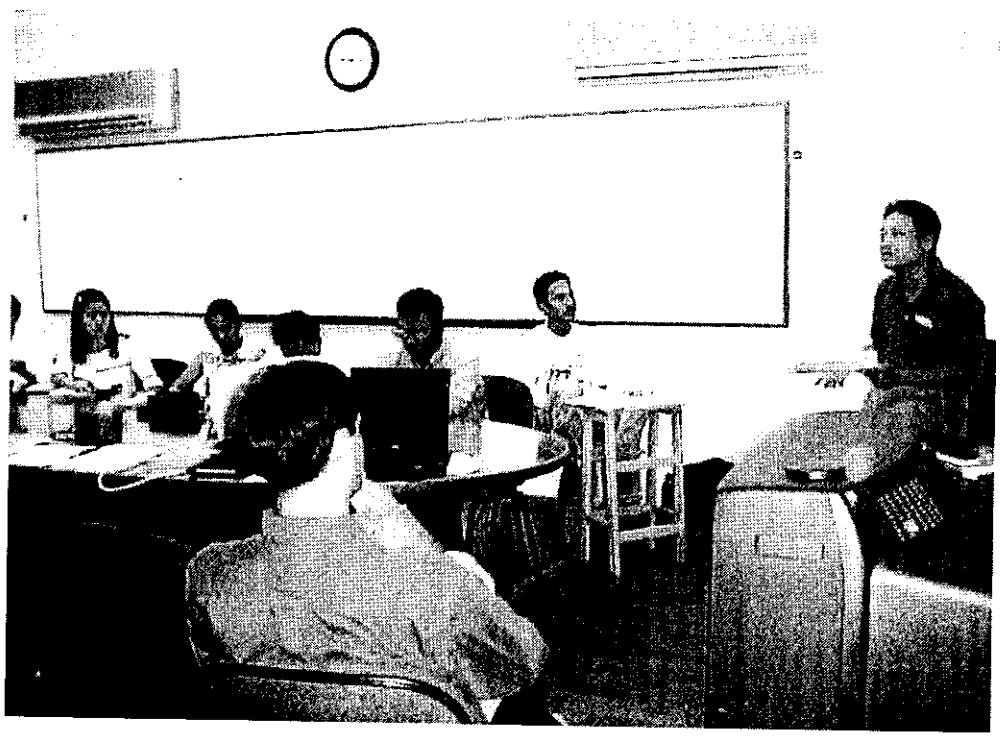
The day began with lectures from May Lee, Director of Education, Singapore with an overview of "What is Zoo Education" on behalf of the Wildlife Reserves, Singapore Education Department.
Also Tan Kit Sun and Sally Walker gave a welcome and orientation on behalf of Singapore Zoo and SEAZA Education Committee (Kit for Suzanne Gendron) and for the International Zoo Educator Association and its regional network, ARNIZE, the Asian Regional Network of International Zoo Educators' Association (Sally Walker).

Course materials were given from Singapore Zoo and the ARNIZE / Zoo Outreach Organisation Report from the South Asian Zoo Educator course and various ZOO Ed books.

An overview history of South East Asian zoos and an introduction to the course project, Masterplanning for your zoo was given by Sally Walker. The education section of the World Zoo Conservation Strategy was provided.

Later in the day, the participants were led through a S.W.O.T. exercise to assess the Strengths, Weaknesses, Obstacles and Threats to zoo and conservation education by Sanjay Molur. The day ended with a nonsense game called "I love this little elephant" which provides shrieks of laughter from the participants and broke the ice quite nicely.

Regional Training Programmes and Education and Conservation Interpretation from SEAZA Strategic Futures Workshop



Tan Kit Sun heads the SEAZA Training Committee and organises the many SEAZA training courses

Regional Training Programmes

Mission

To set up a well co-coordinated and sustainable regional programme to train SEAZA personnel in all aspects of zoo biology and zoo management to ensure the development and maintenance of quality and professional standards in all member zoos.

To achieve this :

-- All regional zoo training courses and international funding must be co-coordinated through SEAZA.

-- Due recognition of the professional development of staff undertaking these courses should be given by member zoos.

-- Partnership with other regional zoo associations, zoos , wildlife training institutes and universities to undertake these training programmes, both regional and international must be developed.

-- A list of the knowledge and competencies of SEAZA personnel should be developed for the selection of potential SEAZA trainers

-- Courses to train these trainers should be developed

-- Sources of funding need to be identified and tapped.

The specific training needs identified are:

- Zoo administration/work ethics/team building ·
- Exhibit planning and design
- Zoo education/environmental conservation/graphics
- Animal husbandry/ training/ transportation/ welfare
- Nutrition/veterinary care
- Natural history
- Record keeping/collection planning
- Communications/marketing/public relations/fund raising ·
- Zoo horticulture

Potential participants are:

- Zoo Directors ·
- Architects/designers ·
- Educators/graphic designers ·
- Curator/veterinarians/senior keepers ·
- Marketing & fund raising staff

Action Plan:

-- Set up a training committee and advisory board

-- Formulate curriculum modules

-- Liaise with Funding Committee to generate training grants

-- Develop permanent training centers at Khao Kheow Open Zoo, Thailand and Bogor Safari Park, Indonesia

-- Follow up to monitor the effectiveness and application of the courses

-- Present progress reports to SEAZA annual conferences

Education and Conservation Interpretation

Mission:

To provide guests to our zoos with comprehensive and accurate information on the need for environmental conservation and how they can help, through the use of a variety of appropriate media such as printed material, graphics, audio-visual and live presentations.
This will be achieved by developing SEAZA based conservation messages and South East Asian regional zoo educational programmes to support them.

SEAZA based conservation messages

Develop environmental and biodiversity messages and graphic templates that can be translated into relevant languages:

- We are all part of one large environmental system, if one part is hurt, all parts will suffer
- Precious resource worth saving
- Finite resource needing wise management
- Negative effects of human impact
- Promote flagship species; their biology and conservation issues

Special Days to heighten public awareness

To create publicity events to promote environmental conservation and animal welfare on relevant days of the year:-

- National Day
- United Nations Day
- World Environment Day
- Earth Day
- World Animal Day

Visitors can make a Difference

To solicit support for causes, donations and campaigns from zoo visitors who are the existing core support group:

- Donate to conservation foundations
- Support conservation research and projects
- Reduce, Reuse, and Recycle
- Boycott buying endangered animal and their parts.
- Sponsor animals and/or exhibits in zoos
- Volunteer at the zoos (Friends of the Zoo)

Evaluate education resources in the region

- Collate existing educational programmes from each of the zoos in our region.
- Evaluation of public opinions and perceptions towards the environment and zoos in SEAZA countries
- Co-ordinate with each National Zoo Association to determine the sentiments of the public in each country so they can be taken into account when utilizing the SEAZA programmes and messages.

Educate the Educators

- To liase with the Regional Training Committee to conduct training programmes for zoo directors and zoo educators in environmental conservation
- Develop Travelling Exhibits of South East Asian conservation messages to travel the regional zoos
- These can be developed by zoos in various regions and sent to zoos which use the same language

Work with the local governments and education ministries

- Draft letters for templates for use by each of the National Zoo Associations to obtain information and advocate for improved standards if needed.

The International Zoo Educator Association (IZE)

IZE Mission Statement

IZE is an association dedicated to expanding the educational impact on zoos and aquariums worldwide. Its dual mission is to improve the education programs in the facilities of its members and to provide access to the latest thinking, techniques, and information in conservation education. IZE facilitates communication and professional development among zoo/aquarium educators and supports liaison with related organizations such as WAZA (The World Association of Zoos and Aquariums) and CBSG (Conservation Breeding Specialist Group).

Who are IZE members?

We're your colleagues in more than 30 countries around the world who are interested in communicating and cooperating within our field of zoo and aquarium education and with other conservation professionals.

> *"..the future of humankind greatly depends on extensive and effective environmental and conservation education. The zoos of the world have a unique role to play in the global efforts to educate people."*
>
> — from The World Zoo Conservation Strategy

IZE provides access to the latest information, techniques, and thinking in zoo education

International networking and professional development opportunities

Subscription to the IZE Journal

Conferences held on a rotating basis in geographical regions (the Americas, Europe/ Middle East/Africa, and Australia/Asia)

Access to conference proceedings and papers

Special wildlife and cultural tours planned just for IZE conference participants

In-person interaction with colleagues from developing nations during conferences

ARNIZE - Asian Regional Network of the International Zoo Educator Association

There is a "whole world" of biodiversity in Asia !

Just as the International Zoo Educator Association provides a global perspective on conservation education, ARNIZE, the Asian Regional Network of International Zoo Educators Association ... provides a regional perspective on conservation education and networking at a grassroots level.

Who are ARNIZE members ?

ARNIZE members are Asian zoo educators in the larger sense, e.g. zoo staff (Directors, Veterinarians, Curators, Keepers) who conduct zoo education programmes in the absence of a dedicated post of zoo educator individuals holding additional charge of an education post, non-governmental organisations who conduct programmes in and on behalf of zoos, P.A.s, welfare centres & natural history museum personnel who conduct conservation education programmes using zoo education techniques.

The administrative, economic, social and even political scenario in Asia is such that it is just not possible for everyone who needs IZE to be a member. ARNIZE is an alternative. Its members are often not professional educators, although through training and information they can conduct education programmes of professional quality. ARNIZE is an activity of the Regional Representative for ASIA of IZE hosted by the Zoo Outreach Organisation and funded by the Columbus Zoo Conservation Fund.

Activities and Achievements of ARNIZE

Due to cultural and linguistic differences, Asia is not the easiest region to organise. Since its formation in 1998, ARNIZE has assembled a group of 157 individual members representing 96 zoos in 19 Asian countries (see Table, overleaf). These members contribute basic information about their zoo education programme, which permits us to know the problems and potential of Asian zoos in regard to education for the first time. They also contribute (mostly via email) news and notes to the ARNIZE Newsletter, which comes out twice a year.

ARNIZE has conducted the following activities :

- Brought out a regular newsletter for 4 years
- Published a brochure updated regularly
- Collected information about which of a list of 200 educational techniques had been attempted by members
- Provided Zoo Education information via a Zoo Ed Book sponsored by RSPCA to every member
- Provided Zoo Education materials made with very inexpensive materials to zoo educators in Asia for models and in good numbers to Zoo Educators in India to test in actual education

programmes
- Conducted an 8-day Zoo Educator Training Workshop on Zoo Education Masterplanning for South Asian zoo personnel in Central Zoo, Kathmandu, Nepal, using indigenous expertise. This course was funded by zoos, NGO's, and government offices from around the world

- Published a Report of the South Asian Zoo Education Masterplanning Workshop which was used in training South East Asian Zoo Educators and has been distributed throughout South Asia

- Conducted a 10-day Zoo Educator Training Workshop on Zoo Education Masterplanning for South East Asian zoo personnel from 8 countries in Singapore Zoo using indigenous expertise, funded by the Ministry of Foreign Affairs, Government of Singapore. (Three months after this course, the Indonesian zoo educators who participated conducted their own national level training course)

- Arranged sponsorship in IZE for many Asian zoo educators and travel for a zoo educator from Nepal to attend the IZE International Conference 2000 in Mexico

- Encouraged national networking of members for sharing of information and experience in local languages

And a few other things as well ... !

What ARNIZE has *failed* to do so far of the objectives we undertook so far.
- to find a national representative from each Asian country to organise a national network, translate information into local language and generally represent ARNIZE and IZE locally
- to organise an email network, e.g. a list serve
- to organise training with zoo educators from outside Asia as resource persons.

Join ARNIZE ... learn and share what you know. Send any small or large information, activity, achievement by email for inclusion in the ARNIZE newsletter and also on the IZE and ZOO websites. And speaking of websites :

IZE website : << www.izea.net >>
ZOO website <<www.zooreach.org>> click on zoo education

How to join ARNIZE ?
If you are conducting zoo conservation education programmes you can join ARNIZE simply by filling our form. You will automatically be added to our mailing list for surveys, ARNIZE newsletter, and occasional books and handouts depending on our financial position. Depending on your situation (whether you are a professional zoo educator working in a zoo) you will be shortlisted for sponsorship in the International Zoo Educator Association.

IZE Asia

History and Evolution of Zoos

Pre-19th Century Attitudes & Influences Vis a Vis Wildlife/Nature
Hunter Gatherer "Part of Nature"
Intellectual and spiritual "Harmony with Nature" – India and China
Wildlife as objects of curiosity ornaments or sport
Wildlife as symbols of power and prestige
Spectacle/sport – Arenas
1500s saw great formal Royal Zoological Gardens
Characterised by strict geometry
Animal cages
Topiary shrubs
Layout of pathways
Linnaeus human sovereignty over nature
Linnaeus concept of biological organisation – Taxonomy – Systema nature – 1758(
(First Zoos)
1500 B.C. – Egyptian Pharaoh Thutmose III – First Zoo
700 A.D. – French Charlemagne Menageries in three cities
1100 B.C. – Assyrian Tigloth Pilser – Royal Animals Park
1100 A.D. – Britain King Henry First English Royal Menagerie
1500 A.D. – Mexican Emperor Montezuma
1752 A.D. – Schoubrunn Royal Zoological Garden
1793 A.D. – Jardin De Plantes

19th Century Attitudes & Influences Vis a Vis Wildlife/Nature
Colonial expansion – Public interest in explorers and "Curiosities" (E.G. Exotic Animals)
Era of Great Public Spectacles – Panoramas
Victorian Era Zoos: Garden Setting, Interest in Scientific Investigation & Poplar Recreation
Glorification of Human Culture

20th Century Attitudes & Influences Vis a Vis Wildlife/Nature
Hagenbeck's Innovations
Romantic Era – Rousseau and English Poets – Wild Nature important not just for some specific purpose but for itself
American Wilderness Ethic
Humane Ethic
General Conservation Awareness
Beginning of Introduction and Translocation of Animals
Development of records and Studbooks – ISIS and SPARKS
Immersion exhibits
Western zoos involvement with In situ conservation and other projects in Tropical zoos

Some important facts about South East Asia Zoo History

BRUNEI
Sultan's Zoos – no information - might have been there centuries ago
CAMBODIA
Modern zoos were established in the larger cities of colonial Cambodia by the French and the Cambodian Wildlife Department – destroyed by wars
LAOS – no information
MALAYSIA
Johor Baru Zoo founded in 1928
Private collection of the Sultan – must have existed many decades ago
MYANMAR
In 1906, the Rangoon Zoo was founded on the site of the Victoria Memorial Park.
PHILIPPINES
Spanish colonial government maintained pre 1900
SARAWAK
Sarawak Museum, in 1886 or 1888 — museum and the aquarium.
SINGAPORE
Singapore's original colonial menagerie in botantical garden formed in 1859
Malayan-Borneo Exhibition in 1922. — enormous variety of animals
THAILAND
Sultans, or Kings of Thailand (Siam), had animal collections since ancient times
King of Siam's collection in Bangkok during the mid-1800s
1938, the Dusit Zoo was established on Kings property
Early Thai collections include the Pasteur Institute Snake Farm, founded in 1923
Bangkok Reptile Grove was founded in 1930
VIETNAM
Royalty in Vietnam (Cochin China) kept animal collections for centuries, even ancient times.
King still maintained his collection in the mid-1800s and used some of its animals for combat exhibitions.
French colonialists founded Saigon Zoo at Ho Chi Minh City in south Vietnam in 1864.
Early 1900s there was a zoo in the Hanoi botanical gardens.
INDONESIA
Ancient trading ventures produced wealthy regional rulers who had private menageries.
Local rulers had collections of buffalo, tigers, rhinoceros and elephants that they would use to stage fights.
Timor (the largest and easternmost of the Lesser Sunda Islands), for example, had a collection (monkeys, deer and birds) in the public gardens of its capitol as late as 1901.
Javanese princes and nobles kept this species in their private menageries from the seventeenth to the nineteenth centuries, and probably since well before this period.
Batavia (Jakarta) was one of the earliest Dutch colonial administrative centers and had one of the earliest botanical collection stations (established sometime in the 1600s); acquired a menagerie and in 1751 this collection had a Javan rhino.
Ragunan Zoo in Jakarta can trace its history back to a menagerie opened in 1864 as part of an amusement complex
Another early zoo, Taman Wisata Satwa Taru Jurug (Satwataru Zoological Park in Surakarta, Central Java), was begun in 1878
Kebun Binatung Surabaya (Surabaya Zoological Gardens in Surabaya, East Java) in 1916
Bandung Zoological Garden in Bandung, West Java) founded in 1933

Course Theme and Project

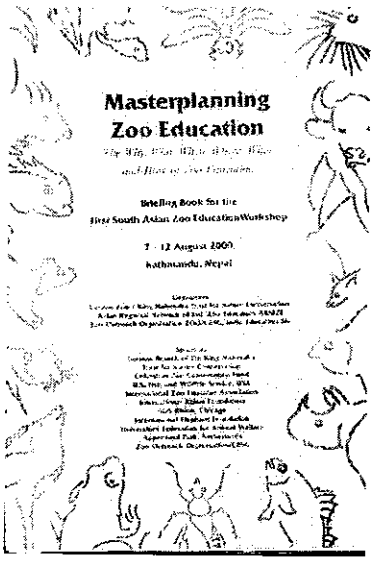
Elements or Outline of a (written) Zoo Education Masterplan :

Assignment due end of course

1	**Introduction**	Should tell why you need a Masterplan - a bit about the importance of zoo ed
2	**Background**	Brief history of your zoo and why the need for Education Masterplan emerged
3	**Philosophy, Goals & Objectives**	Should be centered around the Mission Statement of your zoo or equivalent
4	**Identification of Target Groups**	Related to your zoos' needs - not just the usual
5	**Conservation Themes and Topics**	Should be very specific to your zoo and country
6	**Strategies and Techniques**	Give specific plans, methods, techniques
7	**Implementation**	How specifically it is to be done (see below) a) Staff, Equipment and Material b) Time Table (Short and Long Term) c) Coordination with Other Zoo Departments and Conservation Organizations
8	**On-Going**	Evaluations and Adjustments to Programs
9	**Budget estimates**	for EVERYTHING for one year
10	**Conclusion**	end on a powerful note.

Master Planning Zoo Education

The South East Asian Zoo Educator Course was designed on the same model as an earlier course held in South Asia, with the same theme and *modus operandi.* In South Asia an 8 day course was held at the Kathmandu Zoo using indigenous resource persons for teaching new techniques and relying a great deal on participants sharing with one another. Participants of the South Asian course were asked also to prepare a Master Plan for Education.



The Report of the South Asian Course was used as briefing material for the South East Asian Zoo Educator Course

The key element of both courses is the use of indigenous trainers and facilities with a strong element of participants sharing their own experience with one another. Many zoos in tropical countries lack budget and experience to develop an education programme and fall back on ideas and techniques from western countries, which are often inappropriate. It has been noted that educators and zoo personnel responsible for education in tropical seem to learn more from one another's experience than from very experienced educators from a different culture.

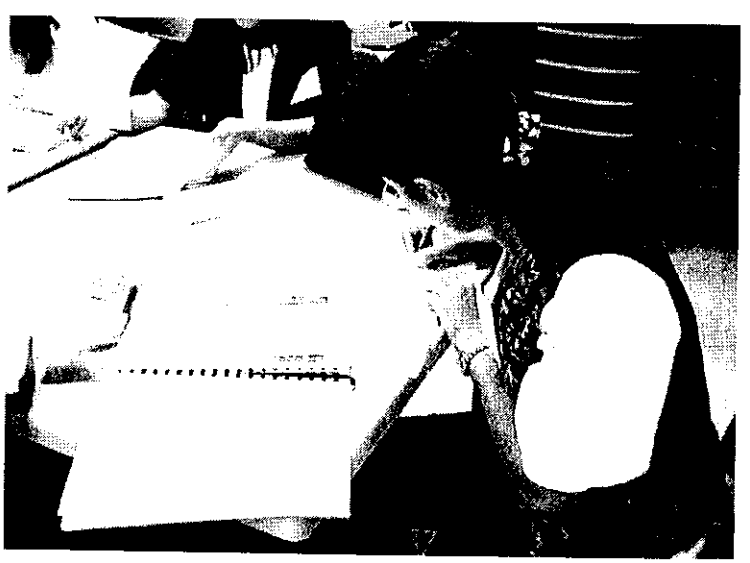
Attending a course in which they are more or less on an equal basis with others gives participants confidence. The techniques conveyed should not all be beyond the capability -- economic, technical or intellectual -- of participants.

The idea of creating a Master Plan for Education was new to most participants. The ability to create such a plan is extremely useful, particularly for zoos that are under government administration. Obtaining funding without a detailed programme worked out is virtually impossible. A plan of this type is also essential in creating a momentum of activity and keeping it going. Instead of having to think up something to do every week or so, having a collection of ideas and programmes ready facilitates the activation of meaningful projects.

Although many participants found it awkward to work in English, by the end of the course, all of them were able to draw up and present a Master Plan for their Zoo's Education.

On the final day of preparation, participants did consult their briefing material from the South Asian course extensively. It provided structure and format which could be combined with the things they learned and observed during the Singapore lectures, practice sessions, and field trips and fitted to their own zoo situation.

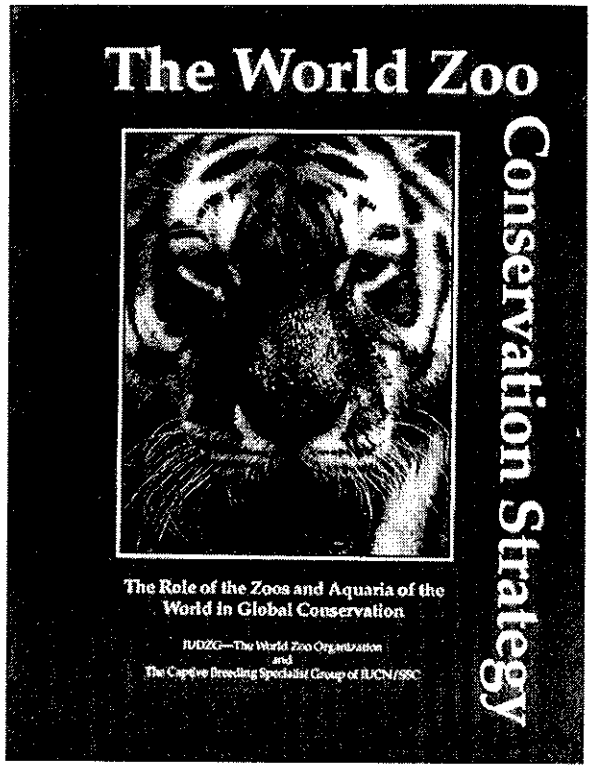
We hope this book will be useful to some other group of zoo educators in conducting a course or writing their own Master Plan for Education.



Participants found it useful to refer to other Master Plans for Education from similar conditions in drawing up their own programme.

Chapter 4

Education



4.1 Education An Essential Conservation Task of Zoos

Awareness of the necessity to establish a new balance between human development and the earths biological system is basic to conservation. This awareness should grow in all countries of the world and in all layers of human society, and should be the basis for political decisions. Education explaining the irreplaceable value of the entire biological system of our planet and all of its constituent components is a most powerful tool in raising the level of general awareness. Thus, the future of humankind greatly depends on extensive and effective environmental and conservation education. The zoos of the world have a unique role to play in the global efforts to educate people.

The World Zoo Conservation Strategy notes that zoos reach hundreds of millions of people all over the world. The great majority of these people live in urban areas and have little or no contact with nature. They come to the zoo because in one way or another they have an interest in animals. Whatever the level of interest may be, it offers an opportunity for education. This, together with the mass character of zoo visitation and the fact that this is occurring in almost every country on every continent throughout the world, gives zoos an unequalled potential to heighten public and political awareness of the importance of nature conservation. Additionally, zoos are visited by a significant number of people from rural areas. Zoo education may also have great impact on this section of the public, especially in developing countries, where these people in their day-to-day life are dealing closely with the use of living natural resources.

4.2 Living Animals: The Basis of Zoo Education

Zoos attract many more visitors than most natural history museums, botanical gardens, and other comparable nature-oriented institutions. The reason for this is that zoos exhibit living, wild animals. Living animals clearly have an enormous power of attraction. The impression made on the visitor through the close physical proximity of living animals cannot be replaced by photos, films, videos, books, or encyclopedia.

The World Zoo Conservation Strategy emphasizes that living animals form the basis for education in zoos, however important the manner of exhibition and the addition of other collection components (for example plants and non-living materials) may be. The zoo visitor's susceptibility to educational information exists because of the attraction to the living animal, and animal collections are therefore the foundation of the enormous potential educational value of zoos.

4.3 Informal Education Reaches Widely Varied Target Groups

Dependent on their size and location, zoos receive between a few tens of thousands to several million visitors annually. Despite some local variation, it can be safely said that generally a

considerable proportion of the area population visits a zoo in their region annually or at least every few years (see also Box 4 in Chapter 3). Additionally, zoos are not only visited by many people, but also by a public that is broad in composition. Research on visitation in many zoos has indicated that many diverse groups of people visit zoos, including groups of all ages and most educational levels. Groups of different social, ethnic, and cultural backgrounds visit zoos. The diversity in visitors that is so characteristic of zoos is seldom seen in other cultural, educational, or nature-oriented institutions. This gives an extra dimension to the education potential of zoos. The World Zoo Conservation Strategy emphasizes that the total zoo public forms the target group for informal education in or by the zoo (that is, education which is not connected with the curricula of formal educational institutions). It would not be valuable for zoo education to be directed towards only one or a few groups within this total. It is a misconception that education must primarily be meant for children. Certainly children form an important part of the zoo public, and children indeed form a vital target group for education, but other groups deserve just as much attention in the total zoo education plan. Education—particularly conservation education—should reach every category of zoo visitors.

In addition to target groups within the zoo, zoos can also reach target groups outside of the zoo, including those groups that are relatively under-represented among the visitors. These groups can be reached through zoo outreach programmes and through media presentations, such as press releases and radio and television coverage of conservation oriented activities, and thus also belong to the target group for zoo education.

4.4 Education is Compatible with Recreation

People all over the world go to zoos during their free time and of their own free will. They could just as easily be doing something else, and in the richer parts of the world they are competitively invited to spend that free time in other recreational facilities. That they choose zoos over these many other possibilities demonstrates an interest in seeing the living, wild animals that zoos exhibit, and this indicates nothing else than an interest in learning about these creatures. People visiting zoos are open to receiving information about animals, which means they are susceptible to education. They may be willing to be educated of their own free will in their own leisure time.

The World Zoo Conservation Strategy states that the zoo, in all of its details, is intrinsically educational, and education is an indispensable part of the zoo's attractiveness. Improving education in fact increases the zoo's attractiveness. Improved education and increased financial investments in education can go hand-in-hand with increased visitor attendance, provided that technically and in its content zoo education meets the public's requirements and the standards for the time and place.

The Strategy emphasizes that this also means that investing in zoo educational projects is always of value to governments and nature conservation organizations. They should take advantage of the unique facilities offered by zoos rather than investing in and setting up new structures for their educational and conservation objectives.

4.5 Formal Education: Intensive Education for Selected Groups

Formal zoo education comprises education that is conducted in the framework of the educational curriculum of educational institutions (schools, colleges, etc.) within or in relationship to the zoo. Most, if not all zoos are regularly visited by numerous classes from a variety of educational institutions. Several thousand classes visiting a particular zoo per year is not exceptional. These

classes receive structured educational tours and lessons focusing around selected themes as part of their formal teaching programme at the zoo. Many zoos have developed professional programmes and facilities for this type of zoo education. Formal zoo education has a number of clear-cut advantages, such as:

Formal education groups are unique in as much they visit the zoo specifically for education purposes. The inclusion of zoo-based biological and conservation education in formal teaching curricula stresses the importance of taking into account wild animals, their habitats, and ecosystems as part of the learning process that should lead to the insight that life on earth forms one great system. The direct contact between students and zoo teachers enables an intensive and interactive manner of education.
Regular contact with classes from a variety of educational institutions and their professional teachers ensures that the zoo staff is informed about developments and levels of formal education in their country's society. This is important, as designing zoo educational programmes with the needs of institutional teachers and authorities in mind will serve two purposes: the programmes designed are more likely to be used, and the zoo is more likely to receive support from the authorities. Additionally, it enhances professionalization of the zoo's educational techniques and programmes.

A wide range of educational institutions/levels can be considered target groups for formal zoo education, ranging from pre-school, primary, and secondary schools to institutions for special education up to and including university levels. In practice, however, most efforts focus on the preschool, primary, and secondary levels. Special attention is often given to institutions for the education of mentally and physically handicapped people, for which zoos constitute excellent educational media.

The World Zoo Conservation Strategy concludes that formal education serves an important function for the educational institutions involved, their students and their teaching staff, as well as for the zoos themselves. Thus, involvement in formal education should be stimulated and increased whenever possible.

As many of the various levels of education should be included as possible. Educational institutions should be stimulated to pay visits to the zoo and to make these part of their teaching curricula. Universities and other degree awarding institutions should be encouraged to include the role of zoos in wildlife conservation as part of the curriculum of relevant courses in biology, ecology, environmental sciences, and other related disciplines. Zoo teaching programmes should be developed in consultation with institutional teachers. The zoo should take optimal advantage of the knowledge and experience gained from formal education to make its entire educational programme as professional as possible.

4.6 Education Should Be Conducted at Various Levels

The basic level of zoo education is simply the display of living animals. This is the only means by which countless people will ever come into contact with living, wild animals and in a compelling manner become acquainted with elements pertaining to nature conservation. Zoos make a huge contribution to the success of education campaigns undertaken by governmental and nature conservation organizations (such as the World-Wide Fund for Nature) simply by providing the opportunity for contact with examples that these organizations are concerned with.

Other levels and styles of interpretation, directed towards different age groups, and groups with different levels of knowledge and interest, must be built onto this important substrate. It is

obvious that entirely different approaches are required for children of primary school age and for adults. It is obvious that those who have little biological knowledge must be approached in a way different from that for a student of biology, and that the enthusiastic aquarium/terrarium hobbyist will expect different information from a zoo than will the average visitor.
The World Zoo Conservation Strategy emphasizes that, despite the great diversity of the zoo public, it is possible to present educational information and facilities that are suitable to each and every one of the various visitor categories. How these levels should be arranged and approached is a question of knowledge about, and insight into, the composition and motivation of the public that visits that zoo, as well as a matter of creativity, inventiveness, and belief in the importance of the conservation message that zoos must deliver.4.7 A Variety of Biological Themes Can Be Explained by Zoo Education

The exhibition of animals in zoos provides the foundation for an educational approach to a wide variety of biological themes. Morphology, geographical distribution, and anatomical and physiological adaptations to the environment are obvious educational subjects in the zoo. These lead directly to explanations of adaptive evolution and the history of life. Feeding, behaviour, and social interactions are good introductions in zoo education, offering starting points for explanations about ecology, behavioural adaptations, sociobiology, reproductive behaviour, natural balances within biotopes, and a number of other biological principles. The variety of animal species within the zoo can be used to illustrate the overall importance of biological diversity. Even more complex biological disciplines, such as molecular biology, genetics, and population dynamics, can be explained using zoo animal exhibits.

The World Zoo Conservation Strategy concludes that the array of educational possibilities offered by zoo animals is inexhaustible, and certainly does not stop with topics in classical biology. The more complex the biological principles are, however, the more educational skill is required to explain them, and the more subtle and sophisticated interpretations of the animal and, where appropriate, the design of the exhibits must be to serve the educational goals.

4.8 Conservation Education: A Specially Important Element of Zoo Education
All of the biological information available about zoo animals, including their physical appearance and natural behaviour, that can be given to the public is of basic importance to conservation education. However, the importance of nature conservation must also be expressed more directly in zoo education. The most basic form of conservation education includes informing the public about the threatened status of the species of zoo animals, and other animals which are taxonomically and/or geographically related. The factors causing the declines can be indicated, and the importance of removal of these factors emphasized. In a more elaborate approach to conservation education, the exhibited animal can be used to symbolize the interactions and complex balances in nature, and how these have evolved over millions of years to their present forms. The ease with which this evolutionary process can be disrupted through the carelessness of humans, and what fatal consequences this will have, both to humankind and nature, can also be pointed out. That it is of the greatest urgency to halt this disruption of natural systems naturally follows. It is important to indicate how these processes can be stopped in the countries of origin of the animals used as the examples, but it is equally important to indicate how changes in the attitudes of people within the zoos' own countries can contribute to conservation in other parts of the world.

The World Zoo Conservation Strategy emphasizes that conservation education in zoos can make it clear that nature conservation affects everyone, and that everyone needs to be concerned with it. It can demonstrate that the future of human beings and nature is only ensured if the whole of humankind can live in a new harmony with nature. Furthermore, every person has both a com-

munity and individual responsibility to help achieve this on a local, national, and global scale. In addition to approaching conservation issues from the view of biological sciences, zoos should also develop educational programmes that elucidate the socio-economic backgrounds of the threats to nature. Through this, they should play an active role in increasing the public and political awareness of the connections between consumption and lifestyle and the survival of species and biological systems.

4.9 The Global Zoo Network Plays an Important Role in Zoo Education

Zoos are well suited to emphasizing the importance of a world perspective in nature conservation because they usually show animals that live in diverse biotopes and ecosystems in different parts of the world. The interdependence between the whole of nature and all of its components can be explained through zoo animals. The destruction of nature in places far away from the zoo visitor will eventually also have an influence on him or her. Thus the conservation of that far away nature is just as important to this person as is the conservation of nature within his or her own country.

The World Zoo Conservation Strategy recognizes that it is of great value that zoos worldwide are carrying the same message, and have a network that is demonstrating the importance of nature conservation on a global scale. This can also be made clear to the visitor. For example, if a visitor looking at an orangutan realizes that at the same time other people, in countless other zoos, are also looking at orang-utans, and that all of these people are being informed about the importance of the rainforest in which the orang-utan lives, then a feeling of collective responsibility can be awakened. If it is also clearly explained to the visitor that zoos and nature protection organizations in the orang-utan's native countries are fighting for this animal's conservation by telling the native population the same story, then the visitor can understand that the fight to conserve the orang-utan and the tropical rainforests in which it lives does not have to be a futile battle.

If the visitor just understands that he or she is not the only one receiving this message, but also countless other fellow human beings on this earth, then he or she will more rapidly be prepared to make a personal contribution to nature conservation, however large or small, in attitude, personal commitment, financial support, and so on. The global zoo network can make an important contribution to the birth of a worldwide conscience network by promoting this understanding.

An effective way to underline and further develop the worldwide nature of zoo education is formed by partnerships between individual zoos or zoo associations in one part of the world and counterparts in other regions, often involving institutions or organizations in developed countries on the one hand, and those in developing countries on the other. Such partnerships create firstly a feeling of solidarity, not only with respect to the institutions and their staffs, but also (if properly used in educational programmes) with respect to the zoos' visitors. This feeling of solidarity and joint responsibility for the future of nature is of utmost importance to conservation. Secondly, zoo partnership programmes often aim at increasing the level and effectiveness of zoo education in developing countries. This is highly significant, as especially in these parts of the world conservation and environmental education by zoos reaches many millions of people who otherwise receive comparatively little information on the intrinsic values of nature for human survival.

4.10 Research and Conservation of Endangered Species Can Be Excellent Educational Themes

The two other zoo conservation tasks—research and the associated conservation of populations of endangered animal species—can play an important role in conservation education. Both can demonstrate clearly to the public that no cost or effort should be spared to conserve elements of nature. Both also underscore the importance of worldwide cooperation, because so much of the research relevant to the conservation of threatened species rests on intensive involvement of many zoos and other institutions in different parts of the world.

The World Zoo Conservation Strategy emphasizes that the results of scientific study and conservation of populations, if properly used in education within and outside the zoo, e.g., via publications and public relations, can have a far greater impact than just the conservation of the relevant species. They can contribute to a speeding up of the awareness process, and through this to the conservation of whole biotopes that would otherwise be lost. Zoos must emphasize both of these other two conservation tasks in their educational expression.

SWOT -- Strengths, Weaknesses, Opportunities, Threats
a scoping exercise for confronting a challenge

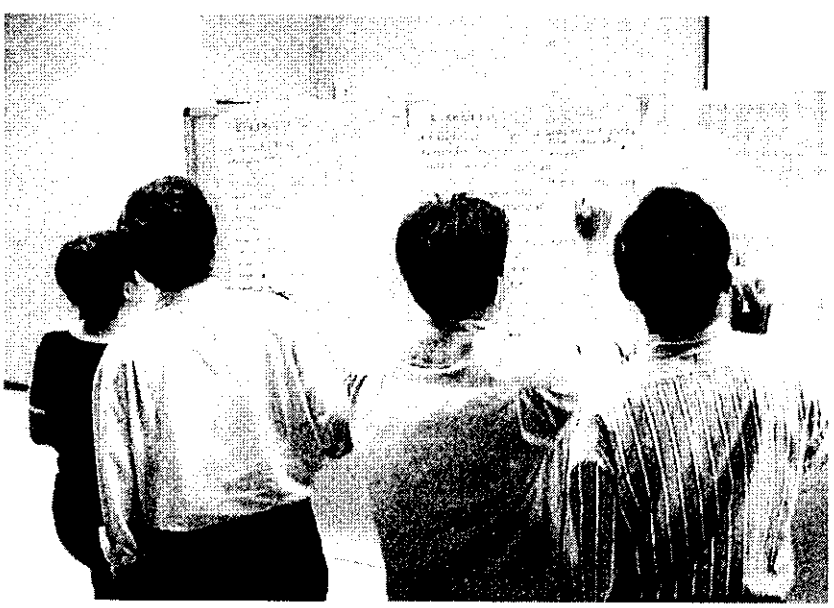
A SWOT exercise often is done in small Working Groups each of which takes a large piece of paper and divides it into four squares, one for each component of SWOT. Working Group members then list the Strengths, Weaknesses, Opportunities, and Threats which accompany the specific problem they are working on.

Sanjay Molur from Zoo Outreach Organisation explains how a SWOT exercise is conducted and writes participant suggestions on boards.

In this instant, we were in a large auditorium which was furnished with plenty of giant white boards, so opted to do the exercise with the whole group. Since we were getting to know one another, this worked very well indeed.

The subject for analysis was Zoo Conservation Education -- what did we have going for us and against us in carrying out our work in this area. We took up one component at a time and asked participants to call out elements which they felt were, for example, Strengths in South East Asian zoos or what they had individually in their institutions. Whatever was called was recorded on the white board without judging it, except in some cases to ask if it belonged better in another category. After completing Strengths, we went on to the next component until all four were completed.

Then participants were invited to come to the boards and select the three elements in each component that were the most true or had the most influence on them as educators. These were listed with their ranking and a short discussion was conducted. This exercise is effective in starting a project as it clarifies what you have to work with and what you have to overcome. The list of Strengths, Weaknesses, Opportunities, and Threats follows.



Participants were asked to select the three elements in each component that were the most true or had the most influence on them as educators.

S.W.O.T. Exercise with reference to Environmental Education or Zoo Education for South East Asian Zoos

STRENGTHS

Environmental and Zoo Education
Species diversity (15)
Facilities (13)
Human resources (13)
Ecosystems (12)
Cooperation (9)
Global interest (9)
Location (8)
Captive audience (6)
Knowledge (4)
Skills (2)
Law enforcement (2)
Signage
Media
Regulation

WEAKNESSES

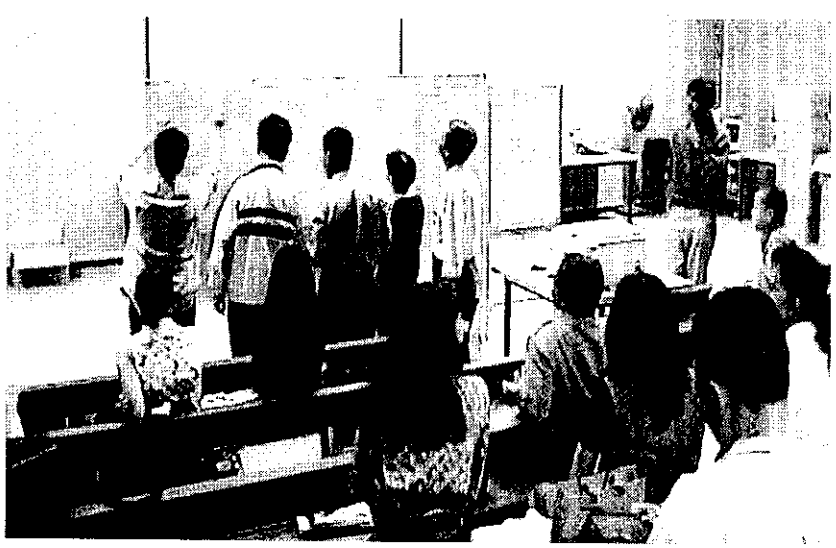
Finance, lack of (11)
Economic and political instability (10)
Lack of law enforcement (9)
Awareness, lack of (8)
Poor support from government (8)
Lack of professionalism (7)
Wildlife trade (7)
Lack of wildlife veterinary experience
Poverty (6)
Natural disasters (5)
Lack of staff (4)
Lack of political will (3)
Private animal collections (2)
Pet Industry (2)
Poaching
"Know-it-all" attitude
Political interference
Lack of interest of wildlife management
Overpopulation (1)
Isolation
Traditional culture (bushmeat habit)
Insufficient communication facilities
Language problems (0)

OPPORTUNITIES

SEAZA (13)
All Zoo cooperation associations (12)
Training (11)
Special days (9)
Fundraising (8)
Tourists (7)
Public relations (6)
World Cooperation (6)
ARNIZE (4)
Education (4)
Similarities in SEA countriesn (4)
NGOs (3)
Workshops
Build respect for SEA zoos
Field personnel (2)
School system (2)
Reintroduction
Research / education in universities
Media (1)
Zoos as media for conservation at various levels (action and lobbying)
Potential in exhibition

THREATS

Extinction (16)
Loss of habitat (13)
Lack of funds (9)
Poverty (8)
Deforestation (7)
Coordination, lack of (7)
Attitudes (7)
Pollution (6)
Depletion of gene pool (6)
Ignorance (3)
Anti-zoo or captivity issue (2)
Traditional beliefs (2)
Demand drive tourism (2)
Too many visitors (some days) (2)
Conservation NGO's (1)
Job preference (1)
First world countries dictatorship (1)
Ambivalent attitude
Lack of employees
Technology
Unemployment



This exercise is effective in starting a project as it clarifies what you have to work with and what you have to overcome.

Love that Little Elephant

Orientation and background ended with *completely* "broken ice" at the end of the 2nd day as result of the "I love this little elephant" game. The game consists of two parts. First, participants form a circle and a soft stuffed animal toy is passed around one by one. In this instance it was an elephant, purchased from the zoo shop just for this occasion. Each participant had to announce "I love this little elephant" and select a point on the elephant's body to kiss. So it went "I love this little elephant and I'm going to kiss him right on the nose". According to rules, once a body part has been selected, it can't be duplicated so you get participants selecting the second toenail of the right foot, and such. Some participants with a tendency to be a smartypants inevitably select "sensitive" body parts. This part of the game, simple though it may sound, creates a lot of amusement and interest.

Part II is where the fun starts. The leader announces that each participant now has to kiss the person to his right, ... precisely where they kissed the elephant. What was amusing turns riotous as participants find ways to carry out this instruction without dying of embarassment, or worse !

By the time this game ends, everybody is pretty comfortable with the group ! So it is just an icebreaker, meaning nothing, but on evaluation forms at the end of course, some partipants complained that they never understood the educational significance of the "Love the Elephant" game !

Participants innocently select a target and kiss the little elephant.

Some participants had experience and selected a "safe" target.

Some victims of the "kissing game"take it hard (or pretend to) and some just enjoy it ... no complaints yet, however, about beingthe brunt of a somewhat kinky joke !

Part III

Participants Presentations about their Zoo

Mrs Nguyen Thi Thu Hien presents a poster from the Endangered Primate Rescue Center, EPRC Cuc Phuong National Park, Ninh Binh , Vietnam

Participants' Presentation about their Zoo

EPRC - Endangered Primate Rescue Centre Education Programme

Cuc Phong National Park,
Ninhbinh, Vietnam

Mrs Nguyen Thi Thu Hien,
Proj Asst, EPRC, Vietnam

Vietnam was known in part of the Western World as a poor country suffering from damage and destruction after decades of war. First information after this period mentioned our fascinating nature and an extremely richness on biodiversity, but also the threats, difficulties and problems of the nature conservation and protection. The impetus for the Frankfurt Zoological Society, Germany to start a project to support Vietnamese natural conservation activities came 10 years ago.

The amazing rediscovery of one of the world's rarest primate species the legendary Delacour's langur in CVC phuong National Park in Vietnam was the background for the project. But not expected, like a grain of seed the project started with two confiscated animals of this rare species. besides protection work for the National Park, field survey and research on primates. This seed grew and developed to the Endangered Primate Rescue Center, now.

This institution is a part of the CVC Phuong National Park, which belongs to the Ministry of Agriculture and Rural development (MARD of Vietnam). It was the first rescue center in Indochina and until now is the only one which decided to rescue endangered and especially endemic Vietnamese primates. Started with two animals in 1993, our center keeps now more than 100 animals of 14 species and sub-species of threatened primates of Vietnam and Laos. About 30 of them were born at the center, and belong to the world's rarest primate species. Based on the mission of the project and Dupy of the EPRC to rescue primates from illegal hunting, trade or keeping throughout Vietnam.

The park became established in three provinces with four districts of fifteen communes in first three years. We train and educate the leaders, officers and especially the rangers of the park about national and international law systems.

Forest protection meetings (Ranger Meeting) by different level of District, Commune and Hamlet enhance interest and strengthen the relationship between Park and Forest personnel. Monthly we run a video show about wildlife to stimulate discussion about the laws animal of the park. We print and distribute material for forest protection personnel (Rangers) as well as ranger posters, postcards, brochures or leaflets with information about protected species and with information about punishment for violators, villages, and public in the place. Publications in print media about the threats of primates (popular and scientific papers) and exhibition for the public on the New year time (MARD, Vietnam exhibition) have helped raise public awareness.

Training tourists guide of the park and visitors center to provice information to visitors in the park. Our work seems small today, but it was a very important step to improve the conservation activities in Vietnam in the last 10 years.

Participants' Presentation about their Zoo

Python Enclosure Development: The New Ark

Philippine Eagle Foundation, Philippine Eagle Center
Malagos, Baguio District, Davao City

Introduction:

Animals in the wild are rapidly disappearing. This is primarily due to habitat loss and direct human persecution. As we continue to lose our wildlife resources, the need to accelerate educate programs and engage our people's involvement in conservation becomes imperative.

Perspective of Python Enclosure

Majority of Filipinos never get the chance to see our forests and appreciate wildlife. This presents a unique challenge as people often find it difficult to relate to problems and issues they are not familiar with. The Philippine Eagle Center addresses this challenge by providing a venue with which to educate the public about wildlife resources and its conservation.

We are presently working to improve our animal exhibits with the primary aim of supporting school systems with educational resources in the life sciences and conservation biology. These efforts include the development of state-of-the-art enclosures that address animal welfare issues while facilitating visitor education. Enclosures are designed to simulate the animal's natural environment so as to allow animals to display a wider range of behavior. Such presentations allow the viewer to appreciate each animals' role in the ecosystem more fully and gain insight into the species' life and problems of survival. By working to inspire care for our living heritage, we hope to help develop and build a conservation ethic among our people.

We are requesting your partnership in helping us build a new enclosure for the reticulated python – one of our least understood reptiles but one which plays a big role in the dynamics of forest and agricultural ecosystems. In addition, your support will help us turn the Philippine Eagle Center into the country's first modern zoological garden.

Brief Description of the Species

Reticulated Python *Python reticulatus.* The reticulated python is the largest of the pythons, this is a long and relatively slender snake. Specimens over 300 pounds are reported. The record length slightly exceeds 33 feet. Retics, as they are known, have big heads that are distinctly wider than the necks. This is the most widespread python species in the world. Its distribution includes coastal Southeast Asia, from Burma and the Nicobar Islands east to Vietnam, Peninsular

Malaysia, and most of the islands of the Philippines. It is considered one of the most beautiful of all the snakes. The reticulated python has enjoyed its first real wave of popularity in captivity and among keepers in the late 1990s. It is extraordinary to consider that such a huge predator still lurks at the fringes of civilization.

The objectives of enclosure improvement.
The way animals at the Philippine Eagle Center are shown has increasingly attracted visitors' interest in the past. The Philippine Eagle Foundation is currently trying to replace the old cages with enclosures that simulate each species' natural habitat and provide viewers with better opportunities to learn more about the exhibit animal through personal discovery.

The Center fulfills a particularly important role for a large majority of our people who do not have the opportunity and time to view animals in their natural habitats. The Center benefits children as it provides them with a venue to observe animals, listen to them, smell them, and learn about them through personal discovery.

Our research indicates that each visitor at the Philippine Eagle Center often spends time on an animal they find interesting and personally appealing to them. And because everybody digests information and learns new things their own way, the development of aesthetically pleasing and animal-friendly exhibits provide an opportunity to further wildlife education. The simulation of wild conditions allows the animals to display a wider array of behavior which would otherwise be unknown to the ordinary visitor. Such presentation fosters a deeper appreciation and admiration for the animals which will, in turn, result in the development of a conservation ethic among our people. New enclosures used at the PEC show that this concept works as reflected in recent interviews among visitors.

Expected benefits of public education.
Conservation is a process that involves people, it does not occur in a vacuum. People make decisions about problems on the environment and act according to which issues appeal to them. However, people, before they can act, need to have an understanding of what processes operate in the natural environment. They need to understand that these processes support the diversity of life on earth, including our own. They need to understand that their, and others' actions in one area can have impacts elsewhere. By providing the viewer with vivid displays and accurate information, we enable him or her to evaluate and digest the material so they may rationalize future behavior.

In order to achieve satisfactory educational objectives, we aim to exhibit animals in the context of their natural habitats and in the best possible circumstances to enable them to display natural behaviors. This will create the correct atmosphere for visitors to develop an empathy with the animals. Enclosure design, structured educational visits and graphics can be used to interpret the animals.

The proposed enclosure offers many people their only opportunity to observe snakes at close quarters. The python enclosure is an especially useful exhibit as it underscores the need to conserve one of the rarely seen and least understood native species.

Dennis Salvatore, Philippine Eagle Foundation

Participants' Presentation about their Zoo

Zoo Conservation Education in Cambodia

**Wildlife Protection Office, 40 Preah Norodom Blvd.,
Daun Penh, Phnom Penh, Kingdom of Cambodia**

I - Introduction

Cambodia is a rich biodiversity country in Southeast Asia. Before 1970, the Indochinese area, Cambodia was covered by 77% of forest, which was the main habitats of wild cattle, wild cat, elephant and other endangered species.

In 1993, after the UN supervised elections in Cambodia, conservation efforts have been taken step-by-step with the cooperation with international organizations. The efforts included a National Zoo and Wildlife Rescue Center established in 1995. It is located about 40 km south of Phnom Penh and occupies an area of 1,200 ha.

Why Cambodia needed Zoo after the War?

During the war many knowledgeable people were killed. The greater majority of remaining people are basically uneducated. Many of them also have mental health problems. Poverty and food programs are the main issues. However, Cambodia also needs to carry out law enforcement and conservation education programs to sustain its natural resources. So, the earlier reason for establishing a zoo was to find an appropriate place to rescue and keep confiscated animals. Now, after the rescued species increased, this zoo serves 3 main objectives:

1. Education and Public awareness
2. Conserving endangered species.
3. Community Development and Eco-tourism.

II. Education and Public awareness Programs:

Since the location of the zoo is close to Phnom Penh capital, there are many visitors who come to the zoo every day, especially during the weekend. To educate visitors coming to the zoo, we have organized a volunteer program to guide and talk to the visitors. Two main methods have been used for this purpose:-

1. Using animal beauty to inspire people to love animals, to decrease wildlife meat eating and conserve species.
2. Using problems of animals to inspire people to stop hunting and trading animals. This was ilustrated by keeping some of the disabled animal in the enclosures with conservation messages written. Likewise, showing all the confiscated wildlife specimens illustates the destruction of Cambodia wildlife.

III. Conserving endangered species.

Some of the threatened species like elephant, tiger, bears and other large waterbirds are safely being take care of in large, naturalistic enclosures. Some of them are breeding now, like Painted Stork, Spot- billed Pelican, Black-headed Ibis, Lesser Adjutant Stork and others for reintroduction programs in Cambodia where habitats are still supported. The same thing we have also sent

out, some of these threatened species, to other countries for captive breeding programs.

IV. Community development and eco-tourism.

The zoo has also provided many alternative economic solutions to the local community through creating local food market and services. A lot of local souvenir items like palm leaf boxes are being sold to tourists every day. Moreover, all the zoo keepers, and staff were recruited from local people. This makes a lot of difference from earlier period when people had no jobs and live depending only on their agricultural production.

V. Recommendation

1. Training for zoo educators is really needed to conduct more appropriate education and public awareness programs.
2. Training for zoo keepers and decision makers should also be organised.
3. Equipments and materials for zoo education and awareness programs should be supported.

VI. Conclusion

This project is important for Cambodia, and all different target groups. The Cambodian Government, now, is not ready to support this kind of project. Therefore, we are looking for any international and national NGOs that can support this project or any part of it, such as equipment, donation, volunteer program, or other interests.

Submitted by Sun Hean, Cambodia

Participants' Presentation about their Zoo

A Glimpse of the TMII Bird Park

Bird Park Taman Mini Indonesia
Indah, Jakarta 1350, Indonesia

Introduction

Indonesia is blessed with a rich biodiversity (ecosystems and species of living organisms). Particularly in bird species, Indonesia can boast 1,539 recorded species, including 381 endemic ones. Unfortunately due to deforestation, loss of habitat, burning, illegal hunting and other factors, the number of threatened bird species tis increasing drastically.

TMII Birdpark was officially opened for the public on 27 April 1987, the oldest bird park established in Indonesia so far. Establishing TMII Bird park was to impart awareness and knowledge about Indonesian bird species, especially to Indonesian people. Establishment of the bird park was based on various considerations such as scientific, art and culture, economy, conservation, education etc.

At the Bird Park there are two clustered domes, separated with a man-made pond between them to represent the Wallace line. According to Wallace's concept, the Indonesian flora and fauna divided into two big groups, i.e. Asian type to the western part of line and Australia type toward the eastern part of the line. Western cluster of domes accommodate the collection (bird and plant) indigenous to Sumatra, Kalimantan, Java and Bali and the eastern one keeps the collection from Sulawesi, Irian Jaya, Mollucas, Lesser Sunda and surrounding small islands.

Brief Information

A multi-dimensional crisis hit the country and as a result, the Bird Park launched a tight money policy and restructured the organization, which became 3 divisions. The total employees are 52 staffs with 31 general affairs staff; 5 for animal health care and breeding, and 14 for collection and nutrition.

Collection

The total number of our collection is 5,376 specimen representing 311 species. The majority of our bird species are indigenous to Indonesia. We have some exotic ones, e.g. macaws, crown crane, golden pheasant.

Implementation on modern zoo concept

Based on modern zoo concept birdpark has had implementing its function i.e. :

1. to carry out *ex situ* conservation
2. to provide facility for education
3. to carry out research and facility for research
4. to provide facility for recreation education

Normally, implement the functions are carried on simultaneously, although financial constraint has restricted us recently. However we could implement some activities :

Recreation

TMII Birdpark being an integral part of TMII (The Beautiful Indonesia in Miniature Park) that has main mission to introduce Indonesia birds to the people. In the last few years there has been a decline in visitor numbers as a result of the economic crisis which hit Indoneia. The total number of visitors now are below 300 thousand per annum. Reduced number of visitors can be attributed to high inflation rate, establishment of new entertainments, such as malls, shopping centres, eco tourism etc. Due to the national situation especially, political disturbances, it's difficult to increase the number of visitors. Now, the priority effort is how the park could survive.

Conservation

Interconnected walk-in aviaries attempts to create harmony between bird and environment with selective planting of flora indigenous to Indonesia which are useful for the rare species and non-toxic for the birds. The park is also landscaped with several species of decorative plants. Those efforts are to create man-made habitat as natural as possible and quite successful so far. The birds feel as if they are in their natural habitat, flying freely and breeding well.

According the last record, the park has succeeded in breeding 128 species of birds of which 30 of them are protected species. A few of them are:

1. Bali Starling *(Leucopsar rothschildi)* : This is a very famous species maybe because of its rarity inhabit Bali Barat National Park. The last report showed the total population in its habitat to be less than 12 birds. The TMII Park has been trying to preserve this species by captive breeding.

2 . Brahminy Kite *(Haliastur indus)* : Loss of habitat, pollution, and illegal hunting has been identified the main cause of population decline for Brahminy Kite. This species has been inaugurated as a symbol of Jakarta District. This success record was recognized as the first captive bred in Indonesia

3. Double-wattled cassowary *(Casuairus casuarius)*

4. Lesser Adjutant *(Leptoptilos javanicus)*

5. Great Argus *(Argusianus argus)* :

6. Lesser bird of Paradise *(Paradisaea minor)*: This is the most famous bird species in Indonesia, and because of its rarity, certain private collectors used it as status symbol. Poaching and loss of habitat have threatened its population in the wild.

7. Magnificent bird of Paradise *(Diphyllodes magnificus)*:

8 . Maleo *(Macrocephalon maleo)* : This is an endemic species to Sulawesi island. It has a unique breeding system in which the female buried the eggs in warm sand in coastal area or close to volcano area, use the solar heat to incubate the eggs. Illegal hunting and over-harvest of eggs have been identified as the main threat to their population.

9. Kingfishers :Javan KF and Stork-billed KF

10. Hornbills (Pied Hornbill and Wreathed Hornbill)

Females remain sealed in hollows for around 3 months to incubate and raise the chicks.

11. Crown Pigeon *(Victoria and Cristata)* : This is the biggest pigeon in the world. They are quite easy to breed and are good in a walk-in aviary as they are more resistant 'disturbances'.

Source of collections

This is primarily result of breeding program, donation from private collectors, exchange program, confiscated birds from PKA (Department of Forestry) and through procurement. The

achievement on breeding endangered species is a support to bird species conservation at large. In the future, develop a strong coordination and cooperation at national, regional and international level among all parties involved in breeding program especially on birds is the main task.

Research

Research activities have done by both the park staff and other institution.
Few samples the institution which have used the park as facility for research as follows:
University of Indonesia, Jakarta (S1 and S2 degree)
National University, Jakarta
Bogor University of Agriculture (3 Faculties, Diploma, Sl and S2 degree)
Gadjah Mada University, Yogyakarta
Center for R & D Biology, Indonesia Institutes of Sciences, Bogor
Padjadjaran University, Bandung
Jenderal Sudirman University, Purwokerto
Udayana University, Denpasar, Bali

The park has enhanced efforts to carry out and facilitate research by invite other institution to optimise the facility as a field laboratory. The park also approached institutions for sponsored research activity.

Education

The information and education sub-division have main tasks to give information and run education activities for school children and public at large. The education program in the park has carried out the activities below:

1. held workshops for biology school teacher (more then 9 hundreds) in collaboration with a foundation
2. distributed worksheets to school children
3. provided information about an attracting occasion such as an unique breeding system on megapodes, ratites, hornbills etc.
4. disseminated information kits e.g. bilanguages sign text (some of them 3 languages), leaflets, brochures, posters, postcards, calendar.
5. provided tour guides
6. organised drawing competitions and quizes.

Due to the national economy, the situation has not recovered yet, and several annual education programmes have been delayed.

Conclusion

Negative growth in number of visitors could be the main constraint for the existence of the park, otherwise several problems could have been solved sooner. Exploring unconventional funding resources and strengthen cooperation and collaboration among parties concerned the conservation put on first priority.

Submitted by Endang Budi Utami, Head of General Affairs

Participants' Presentation about their Zoo

Penang Butterfly Park

Butterfly House (Penang) Sdn. Bhd.
No. 830, Jalan Teluk Bahang, 11050 Penang, Malaysia

Penang Butterfly Farm was opened in 1986. It is the most attraction in Penang Butterfly Farm is the free-flying butterflies in the enormous enclosures. There are exhibits of butterflies, moths, insects, millipedes, centipedes, arachnida, lizards snakes, geckos, etc. Today, Penang Butterfly Park is more than just a tourist attraction but also as well as a 'live museum' to educate public besides a research centre to develop breeding methods.

Educational Programmes in Penang Butterfly Farm

1. Farm Presentation
2. Quarterly Newsletter
3. Arts & Collage-making Competition
4. Treasure Hunt & Nature Camp
5. Story Telling & Show Time
6. Mini Butterfly Farm
7. Science Project.

A. Farm Presentation

(1) Live Reference

* All animals are displayed with a clear lable (Scientific name, common name, distribution, habitat & feeding habits)
* Educational Station

Station A= live caterpillar on food plant
Station B= emergence of butterfly
Station C= life-cycle of Rajah Brooke, Malaysian National Butterfly

(2) Preserved Reference

* Insect museum

Highlight of the entomological exhibition on the Malaysia butterflies and also the national butterflies of the world. i.e. explain the natural phenomena of the insect, such as insect evolution, mimicry, the camouflage effect and etc.

B. Quarterly Newsletter

* Printed every 3 months
* Delivered among the Penang Butterfly Farm caterpillar club members, and selected school children
* Series of animal articles
* Yearly tentative programmes
* News up-date of Penang Butterfly Farm
* Games

C. Art and Collage Making

* Art Contest

- observation of our surrounding; raise-up understanding of nature among children. E.g. 6 legs

insect, 8 legged spider . . .

* Collage Making
- build up the individual creativity besides create the conservation awareness by using only the nature resources in collage making.

D. Treasure Hunt and Nature Camp
* Quiz Competition
- to think of the answer, to think of the possibilities. e.g., why does the pupa look like a brother sticks, why does the caterpillar eat up it own egg shell?

* Insect Hunt.
- you will be surprised on how well the insects camouflage/mimicry with its surrounding.

* Night Catching
- catching moth & other insects which are active in the dark, getting know of insects/animals movement during the night. Also learn to set up a night catching trap.

* Insect Breeding Programme
- breed on butterfly, stick insect, leaf insect, mantis,
- get know of the whole life cycle, practically

* Animal Feeding Programme
- get know of the animal habits & their nature behavior.

* Telematch
- built up the team spirit where full cooperation among team members is needed, indirectly this may tie-up the community relationship.

At the end of the games, participants will learn to be more independent & self-confident.

E. Story Telling and Show Time
* Story telling - weekly at the children library or selected primary school.
* Show time - twice daily; 10.00 am and 3.00 pm.
* Live performance of insects, reptiles & arachnida with short information.
* Tour behind the scene will be open for visit after the show.

F. Mini Butterfly Farm
* Set up a mini Butterfly Farm at Paichai Primary School.
* Supplied the breeding cages, parental butterflies, given the breeding techniques & monitor for 2 months.
* Objectives - to create the hobby of breeding the butterfly besides & create appreciation to our nature resources.

G. Science Project.
* Open for children > 7 years old
* Lectures and hands-on project will be given
* To create the sensibility & understanding on the animals (insects) besides gain a better knowledge of Biological Science

Submitted by Kuennie Lee Yoke Kuen, Biological Researcher

Participants' Presentation about their Zoo

Perhimpunan Kebun Binatang Se Indonesia (PKBSI)
The Indonesian Zoologocal Parks' Association Perhimpunan

Kebun Binatang se-Indonesia (PKBSI)
Organization Activities and Status

Secretariat: JL. Harsono RM. No. 10, Jakarta 12550
Phote/ Fax : (021) 7800636

The Philosophy of the Indonesian Zoologocal Parks' Association is : "The almighty created our country and its richness to the benefit of its people. Therefore conserve the natural heritage for generations to come." Our logo is a nesting pair of Bird of Paradise.

Our organization was established in Jakarta in 1969 on November 5, as a result of the first directors assembly of all 28 (twenty eight) Zoos in Indonesia. It is a non profit and non governmental Organization (NGO), recognised as a partner of the government Management Authority (Ministry of Forestry, Firector General of Forest Protection and Wildlife Conservation-PHPA) and the Scientific Authority (Indonesian National Instituts of Sciences - LIP).

There is a Board of Councillors consisting of Cabinet Ministers, e.g., Minister of Forestry; Minister of Home Affairs; Minister of Tourism, Post and Telecommunication; State Minister for Environment, former Ministers and Director General PHPA. There is also an Advisory Board, an Executive Board with representatives of related ministries as its members to enhance coordination. The E.B. is responsible to the Board of Councillors and finally an Assistant Team.

The Tasks and Functions of Indonesian Zoologocal Parks' Association are as follows:
-- Constant coordination needed between IZPA and related agencies within the government as well as the private sector.
-- Coordination amongts member Zoos in programmed activities and exchange of animals within the country and abroad.
-- Advice and council in promoting professionalism in management and animal handling.
-- Exchange of information amongst the members through visits, periodical meetings and written material (Bulletin, correspondence).
-- Meetings organized by annually (Board of Councillors) and annually (Zoo Directors on November 5 IZPA day).
-- Weekly Executive Board Meeting.
-- Monthly dues from member Zoos, and donations from I.W.F. and third parties.

From the old Management to the Modern Zoo
Inheriting the old menagerie exhibition from colonial times, there is still a long way to go to achieve modern zoo management. A step-by-step effort to change the priority scale of recreation / entertainment to education / scientific program, conservation *ex situ* / last bastion for endangered species. Relocation to more suitable premises toward a combined flora fauna garden, functioning as greenbelt / the lungs of the City. The existing diversity in status, size and management capability is a challenge in itself.

Variety in status of zoos in Indonesia
-- Government sponsored foundation (Yogyakarta, Jakarta TMII).
-- Private Zoological Society (Surabaya).
-- Private enterprise (Taman Safari Indonesia, Bogor).

Some features and size of Indonesian Zoo.
In size, the largest zoos are in Java
-- Ragunan Zoo at the Nations Captial Jakarta (136 ha).
-- Zoo-Botanical garden, Semarang (62 ha, in development)
-- Gembira Loka Zoo, Yogyakarta (20.4 ha)
-- Satwa taru Jurug, Surakarta (24 ha, in development)
-- Surabaya Zoo (14 ha)
-- Tamansari Zoo, Bandung (14,5 ha)
-- TMII Bird Park, Jakarta (6,5 ha)
-- Oceanic Park, Ancol, Jakarta (12 ha)
-- Taman Safari Indonesia, Bogor (68 ha)
-- Indonesia Jaya Crocodile Park, Jakarta (2 ha)
-- Seaworld Indonesia, Jakarta
-- Taman Akuarium Air Tawar TMII, Jakarta
-- Museum Serangga dan Taman Kupu TMII, Jakarta
-- Taman Kaloka Widya Mandala, Purwokerto

The smallest are situated outside Java i.e. Sumatra:
-- Pematangsiantar Zoo (5,5 ha)
-- Medan Zoo (3,5 ha)
-- Jambi Zoo (4ha)
-- Crocodile Park, Medan (2 ha)
-- Bukittinggi Zoo (3.5 ha)
-- Sriwijaya Zoo (3,5 ha)
-- Taman Satwa Kasang Kulim, Riau
-- Taman Satwa Bengkulu
-- Lahat Zoo

Kalimantan (Bomeo):
-- Pontianak Zoo (1, 1 ha)
-- Taman Satwa Galuh Sari, Banjarmasin

Bali:
-- Bali Birdpark International
-- Rimba Reptile Zoo
-- Bali Reptile and Crocodile Park
-- Bali Butterfly Park

Re-evaluation of all the Zoos, in particular the smaller ones, is in progress. based on the following factors:

-- Existence of a community responsible for the welfare of the local Zoo (Zoological Society, Friends of the Zoo) considering the absence of government subsidies.
-- Fulfilment of minimal requirements in establishing a zoological (Botanical) park.
-- Basic knowledge in animal handling and record keeping.

The overall standing in management and record keeping is still low. Studbooks are yet to be established.
-- Inadequate English language is a handicap.
-- Education and training is an urgent need. We are looking forward to the following Zoo Training Course in the near future. Thanks to the helping hand of the National Zoological Park (NZP), the Smithsonian Institution in Washington DC in cooperation with AAZPA member zoos, this course will usher our managers into the era of modern zoo management.

Conservation of Endangered wild Species of Flora and Fauna of Indonesia.
The Indonesia Government has a strong commitment in the conservation of its tropical rain forest, as stated by President Suharto in his annual address to the Parliament on August 16, 1989. In order to extend Indonesia's protected tropical forest to 20 (twenty) million hectares (10% of total land mass of Indonesia), a sum of $300 million will be set aside to replant an area of 300,000 ha per year. It would take 65 years to cover the 20 million hectares, if Indonesia would carry out this program alone. For this reason we urge the advanced countries to shorten this time by taking an active part in replanting tropical forests, carrying out our common responsibility in keeping the lungs of the world healthy.

The Government's general policy is based on the conservation of whole ecological environments or habitats, rather than focusing on single endangered species. Therefore the establishment on National Parks and wildlife refuges sanctuaries as mentioned in Appendix I. Within ASEAN, meetings on the Conservation of Nature and Natural Resources are part the coordinated effort. By ratifying CITES, Indonesia has established itself in a better position for protecting its endangered species of plants and animals from illegal international trade, as seen from the constitutional aspect. But in reality there are still difficulties, and dilemma arising from practice by many layers or communities and traditions that have been in practice for countries:

Turtle slaughter in Bali for ritual ceremony
Poaching and smuggling of rare plants and animals for commerical purposes. As long there is demand from abroad, this practice is difficult to stop (illegal trade in protected species such as orchids, butterflies and beetles, cockatoos, Bird of Paradise, orangutan). With the promulgation of the new law conservation in the near future this year we hope to have a stronger base for law enforcement to replace the obsolete prewar stipulations of 1931.

* According to Conservation International, Indonesia has the largest number of mammals, including both Asian and Australian species, many of which found nowhere else in the world. A mega-diversity country, Indonesia is second only to Brazil in amount of tropical forest cover, and by far the most biologically diverse country in the old world. Like Mexico, it falls within two major biogeographical realms, the Indomalayan and the Australasian. The result is mix of some of the world's most spectacular species (Alfred Russel Wallace: The Malay Archipelago)

The diversity of Indonesia's marine organisme is unmatched by any other country. World Rank
-- 1st in Mammals (515 species)
-- 1st in Swallowtail Butterflies (121 species)
-- 3rd in Reptiles (over 600 species)
-- 4th in Birds (1.524 species)
-- 5th in Amphibians (270 species)
-- 7th in Flowering plants (approx 20.000 species)

Special attention and efforts are given by IUCN, Captive Breeding Specialist Group (CBSG),

Species Survival Commission (SSC) in arranging workshops on the Sumatran and Javan Rhino as well as the Bali Mynah.
-- Indonesia Rhino Foundation
-- The AAZPA Sumatran Tiger Workshop.

In all these conservation activities, the (PKBSI) IZPA has a keen interest as to educate its members and prepare them when active participation is needed.
-- The Ragunan Jakarta Zoo and The Safari Garden in Sumatran Rhino.
-- The Subrabaya Zoo in Bali Mynah.

Other cooperative captive breeding programs with AAZPA and other International Zoos are under study i.e..
-- Komodo *(Varanus komodoensis)*
-- Maleo bird *(Macrocephalon maleo)*
-- Mentawai macacaque *(Macaca nemestrina pagensis)*

Public Awareness and Education
-- In a developing country like Indonesia where the welfare of the people is still the most important task to be realized, the changing role of the Zoological Park needs a never ending effort to educate the general public.
-- A zoo / botanical garden is an ideal place for recreation, for a family outing on weekends and national holidays with a minimum entry fee. Visitors should know how to behave and respect the needs of the animals.
- no feeding, no teasing, etc.
- better knowledge of different speecies through graphics;
- healtheir animals in their natural surroundings are more enjoyable exhibits.

-- Animal Appreciation (Pro Fauna) day (5 November, IZPA day).
-- A scheme to be developed in supporting this national effort, as a realization of the First Lady's (Patron) dedication of number 5 as the National Flora-Fauna Day.
-- SEAZA establishment, October 1990 and the Third Annual SEAZA Conference 1993 in Cisarua, Bogor, Indonesia.
-- Lecture to Indonesian Diplomats. Since 1987, IZPA assists the Ministry of Foreign Affairs with a set of lectures on the role of the Zoo and related international conventions i.e.
-- WHO, IUCN, CITES, UNEP, RAMSAR, etc.
-- International cooperation in conservation of wildlife.
-- Exchange of zoo animals.
-- Reference literature.

Participants' Presentation about their Zoo

In-situ Conservation -- "Community based Tiger Conservation"

Department of Animal Health & Production
Cambodia

Tiger conservation establishment
Recruiting local hunters
Training (GPS & GIS)
Ranger patrolling and data collection
Village workshops
Coordination of other NGOs.

Three regions of the remaining habitats of tigers were represented in an office. Local hunters who had experience were recruited and given training. After a meeting of directors, a poster was produced. Data that had been collected was interpreted and documented in GIS system. Any NGOs and other projects can use our facilities and staff to do their work.

A good information system has been set up to communicate, from community-international standards. Turning the hunters to protectors is the objective. Even though the project focuses on tiger, it also extends to others species that share the same home range. Local people learned how to use GPS for tracking tigers.

Government employment was created for the local people including eco-tourism and other alternative economic activities.

Ex situ conservation
"Zoo Conservation Education and Rescue Center"

Saving endangered species
Education and awareness program
Community development (Tourism)

Using the beauty of animals to inspire people to love and conserve them.
Using problems of animals inspire people to feel bad about killing and trading animals

Through observation many people feel inclined to protect animals. Some of them donated enclosures and food. More training should be provided to keepers and educators
Other programs should be conducted as well, especially the more the best.

Participants' Presentation about their Zoo

Local Educators' Action on Development and Environmental Regeneration

Philippine Eagle Foundation, Philippine Eagle Center
Malagos, Baguio District, Davao City

The Project Goal was to develop a conservation ethic among Filipinos in furtherance of wildlife conservation in the country.

Strategies and Objectives utilised are listed below:

- Enhance wildlife education through integration of interdisciplinary modules on wildlife with a strong focus on Philippine Eagle at the secondary school curriculum of the Philippine educational system.

- Improve process skills and conservation literacy among secondary school teachers and students through faculty development and exposure workshops on wildlife and habitat management.

- Expand teacher-based organization to help promote wildlife and biodiversity conservation and build further the capability of teachers as key partner in reaching out a larger audience using eco-seminar workshops.

- Enhance wildlife education through integration of interdisciplinary modules on wildlife with a strong focus on Philippine Eagle at the secondary school curriculum of the Philippine educational system.

Beneficiaries were :

1996-1997	1998-1999	1999-2000
66 teachers	1,503 teachers	500 target teachers
3,960 students	90,180 students	30,000 students
37 schools	597 schools	

Problems encountered:
School policies like limitation on technology, time, number of students versus number of workbooks.

Solutions:
Obtained institutional support

Learning and Insight
The teachers' acceptance to continue the challenge of inculcating conservation values among their students is an indication of their commitment to support conservation initiatives like ours. The training was participatory in all levels and it provided both the PEF and the teachers the

venue of gauging the efficacy of the workbook, the extent of its integration in the curriculum, the levels of innovation of teaching and its impact to the learners.

Furthermore, the students who had access to the workbook and other supplementary materials being distributed by the PEF had the rare opportunity of being taught and equipped with essential knowledge on current issues associated with the environment. While the young students might not be living in the jungle, it is essential that they understand the role they play in protecting the forest and the need to conserve our biological resources. It is hoped that this will provide motivation among the students to view wildlife resources as an essential part of everyone's life.

By taking this approach we believe that the full scope of biological resources conservation will have a longer lasting impact in the country. To the partner teachers and to Canada Fund who provides financial assistance, we salute you.

Submitted by Angelito A. Cereno, Philippines

Participants' Presentation about their Zoo

" Zoo Education in Bandung Zoo"

Bandung Zoo, Jl. Kebun Binatang No.6
Bandung, West Java, Indonesia

Bandung zoo was founded at 1933 with an area of 14 ha. The location of Bandung Zoo is strategic. Everyone can visit Bandung Zoo easily which is a great advantage for a zoo.

We have a "Public Education" division which serve visitors in need of information about Bandung Zoo or the animals. We have erected signage on every enclosure. Even some trees have a board which tell visitors about it's classification, scientific name, distribution and it's habit. We have made a brochure for the visitors also.

This year (2001) we have a new program. We visit schools and invite the students to come to Bandung Zoo and participate in Bandung Zoo's education program. Students will get 40% off ticket price. We guide them on a walk around the Zoo and tell them about the animals. We also tell them how we take care of the animals.

After that, the students go to a room and watch some animal videos and take a quiz on what they have learned. We give a prize to students who can answer the questions correctly. We also have some references about animals they can check.

The teacher also can choose the subject what they want us to teach the students.

This program is conducted from Monday to Friday.

Submitted by Yanni Puspitaningsih

Participants' Presentation about their Zoo

Forest and wildlife conservation in Laos and Vientiane Zoological Garden Lao, P.D.R.

Vientiane Zoological Gardens, P.Box 8380
Vientiane, Laos

Forests used to cover 70% of the total area of Laos, which is 236,000 square kilometers. The country was beautiful looking from the sky. The country was green as it was covered with forests. Laos used to have most of trees and plants that were available in any tropical rainforest area such as teak, which has become exporting products until today. Laos also used to have most wildlife species found in tropical rainforest, ranging from elephants, tigers, roe deer, deer, antelopes, many kind of birds such as doves, hawks, etc. However, according to a recent survey, the forest has reduced to nearly 50% of the forest cover.

War: the war occurred in Laos from 1960 to the early 1990s. During this period nearly 4 million tons of bombs were dropped on Laos. The bombs were dropped on the mountains, slopes of mountains, rivers, buildings, houses, Buddhist temples and many other beautiful sites, causing severe damage to natural resources and even killing human beings.

Slash and burn cultivation and bush fire: each year hundreds of hectares of forest have been cut down and burnt for growing rice and other crops. This has become a chronic problem which cannot be solved even today.

Logging: in the 1980s the forest decreased very fast as laws on forestry had not been created. People carried out what they wanted for their livlihood. They cut down trees and sold them overseas. The government issued logging quotas to logging companies (for example, 1000 cubic meters of timber) however, 1500 or 2000 cubic meters of timber have been processed. The government bought vehicles from Japan, China and Vietnam, but they had no United States dollars to settle its debts, so they cut down trees to give those countries instead.

Decline in wildlife population because of the following :

War: as I mentioned earlier, bombs were dropped on the ground and became landmines from which they spread out strings. Once any living thing touched one of the strings, the bombs exploded and killed it immediately. In many cases such animals such tigers, deer and roe deer were found lying dead in the deep jungle because of such bombs and landmines.

Bush fire and hunting: hunters sets fires to the jungle and burnt down all young trees and plants. Once the rain comes, young shoots of plants start coming out, so then all animals come out. Then hunters can easily shoot them for food. Nowadays, bush meat is still available in markets of every province and even in the capital city Vientiane.

Facing such problems, the government has taken actions to stop the decrease of forest and wildlife as follows.

- The central government has issued laws; then empowered the local government to implement them.

- The government also trains personnel such forestry technicians; police and custom officers, and then sends them to help local government in order stop these problems.

- The central government in collaboration with local government has educated people. In practice, official staff have been assigned to go from village to village to stop cutting down trees and plants and to maintain forests in their own areas.

- The government has also established National Biodiversity Conservation Area (NBCA) and encouraged people to plant trees in the rainy season and celebrate the National Day of Planting trees.

- External assistance has been given to Laos in reforestation and management of its forest.

Vientiane Zoological Gardens

Vientiane Zoological Garden is located in Tulakhome District, Vientiane Province, which is 70 kilometers away from the capital city Vientiane. It has 110 animal species and 750 individual animals. It was officially opened to the public in 1994. At that time that zoo was state-owned business unit. Because of mismanagement, the zoo was not profitable. At the time the government was unable to finance the zoo because of its financial difficulties. The Government since then has semi-privatised the zoo, and the management and ownership has been transferred to private hands, however this process has not yet finalized. Since this change has been initiated, however, the zoo has developed in a positive direction.

Prepared by Saikham Bouathongthip, a Laotian participant to Zoo Educator Training Course under ASEAN Award Training Program

Participants' Presentation about their Zoo

Conservation Education for School Children in Zoo Melaka

Zoo Melaka, Malaysia
Air Keroh 75450, Melaka, Malaysia

Objective
The main objective of this programme is to increase the knowledge of wildlife conservation and to enhance public awareness within the target group. It is also to create a better understanding and appreciation of wildlife and conservation.

Implementation
Working together with the education department

Education Department: Selection fo schools and student
Zoo Melaka: Provide the programme places, facilitators and facilities
The Module: Twice a week (Tuesday and Thursday) for 70 students at one session
Student: Standard 4-6 (Age 10-12 years old)
Time: 9 am – 12 pm

Activity
This programme consists of 3 Segments:
1. Lecture
2. Video Show
3. Questionnaires and Tour Guide

Programme Time Table

Time	Subject
9.00am -10am	Lecture
10.00am – 10.30am	Video show
10.30am – 12.00am	Questionnaire and Tour Guide

1. Lecture
Usually the students are given lectures mainly on wildlife conservation and information about Zoo Melaka. The topics includes:-

Funtions of Zoos
The Animal Kingdom
Biodiversity
Causes of Extinction
Law and Enforcement

To convey these messages, slide and over-head projector are used, to ensure the students understand well. This programme lasts for only one hour.

Presented by: Mohd. Fuzi Zulkifli, Zoo Melaka

Ragunan Zoo Education

Environment Department
Ragunan Zoo, Jakarta, Indonesia

Ragunan Zoo was established in 1864. Its role or main purpose is :

1. Protection of Natural Reserves
2. Education and Research
3. Natural Recreation
4. Reservoir, lung of the City, and Green House

Vision
Animal Welfare in *Ex situ* Conservation

Potential
1. Distance square; 135 ha
2. Fauna Collection; 260 sp
3. Flora Collection; 250 sp
4. Location; Capital Indonesia

I. Definition
Waste refers to "Solid Waste" such as:
- litter
- street Sweeping
- dung
- waste from visitor
- food leftovers

II. Utility
1. Give examples of Waste Management
2. Education facility for students from Primary School until University, such as,
- Field Education
- Research for final paper in University
3. To help from local government, especially cleaning service department
4. Education Facility for Environmental NGO

III. Purposes
Solid Waste Management on the Zoo

IV. Concept
Minimize of Solid Waste with 3R Concept.
1. Reuse
Such as; plastic, paper and bottle collecting by worker for sale as additional income

2. Recycle
Organic or Garbage solid waste to:
a. Composting
b. Vermicomposting (omposting using earth-worms)

3. Replant
Utilisation humus (compost) as organic fertilizer of Nursery and horticulture plantation

Residue of solid waste can be incinerated and the ashes used for landfill

Submitted by Mr. Maskana

Participants' Presentation about their Zoo

Conservation Education Activities at Saigon Zoo Botanical Gardens - Viet Nam.

2-Nguyen-Binh-Khiem Street
Ho Chi Minh City, Vietnam

Saigon Zoo Botanical Gardens is located at the center of Ho Chi Minh City - South of Viet Nam. It had been built since 1864 by French first as a Botanical Garden. In 1956, the government of Saigon had the botanical garden renovated and re-built, and changed its name to Saigon Zoo Botanical Garden. This name has been maintained to the present.

Nowadays, Saigon Zoo Botanical Garden is not just an institution existing solely for public entertainment, but also a place of educational, conservational and study purposes. One of its most important roles is to educate the public on the conservation of living creatures and the environment. This role has a significant impact upon the public, particularly on students of all levels.

At the end of 1996, conservation education activity was initiated with a subjective activity period. At that time, Department of Conservation Education had not been established yet, so some animal curators took this responsibility.

These activities were organized under contests for students in district schools of Ho Chi Minh City. The objectives of these contests are:

- Increasing knowledge of the role of nature and of natural habitat protection
- Encouraging children to understand Vietnam fauna and wildife conservation
- Enhancing knowledge of environment protection and consequence of environmental pollution.
- Providing them the opportunity to interact and to learn.

Totally, there were 3 contests from 1996-1999.
- At the end of 1996- begin of 1997, the contest with topic "understanding of nature, environment and Saigon Zoo Botanical Gardens". This contest consisted of 4 segments: lecture, video show, tour guide and contest. More than 800 students from 17 district schools had participated in it.

- In 1998, at the time of Saigon Zoo's 300 years anniversary the contest "Growing up together with the city" had been organized. About 320 students and 3,500 supporters took part in and enjoyed the contest. Participants were tested on knowledge about history and geography of Saigon; natural habitat and Saigon Zoo wildlife. They also had to create a model of a future Zoo.

- In 1999, Thanh Da Summer Vacation Camp was held and attracted 2,942 students to take part.

On September 1999, the Conservation Education Department of Saigon Zoo was established with two persons. One veterinarian was appointed in the position Head of the Department, e.g., Mr. Vo Dinh Son and another one is his assistant. One month later, two new educators joined the department. At the end of 2000, we had 2 more educators.

From the begining of establishment, the Conservation Education Department had a long-term program titled "Cooperating high school biology education with conservation educational program at Saigon Zoo". We had compiled a guide book "Conservation Education Program at Saigon Zoo" to introduce about our program. Totally, we have 39 topics relating to 5 Subjects: environment, conservation, plant, animal and diseases of animal. Beside these topics, we also prepare 'other topic according to teachers' requirement. Before sending students to the zoo, the teachers have to register with us including: date and time to come, number of students, topic which they want us to instruct. When attending the program, ticket is discounted 50% for students and a teacher free for every 30 students. Duration of one class is 2 hours including: discussion and lecture, outdoor activities (keep in touch with animal, observe animal behavior, video show and test). After every class, we also get the ideas of teacher in order to improve.

Not many schools knew about our programm but since November 2000, we began pay more attention to marketing. The Department of Education and Training organised a meeting for teachers from schools and from this meeting, more schools came to know about the program.

Number of students who participated in Conservation Education Program at SG Zoo

Year	Number	Note
1997	800	Contest for "Understanding nature, environment and Saigon Zoo"
1998	320	participants (3,500 supporters) Contest for "Growing up with the city"
1999	2,942	Thanh Da Summer Vacation Camp
	1,404	Conservation Education Department established with long term program.
2000	4,073 2,636	Marketing was paid more attention (since November).
2001	3,890	From Jan to 9 March 2001.

With the number of students is more and more increase, we have to face with many problems:
- Human resources -- At present we have 4 educators and it's not enough to instruct a large number of students when they come at the same time (this happen very often because teachers don't want to take them many times). So, we need volunteers and support from the teachers.

- We need a graphic designer to create material attractive to students.
- Facility -- Lacking of teaching - aids and lack of a printer.
- Finance -- we need financial support for publishing educational materials for students, printing a brochure and map for the zoo, training volunteers and teachers.

Submitted by Dcan Thi Thanh Tuyen, Zoo Educator

Participants' Presentation about their Zoo

The Zoo Education at Surabaya Zoo

Jl. Ngagel Jaya Selatan, I/4-Surabayaya
Surabaya 60241, Indonesia

The Surabaya Zoo was established on August 31, 1916 by the Government of Dutch, with total area is 15 hectares. We have 300 species of animals.

In Surabaya Zoo, we do not have a special person to do Educational Programmes, so it is managed by the staff of Research & Development Department in our zoo. Most of our visitors are school and university students. For school students our staff will give some information about the zoo, the animal species and their bahaviour, habitat, nutrition and also our health programmes. Sometimes we join with the school teachers to conduct drawing competitions, so they will know more about the animals.

For the university students, we join with some veterinary faculties in Indonesia to do the coassistance programmes and job training programmes.

The Zoo Education Programmes:

A. External Activities

I. Passive Activities

1. Animal label
2. Direction sign
3. Zoo map
4. Brochures
5. Animal prints (photos, post cards, etc)

II. Active Activities

1. Class room:
   a. Environment
   b. Indonesian Biodiversity
   c. Wildlife
   d. Endangered species in Indonesia
   e. Conservation
   f. Surabaya Zoo, etc.,

2. Out door:
   a. Event (Campaign environment, drawing competition, etc)
   b. Guiding - visitors, students.

B. Internal Activities

Human resources development

Submitted by Litasari "Surabaya Zoo"

Participants' Presentation about their Zoo

Education Programin Taman Safari Indonesia

Jl. Raya Puncak, No.601-Cisarua
Bogor, Java barat, Indonesia

Background

Taman Safari Indonesia (TSI) is one of the several zoos in Indonesia. Established in 1984 as a private zoo, it was opened to the public in 1986. It is located in Bogor region, west Java Indonesia, and has 200 ha. square. TSI has about 2500 animal and 300 species from birds, mammals, reptile and fishes. Average visitor who comes to TSI is about 1.2 - 1.4 million visitors per year.

Education program is one of the programs that is still in process at this moment. This is because we do not have a department for education which can do several things for educating person or a suitable person who can take responsibility for doing that task.

However, conducting an education program is our mission for educating people. We have made a program for introducing animals to the school students, bringing animals to the school, making a tour behind the scene, signage and also keeper-training (conducted by our institution or PKBSI / Indonesian Zoo Association)

Program for conservation

Conservation is the most important issue in our institution. Since we are commited to conservation we have to learn how to teach other people about it. When we work with this program, we have to know very clearly about the issues. Conservation should be taught by all persons who work with animals (direct or indirect) in our zoo. Since the first level is a keeper even their family have to know about conservation.

TSI have been successful for returning animals back to the wild. Bornean orangutan *(Pogo pygmaeus pygmaeus)* sent to Wanariset National Park in Puting. Kalimanton, Bali mynah *(Leucopstar roschildii)* have been sent into Bali Barat National Park and Sumatran rhino *(Dicerorhinus sumatrensis)* sent into Kambas National Park. These activities make good platforms for educating the public

Program in TSI

Zoo education should give visitors a better understanding of conservation. In spite of the fact that TSI does not have an education department, we still have several programs for educating people. We work together with this program carried out commonly under the public relation department. The animal hospital department also joins with this program.

People are usually curious with wild animals. Bearing this in mind, the management of TSI has requested several programs for introducing animals to the people, the program are:

1. We took animals to several schools like British International school in 1995 and talked about extinction of Sumatran tiger. We have visited the Japan international school in 1997 and talked about orangutan and also the Pelita Harapan International school in 1996 to relate the importance of animals in their habitat.

2. Behind the scenes tour
Behind the scenes tour is for showing people a part of the zoo that they never see when they come from the main entrance. We allow peoples to walk into guarantine facility, and to watch veterinarians when they are working, e.g., giving food to the animals directly in their own cage and how keepers hand-raise young animals.

3. Safari Trek
Safari Trek allows people to see behind the animals cages. There are 3 ways for walking that divided into 3 ways of treking. The easiest way, when people walk slowly, and the way of treking is very easy to walk, even for a kindergarten student. Then the middle way, for adults, and the most difficult that only people accustomed to very hard treking can only use.

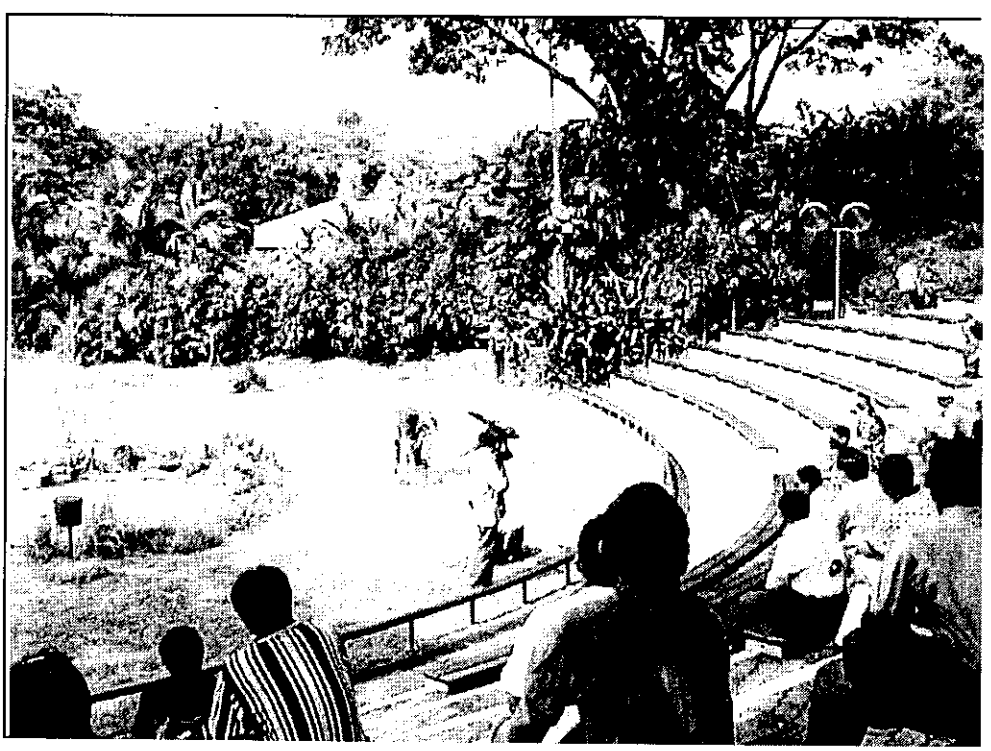
On this program, people can see, hear or even touch (if they are lucky) several animals around that area, as well as the plants that surrounded around that place. Established on 1998, the program is only open on the holidays, and collaboration with FOKSI (Forum Konser Vasi Satwa Indonesia/ Indonesia Wild Animal Conservation Forum) of which 80 of their members are journalists.

4. Safari Kem
Safari Kem is the newest program for introducing students (age 7-12 years old) to facts about their own habitat. Safari Kem (or Safari Camp) is only open during the school holiday.
During this program, we introduce children with animals that we bring into the venue. There are several modules scheduled during the program. The program is mainly to educate people about the importance of environment. The price for the program is Rp. 250.000,
(S$40) 1 for one dayone night or Rp. 450,000/-, (S$ 85) for two day per each people.

Submitted by Sharmy Prastiti, Animal Curator

Part IV

Themes - zoo, exhibit, programme



Bird show at Jurong Bird Park

Themes - zoo, exhibit, programme

Themes are extremely useful devices in education. Much of the advantage of having a variety of animal viewing facilities accessible to the workshop, and to having such good facilities was having examples of various themes.

Underwater World, the Singapore Night Safari and Jurong Bird Park, for example, are illustrations of entire zoos based on a single theme. Underwater World is based on a marine theme, Jurong Bird Park is based on an avian theme and Singapore Night Safari is based on the theme of nocturnal activity. This makes it possible to teach certain concepts and facts more easily and more effectively.

In zoos today it is very fashionable to use themes, but mostly for individual exhibits. This was not the case a few decades ago when zoos just collected animals and exhibited them as specimens. Continental sections in zoos were one of the first themed exhibits. Now, zoos all over the world theme sections of the zoo, or single exhibits, such as the Fragile Forest at Singapore zoo, as well as education programmes, such as Wildlife Trade.

Participants visited Jurong Bird Park and were given lectures in the auditorium, a tour of the educational facilities in the Park (the museum, the incubation room, etc. where the park has gone to a great deal of trouble to make it possible for the public to view and understand all aspects of zoo management). They saw a bird show and rode around the entire park on a special overhead tram which gave a commentary in five different languages.

In Singapore Zoo, participants spent a whole morning in a section of the zoo in which one theme was Tropical Crops and another the Fragile Forest. Fragile Forest started out as an ordinary invertebrate house and evolved into a dynamic ecological display of tropical biodiversity.

Cultural animal stories itself is a theme, the theme of animals in the cultural lore of a country, a religion or a society. Participants were asked in advance to bring a story from their country and be prepared to tell it or act it out. These stories have been reproduced as given by participants.

Programme themes were also discussed in a lecture on how to orient an education programme around a species or event.

Zoo Educator Day at Jurong Bird Park

Laboratory Room

General Introduction

A group of educators from various zoos in Southeast Asia visited the Breeding and Research Centre (BRC) in Jurong BirdPark. They were divided into 2 groups. One group started with an introduction of the laboratory and the other started with the incubation room and switched simultaneously afterwards, so that each group was able to see more of the place.

Incubation Room

Incubation Room

The group that went into the incubation room first was given a general introduction of the facilities that were available and the purpose of the room. They were informed that the room was used to incubate eggs that had been taken from nests due to various reasons i.e., rejection by parent birds. In order to artificially incubate these eggs, an incubator was used. There were various types of incubators in the room for different species needs and these were pointed out to the group.

The methodology of egg incubation was explained to them in general as well. They were also shown a candling machine which was used to examine the fertility and conditions of eggs at various stages.

Besides incubators, the group was shown different kinds of brooders as well. A particular brooder by the brand Brinsea had been set up before and a raptor chick placed inside. It was done to present to the group and explain to them why it was necessary to provide a chick an environment with a stable and

Jurong Bird Park had many clever devices for educating school children and older persons as well.

high temperature.
The chick was introduced as well, and they were also informed of the general diet of the particular chick and its background.

The group was also informed of the necessity to maintain a high standard of hygiene at the Breeding and Research Centre. The incubation room in particular had a distilled water machine installed to provide a pure source of water for the incubators and brooders to maintain their humidity level.

Laboratory
After one group had finished with the tour of the incubation room, they were then brought into the laboratory. They were given a general introduction as to the purpose of the room. Various AICU (Animal Intensive Care Unit) machines had been brought into the laboratory to present to the group various species of birds (parrots, macaws and birds of prey) that were currently being hand-reared. They were given a brief introduction to the different species of birds and their hand raising diet.

They were also explained the structure, function and usage of the egg, feather, beak, nest and leg collection that had been displayed around the laboratory. The collection of approximately 10 years boasted of a wide variety of them that had been meticulously and carefully cleared by the staff. Due to tight schedule of the groups, they only managed to spend approximately 20 minutes in BRC. A very short question and answer discussion took place after each session.

Submitted by Mee Mee, Assistant Curator, Breeding and Research Centre ,
<MeeMee@birdpark.com.sg>

Predator - Prey theme in the Bird Show. Nearly everything is easier to teach if it comes into a theme.

Example of Presentation at Jurong Bird Park

Why do Birds need plants?

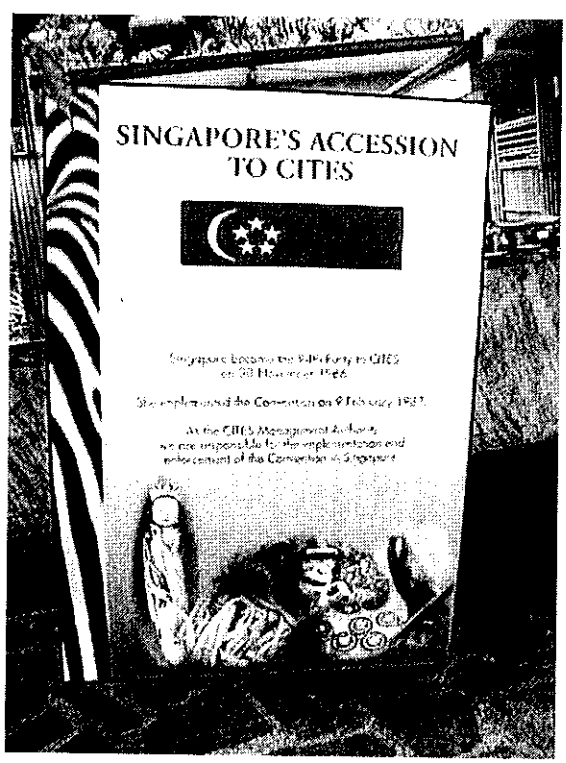
1. For food - On fruits, leaves, flowers, nectar, seeds and nuts, and indirectly, insects.
2. For nesting materials - grasses, twigs, branches, leaves
3. For building a home - holes in tree trunks.
4. For roosting
4. For protection - camouflage, protection on high trees and within thorny vegetation
5. For preening activities

Why plants need the birds?

1. For pest control - natural control on insect population.
2. For seed dispersal
3. For pollination
4. Providing a natural source of fertilizers

In the programme, we also broached on the concept of Carnivores, Omnivores and Herbivores. Scientific terms linked to birds' activities such as foraging, browsing, nesting, roosting, preening are being used and explained. The intent or purpose of this programme is to enlighten the audience on the critical interdependency between the two elements in nature and thus all the more we need to support the true meaning of conservation for sustainability.

Submitted by Tay Kwang Liang, Jurong BirdPark, <ktay@birdpark.com.sg>



Jurong Bird Park had an exhibition with themed posters on CITES, Endangered Species, Species at Risk, etc.

Themed Exhibit -- the Fragile Forest

The Fragile Forest began as an ordinary invertebrate house but in the 3 years of planning, evolved into a dynamic ecological display of tropical biodiversity.

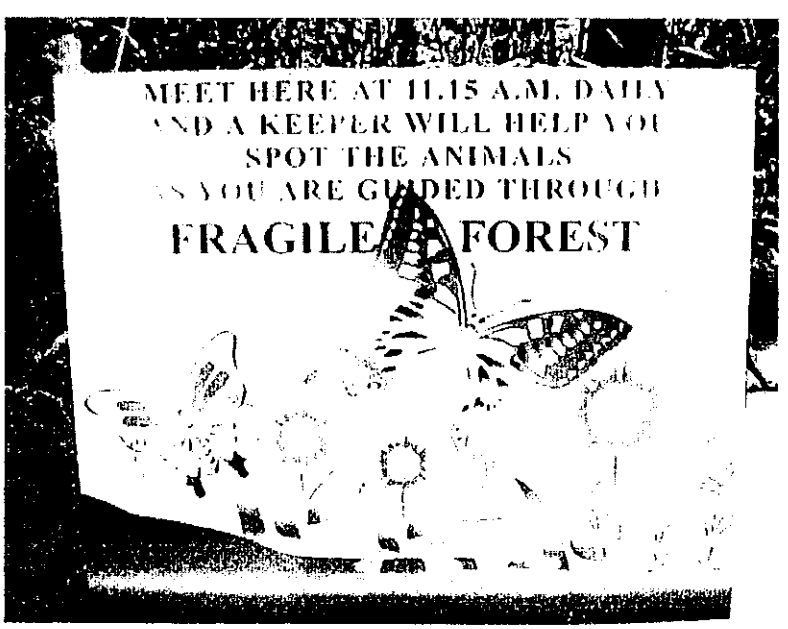
Fragile Forest is a themed exhibit which conveys much information about the beauty and richness of a tropical forest. Almost every step conveys a message and a lesson. Physically, the Fragile Forest exhibit is placed nearby the Tropical Crops trail so teachers or other educators with a group of children can give them an effective overview of biodiversity including the familiar vegetables borrowed from the forest as well as more exotic ones.

Participants enjoyed the educational devices such as the display book (right) of more detailed information about the butterflies and other invertebrates in the Fragile Forest.

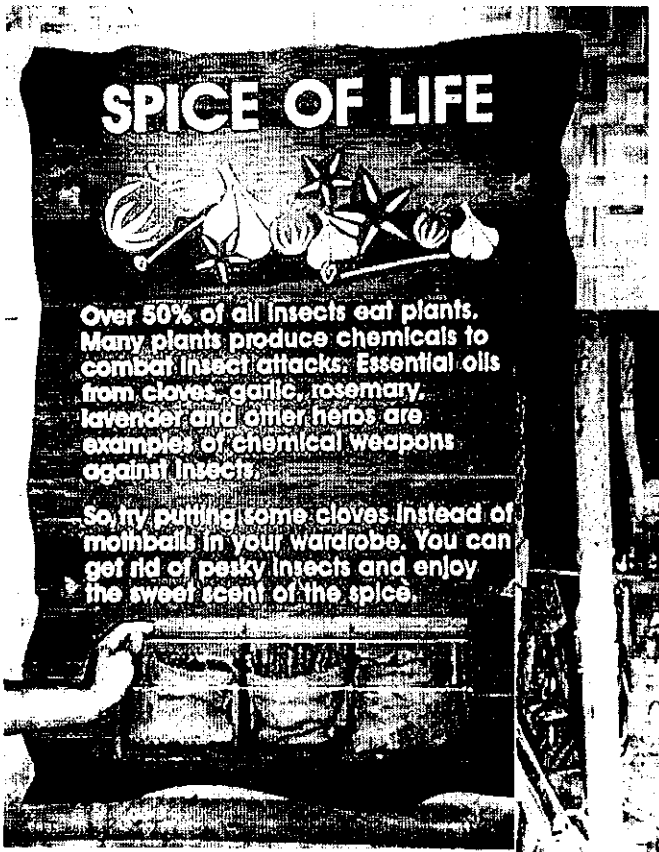
Fragile Forest is constructed on many different levels which gives visitors a sense of the diversity of the forest as well as to hide visitors from one another. Participants particularly enjoyed the bridge and the platform where birds and small mammals approached them close up and personal without fear.

Participants delighted in the various educational gimmicks in the Fragile Forest, such as a fallen log which had tiny exhibits of beetles, grubs, frogs, etc. under pieces of bark which could be lifted to show a small terrarium.

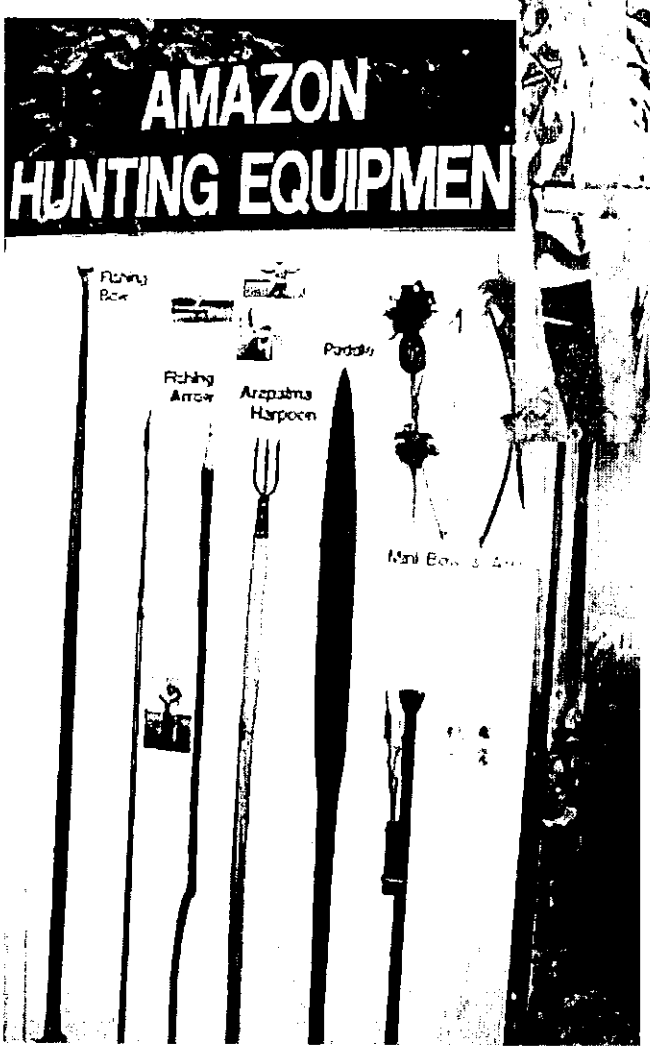
The sounds of the forest are well illustrated in the exhibit as is the humidity and sultriness of a forest walk. There is so much to see on the Fragile Forest trail -- from a myraid of butterflies to the genuine (although not fatal) competition between some animals for food, such as the droll ruffed lemur who stole fruit meant for other animals. Every morning at 11:15 am a keeper is available to help visitors and school groups find the many animals which are not so easy to spot.



The Fragile Forest trail ends with a mangrove forest where visitors can see animals underwater along with the roots of the mangrove, followed by a sort of education centre where there are a large number and variety of graphics which convey important principles associated with biodiversity. Important facts about products as well as a focus on traditional peoples reinforce the sights and sounds of the Fragile Forest.



Participants found much to inspire them in this diverse and beautiful exhibit. Much care was taken with the signage in the Fragile Forest, using several different styles and devices to draw attention to the information conveyed and also to make the signage "match" the exhibit.



The Asmat, a tribe of people of the rainforest itself forms a theme within the theme of the rainforest.

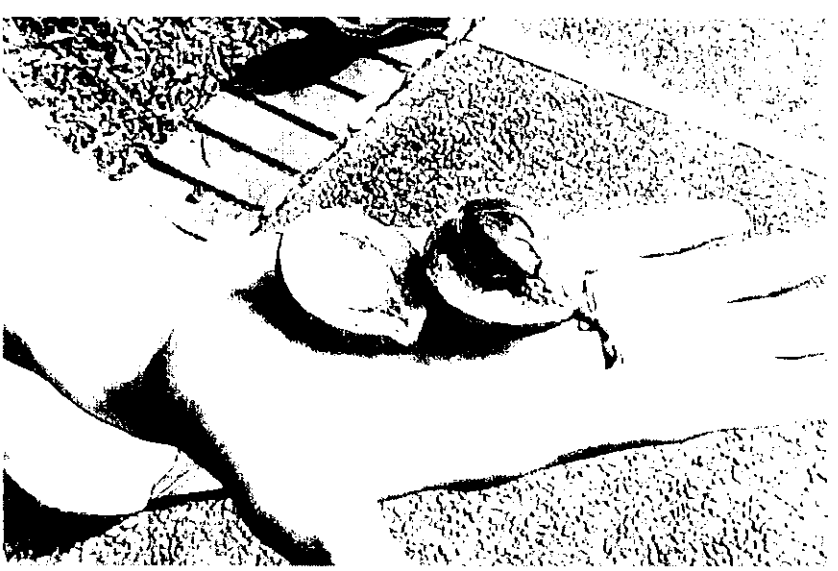
Tropical Crops

The Tropical Crops trail consists of a living pond which provides a focal point for teaching students about the diversity of pond life.

Participants had the opportunity to watch an interpreter work with a class of students who had come to the zoo on a field visit.

A large variety of crops which grow in the tropics have been planted along the trail. Some of these are so familiar to us that we don't even think about where they come from, and how easy it would be to lose them.

Visitors can see the actual living crops growing and, with the help of an interpretor, examine some of the products as illustrated below.



This exhibit provided much food for thought as almost any educator with cooperation from his zoo could create a module such as this in their facility.

Landscaping - examples of material

There was no time for a specific module on landscaping but it was arranged to give participants some handouts to help them integrate the first hand information from the many excellent animal enclosures they saw on field trips.

Here are some examples of the handouts which are from a brief presentation on vegetation types. Attractive and appropriate vegetation is crucial to implementing effective thematic enclosures.

Characteristic features of various Vegetation Types

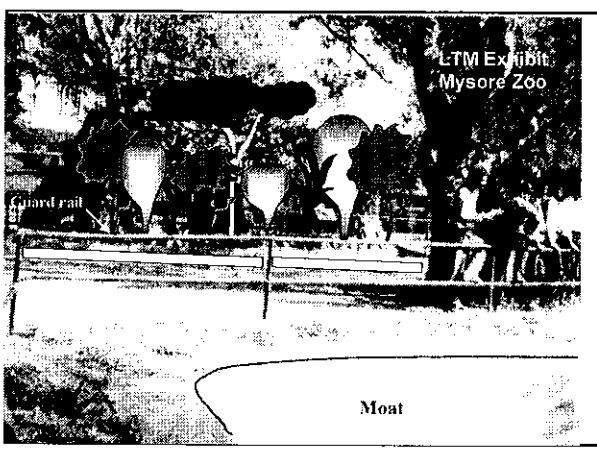
Coniferous forest:	Needle-leafed, tall branchless trees
Savannah:	Scattered thorny trees with spread canopies
Rainforest:	Multi-storied, evergreen, broad leafed trees
Shola forest:	Stunted, low branching, small leafed trees
Terai grassland:	Tall wet grassland
Thorn forest:	Clumps of scattered thorny bushes
Thar desert:	Sandy terrain with sparse vegetation

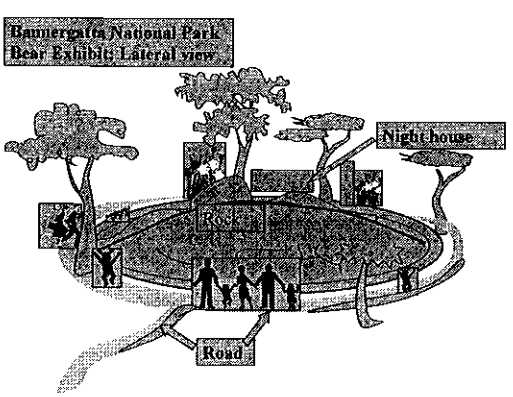
AN IDEAL PLANT FOR THE ZOO

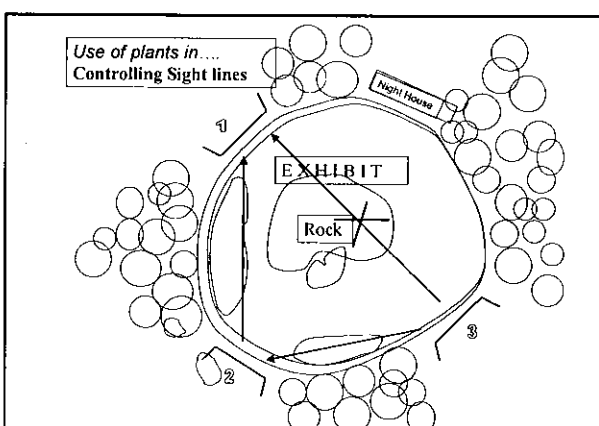
Fast growing
Non-palatable, Non-toxic
Look like forest plants (uncommon)
Hardiness (less water dependent)
Screening capabilities (bushy)
Shading capability (canopy density, spread)
Disease resistance (pests, fungal)

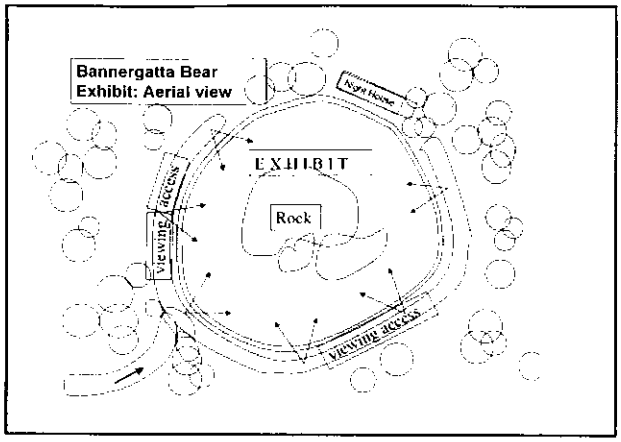
Other features of rainforest exhibits

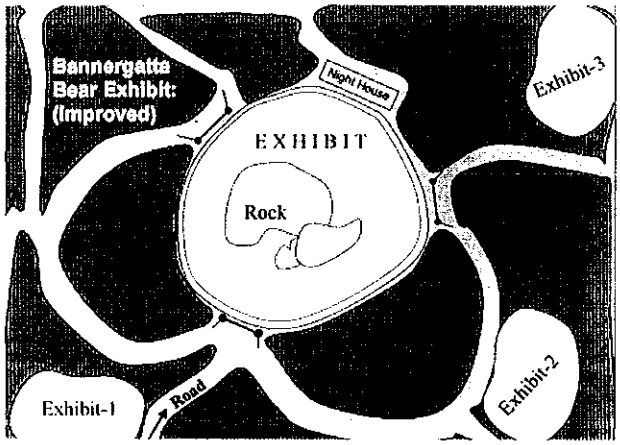
Trees of varying size classes
Lot of understory (particularly emergents)
Good proportion of monocots (canes, palms etc.)
Multi-story (at least 4 layers)
Total absence of grass (including Bamboo)
Plenty of climbers
Plenty of leaf litter (humus)
Epiphytes and ferns

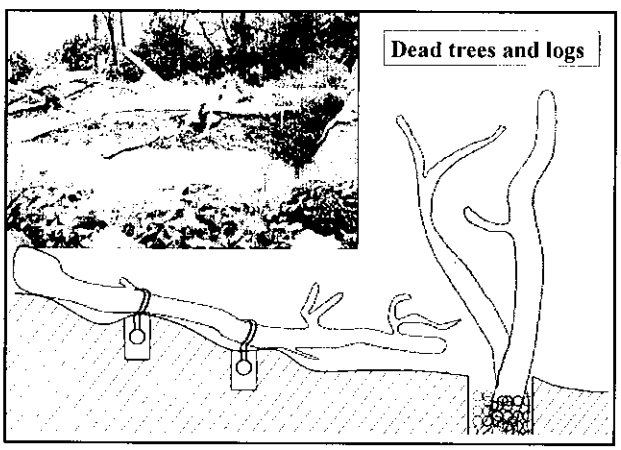


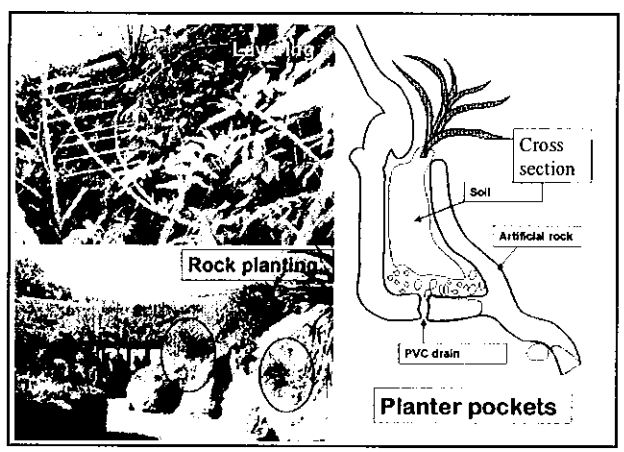





Bannergatta Bear
Exhibit: Aerial view
Night House
EXHIBIT
Rock
Viewing access
Viewing access


Bannergatta
Bear Exhibit:
(Improved)
Night House
Exhibit-3
EXHIBIT
Rock
Exhibit-2
Exhibit-1
Road


Dead trees and logs


Rock planting
Cross
section
Soil
Artificial rock
PVC drain
Planter pockets

Programme Theme :
Cultural Animal Stories Theme

Every country and culture has folk stories about their local animals, both domestic and wild. Normally these stories have some kid of moral. These stories are a good teaching device, both by telling the stories that have come down through the ages and also by making up new ones to give conservation messages.

An exercise was conducted that every country had to tell a cultural animal story. Many countries elected to prepare a drama or skit. Some of the stories were inconsistent with the action of the drama but a very good time was had by all ! This exercise works very well with children of all ages.

Kit Sun, Singapore Zoo Course Coordinator,
explains the evening's programme to participants.

White and other wonderful elephants
Dr. Chatri, Thailand

This story is about the Elephant. You know African elephants have big ears, but did you know that their forehead has one lope only, or that box male and female have tusks ? Asian elephants are completely different with small ears, a two-loped forehead and tusks only for the male animal.

In my country we used elephants in the wars of 1750, when King Narsuan of Thailand conducted a "great elephant war" with the King of Burma. King Narasuan won and got freedom from Burma. It was because of his skill with the elephants.

Now, elephants have had to change their job. Years ago, there were good forests and elephants were used to work the forests, pushing logs and hauling timber. When the forest closed about a

decade ago, elephants were left with no work. Elephant mahouts are resourceful however. They began using elephants to show to tourists, for taxi, and for shows. There are a few thousand elephants in the wild and in captivity.

The white elephant is a mythical marvellous figure in Thailand. The colour of its skin, eyes, and tongue is different from normal elephants. A genuine white elephant is a royal elephant. Experts can tell if the elephant is really a white elephant and if so, it will automatically revert to the King.

In Thailand now we have ten white elephants belonging to the palace. One stays at Bangkok Palace and nine stay at Llampang and Sakarmakoru Province.

How the Sun Bear lost its tail
Quennie — Penang Butterfly farm

Once upon a time, a thin buffalo was accosted by a tiger, who threatened to eat him. However, the buffalo managed to get the tiger to agree to wait for seven days; by then, the buffalo promised, he would be fatter. On the seventh day, the buffalo met a crippled monkey who agreed to help him, and hopped on the buffalo's back. When the tiger appeared, the monkey munched on two eggplants, proclaiming loudly how good the tiger's head tasted. This frightened the tiger, who ran away and sought help from a bear. Both animals were afraid the other would run away, so they tied their tails together. But they were so frightened by the sight of the monkey still eating the "Tiger's head" that they both ran away, forgetting their tails were tied together. The bear's tail broke off, and never again did the sun bear have a tail.

Ang Pagong and Matsing (The Turtle and the Monkey)
Philippine Eagle Foundation

Angelito Cereno from Philippine Eagle Foundation plays Matsing

One day a big flood came to the island of the Philippines. While Pagong and Matsing were walking along the river bank, Pagong saw a banana plant washed away by the flood. Pagong told Matsing, "we will plant this for future food". Matsing said "Yes, but we will divide it and my section is the upper part of the plant". Pagong got the lower part and both planted each share.

After days, week and months have passed, the upper part of the banana which Matsing planted died while Pagong's plant grew and bore fruit. One day while Pagong was out hunting, Matsing stole the banana fruit. While Matsing was eating at the top of the banana, Pagong arrived and was so angry at what he saw. Pagong wrapped the base of the plant with thorny things so that Matsing could not come down. Unfortunately, Matsing was able to jump and he looked for Pagong to take revenge. Also when he found Pagong, he said "I will break you into pieces". Pagong replied "go ahead so that once you broke me, I will become many and will kill you". Matsing thought again and he said "Maybe I will throw you at the lake" and Pagong said "Oh no! Please don't do that to me, I will die." And Matsing threw Pagong in to the water and Pagong lives there happily ever after.

Elephant Song from Thailand
Attapam Srihasram, K.K.O.Z., Thailand
This is a song for children in Thailand so they can know about the Elephant from this story.

"Elephant Elephant Elephant
You all know about it
Elephant is a bigger animal
Long nose called it Trunk
Under mouth have teeth called Tusks
It have ears, have eyes and long tail

The Chicken Cursed
Philippine Eagle Foundation
One day the Brahmini kite gave his sweet heart chicken an engagement ring. However, after few months the chicken lost it. The kite was so upset and got mad and he said to the chicken "I will curse you and I will eat your offspring until you will find the ring give it back to me". That is why until now the chicken continue to scratch continuously in her food hoping she could find the ring and end the curse.

Sangkuriang – A drama
By the Indonesians

Cast
Eudang Budi Utami as Dayang Sumbi
Martha Amnan as Sangkuriang
Mashana as Tumang, the dog
Litasari as Taxi driver and tree at the Jungle
Yanni hispifaningsih as Step mother of Dayang Sumbi
Sharmy Prastiti as Naratok

All Indonesian participants managed to find a role in this drama !

Short story

This is the myth of Indonesia, especially in one ethnic palace at west Java. Sundanese. Sangkuriang is a legendary name of a man who came from that palace. His father is actually a dog while his mother is the daughter of a King in west Java. She is chased away by her evil stepmother because her mother does not have self-confidence. Her name is Dayang Sumbi. She lives in jungle after that time, and being accompanied by Tumang, her dog.

One day when she is sewing, her thread falls down. She promises that if someone will take out the falling thread, they will become related to her. If the person to take the threat is a woman, she will become her sister, but if a men, he will become her husband. Suddenly Tumang heard her promise and he only took the fallen thread and became her husband. They had a son, named Sangkuriang.

Until one day, Sangkuriang had believed that his father is Tumang, after he coincidentally killed his father. Sangkuriang was chased away by his mother and he stayed in the jungle afterward. Until one day, he met Dayang Sumbi and they loved each other. When Dayang Sumbi was searching the lice on Sangkuriang's head she found a tear on Sangkuriang's head. Dayang Sumbi believed that she was his mother, but of course he denied it. Dayang Sumbi made a request when she saw that Sangkuriang never believed in her words. He had to make a ship in only one night and because of his magic powers, he could make the ship even in half a night.

Dayang Sumbi was so surprised and she even tried to stopped Sangkuriang's effort. She made a sound effect, lighting a torch and making many activities as if the time is almost up. Sangkuriang was so angry at that time that he turned the ship quite upside down. This ship become a mountain and was called the "Tanghuban perahu" mountain.

Sang Kancil and the Crocodiles
Malaysia
In Malay Folklore, Sang Kancil, the tiny mouse deer is very cunning fellow who often outwits the bigger and more powerful forest animals. A typical story is that of Sang Kancil and the Crocodiles.

Sang Kancil, had spotted a rambutan tree bated with ripe fruit on the other side of the river. So he told the crocodiles he had been asked by the king to count the number of crocodiles in his river. The crocodiles believed this story and meekly lined up across the river. Counting as he hopped from one crocodile to another, Sang Kancil crossed the crocodile 'bridge' to feast on his favourite fruit.

How the Tapir became a vegetarian
Taiping Zoo
Once upon a time the Tapir was a handsome fellow with a glossy, black hide and a horn on the top of his head. He is also strong as a Tiger but he was vain and conceited. Furthermore he refused to mix with the smaller weaker animals. He demanded food and entertainment from all the animals he visited.

Once his tyrannical ways angered a poor group of rats and mice, who had barley enough only for food for themselves so for them, feeding such an enormous animal was just impossible. So the thief , a bamboo rat, decided to teach the Tapir a lesson. A Potent drink was made from a special herb, this soon put the Tapir to sleep and the Bamboo rat and his friends quickly get to work. They filed down Tapir's teeth so he could no longer eat meat. They cut off his horn so he could not fight an they painted his back with a permanent vegetable dye in order to brand him like a criminal.

Finally when the Tapir awoke, he was astonished to see what had happen to him and he ran into the forest to hide his disgrace. Ever since, the Tapir has been a reticent carnivore, preferring vegetarian. He also has the dramatic black and white body.

Laos — Two short stories
Saikham Bouathongthip

A peacock and blackbird
A long, long time ago, there was a peacock and blackbird lived together in a Jungle, both them were white and they wanted to have beautiful colors. Hence they came and discussed with each other, and they could reach an agreement in which they would color each other so that they would have beautiful colors.

It was the black bird's turn to color the peacock first, patiently and feather by feather and color-by-color. He painted the peacock so elaborately that by the time he finished, time was almost running out, as he had to go for lunch. His lunch would be the inner parts of a pig which some one was going to kill and if he did not go, the butcher would throw away the parts and they would be found by the other black bird. With not much time left the black bird jumped into a bowl full of black color, and then off he went for lunch.
Since then the white bird has become the black one and white peacock has become colorful like we have seen today.

A couple of sparrows.

A long time ago there was a monarch family in the city of Vientiane in Laos, the queen of which gave a birth to a baby girl. As the time went by, the baby became mature. She was the Princess of the family and of the people of Vientiane. She was also the most beautiful lady in the city and drew attention all men who saw her, but she refused to speak to any man who came to contact with her.

The king and queen feared that she wouldn't get a husband so the king asked his security guards to summon all men in the city to the palace. One by one the men came to the Princess and used all means to make her speak, but she refused to speak even a word to those men. The last man, who was poor, lived his life by ploughing the fields and growing paddy, came to her and spoke. " I didn't want to speak to any girl in my whole life because in my last life, my wife broke a promise and flew away when the bushfire broke out, leaving me and my three children, who died in the fire". The princess shouted "You!, it was you who left me and my three children died in the fire !" Hearing the Princess' voice the king was very happy and said "hooray"! The poor young man was officially accepted to be the king's son-in-law in the wedding held in the palace on that day.

In her last life, the princess was a sparrow. She married to a male sparrow and had three children. Her beloved husband broke the promise to protect her and three children from the bush fire. The mother and her children died in the fire. As the nest was burnt therefore, when she was reborn at this time she was frustrated, and refused to speak to any man who came to see her.

Rabbit Justice
Chea Sopheak Makara, Cambodia

For a long time ago Cambodia has had many stories related to animals, and now, I will tell you one called "Rabbit Justice".

One day, a farmer drove his oxen's cart from his house to the farm. During his drive along the road, he met a big crocodile who was very hungry. The crocodile had no power at all. He said to the farmer " Hello farmer, could you help me look for a large lake that has deep water. I will never forget your help." The crocodile repeated the request many times until the farmer agreed with him.

"How should I take you, if my ox cart is full, the farmer asked the crocodile. The crocodile replied "it depends on your help, farmer". So, the farmer decided to try and he tied him under the ox cart. Then he drives it to find the big lake with deep water. The farmer drives for a long time and a long way until he saw a big lake. This was that which the crocodile wanted, and so the farmer put him into the lake. Immediately, the crocodile came up from the water with very great hunger, thinking to eat the farmer. So the crocodile says to the farmer that "I will eat you, man, because, you put me under the oxen's cart and tied me and I nearly died."

The farmer is very afraid of him and he put up his hands to pray for the God and he says to the crocodile: "you have no witness to accuse me like that". "Why do you say that man?", the crocodile replied. "If you don't agree with me, you and I will wait here to look for 3 witnesses. If you get only two witness then you lose and I will eat you", the crocodile said.

The Cambodian participants dramatise "Rabbit Justice"

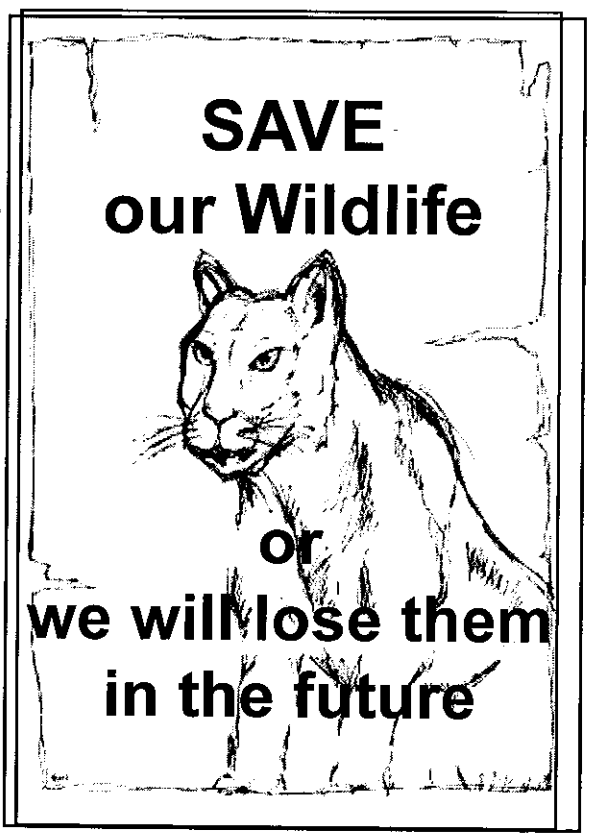
During their wait for the witnesses, the first of all to meet them, is a horse. So they decide to invite him to be the first witness. To be a just, the horse said that "man you must die, because you use me to transport your goods such a hard and long way". The man did not accept the horse's court, so he continued to wait for the second one. After a long time, the second witness came, and he is the elephant. At the end of the elephant's court, he said "you must die man, because you use me to do something hard, especially you used me to draw the timber from the forest". This time the man is very, very afraid, and he decided to look for the last one to help him. Soon the third witness came and said to the man and crocodile that "Hi, man and crocodile, what are you doing?", the Rabbit asked them. Then, the man replied and told the true story to the rabbit from the beginning to the end. During the rabbit's court, he asked the crocodile that, "Crocodile would you agree with me if I were to see the real situation by my eye?". Not thinking anymore, the crocodile replied "Yes, Court". So, the rabbit ordered the man do something that he had done before in order to have an easy decision about who is the winner. The man repeated the same situations from the beginning until they found the big lake. Rapidly the rabbit ordered the man "You must tie him, find a big weapon and hit him until he dies". At the end of the story, the farmer thanked very very deeply to the rabbit and went back home very safely.

Players

1. Farmer represent Cambodian people
2. Oxen represent the animal who help people to cultivate in the farms
3. Crocodile represents the savage people
4. Horse and elephant represent the witness
5. Rabbit represent the Loyal Justice

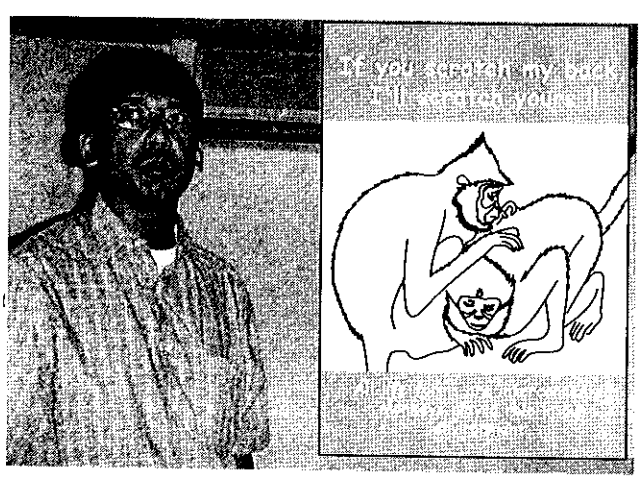
Part V

Designing Cage labels, Posters, Stickers



Each participant presented their label to the group and were evaluated by their tutors and peers.

Singapore Zoo Educator Course
Designing labels, brochures, posters, promotional material



The important subject area of signage and promotional material was covered by several lectures by resource persons on graphic designing and printing as well as writing and developing various materials used in education and promotion.

Before participants began designing their own labels, stickers, etc., some hints were given to help them think "outside the box" and use techniques such as rhyming, metaphor, drama, etc. to make their materials more appealing.

Participants were given drawing tools and paper and asked to go for it. They were asked to first design a cage label. It was suggested to go beyond the old style "zoology" label in which the standard material which can be found in any book dominates, and try to convey a message which would affect visitors' behaviour. These might have some conservation or welfare message.

Participants showed their label and explained what they were trying to achieve with it. Both participants and resource persons evaluated the labels.

Afterwards, participants were given a choice of designing a brochure, sticker or other promotional material.

Some selections of participants work are given in the following pages.

Afterwards, participants were treated to a visit to Bukit Timah Nature Reserve Nature trail where they treked around the reserve despite a vigourous tropical shower.

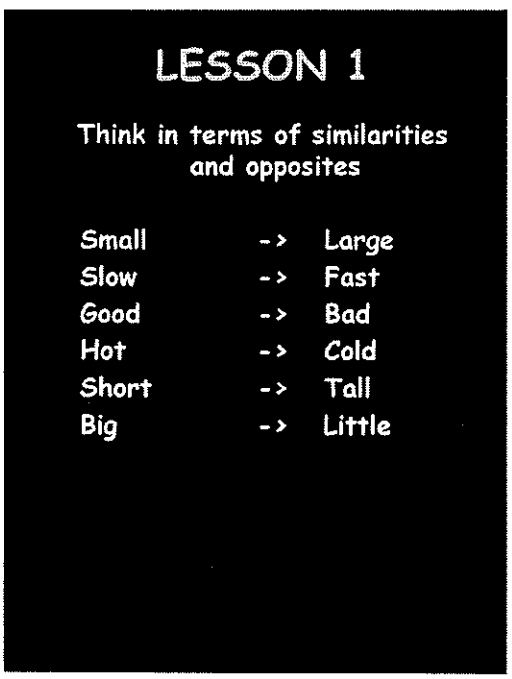
Participants heard presentations on design, tried their hand at designing a cage label or poster using the principles they learned in lectures and field visits and presented their results.

Educating Zoo Visitors ? Catch their Attention
Be Creative ... say something DIFFERENT
How to be Creative ... 10 simple lessons

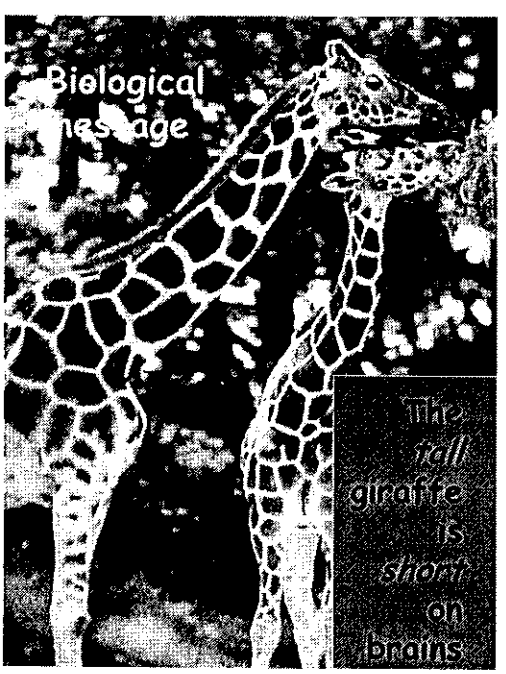
People think there is something ***"MAGIC"*** about being creative. But there isn't. Being creative is as easy as pie. Necessity is the Mother of Invention. Creativity is related to Innovation. Innovation happens when you need something.

What do you need ? What do you already have ? Do you need a sticker and a handout but have money only for one. Then make a sticker with a handout attached.

Here are some simple lessons to teach yourself to be creative with guaranteed results.



Biological message

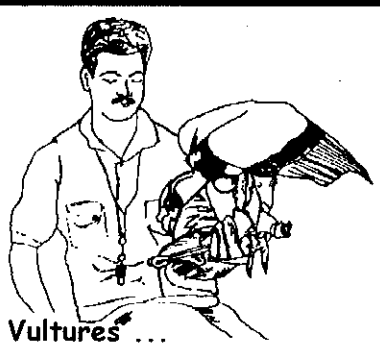


LESSON 2.
Use literary techniques

- Use drama, poetry and literary techniques, e.g. exaggeration, alliteration, rhyming, repetition, slang, humor, irony, puns.

Alliteration

Exaggeration / Irony



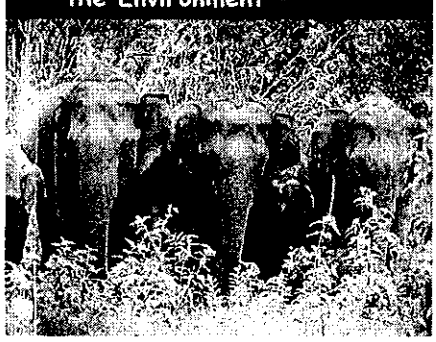
Vultures ...
They keep the world clean.

Imagine Life (or Death) without them!

Use Repetition of words, letters, sounds

Win Friends for Wildlife -

The Elephant is relevant to the Environment -



Use rhymes

BORN in the zoo
SAFE from poachers,
but
NOT from YOU !"

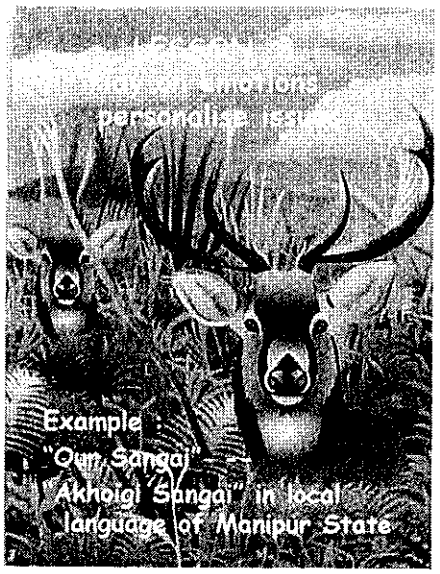
(Some visitors are destructive to our animals -- Please do not tease or feed)

Use alliteration and puns

Ex:
Alliteration : The "dearest" deer ...

Puns :

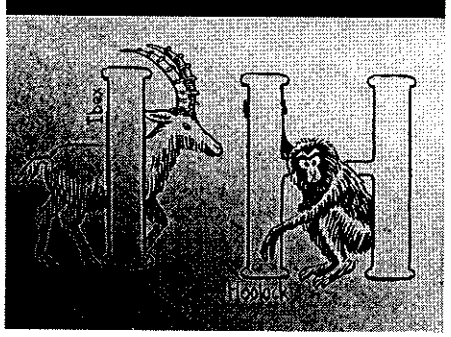
Polar bea[illegible]
can't [illegible]
much [illegible]



Lesson 3.
Play on emotions ...
personalise issues

LESSON 4.
Use time-tested concepts in a new way

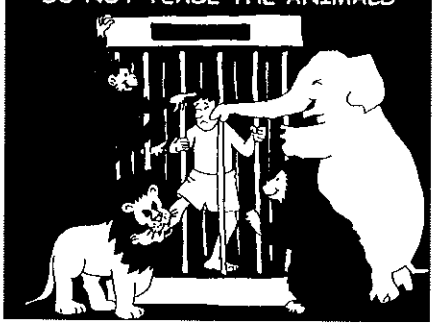
Example : ABC's of Animals



Time-tested ...universal concepts

Example : the Golden Rule
"Do unto others as you would have them do unto you ..."

PUT YOURSELF IN THEIR PLACE - DO NOT TEASE THE ANIMALS



LESSON 5. Use repetition with slight changes

Ex: *Lion-tailed macaque -- LTM*
endemic to . . .
indigenous to . . .
endangered in . . .
Western Ghats, South India

LESSON 6.
Be a copy cat.

Use familiar slogans from ads, political campaigns, etc. altering them to suit YOUR message.

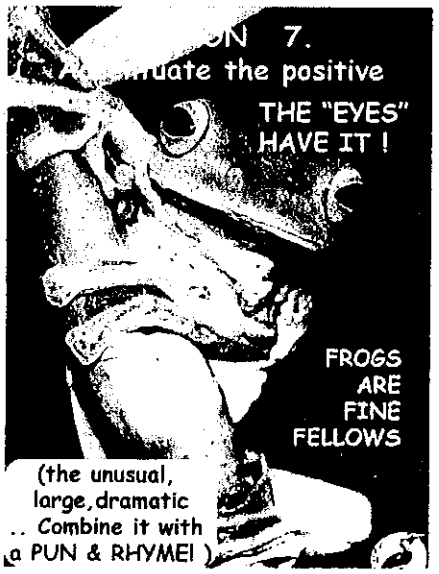
Example :
... the mark
of a man
the mark
of a lion . .

Example :
... the pepsie generation
... the wildlife generation

LESSON 7.
Accentuate the negative

Get attention by being rather frank ... then explain.

Phew ! What a smelly civet !
(But NOT to another civet ... the scent of some animals is useful to them in finding a mate, etc.)



LESSON 7
Accentuate the positive.
THE "EYES" HAVE IT.

LESSON 8.
PLAY UP THE BAD NEWS IN EASY-TO-REMEMBER SLOGANS AND DRAMA

EXTINCTION IS FOREVER

You and your children and their children will never see ...

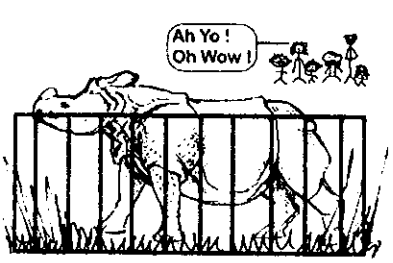
LESSON 9

PLAY UP THE GOOD NEWS
about zoos with catchy slogans

Zoos give wild animals with
NO CHANCE . . .
A LAST CHANCE

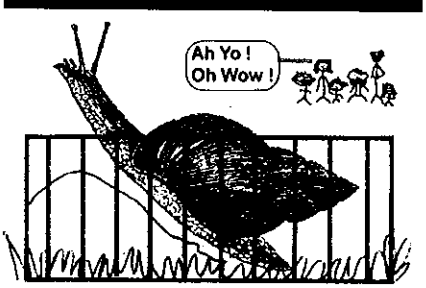
Lesson 10
Don't forget the small things.

- The only difference between a rhino . . .



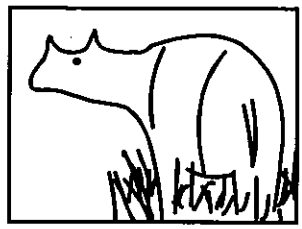
and a snail is its
size !

So size DOES matter !



Jawan Rhino

Rhinoceros sondaicus



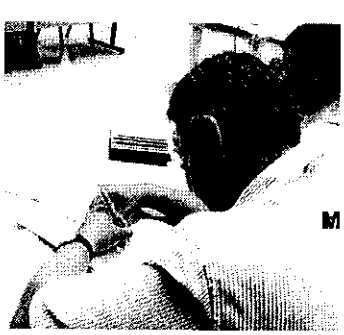
Introduction:
The Jawan Rhino is a sensitive species in the jungle and is especially vulnerable to damage done by humans. Once they could be seen at Sikkim, India, Myanmar, Indochina, Malaysia and Indonesia but now you can see it in Jawa and Indonesia only. It is a Critically Endangered species.

Habitat:
Jawan Rhino likes water and wetland. No wonder this animal likes to stay in the swamp near grasses and trees.

Distribution:
50-60 in Jawa and not more than 30 in Indonesia.

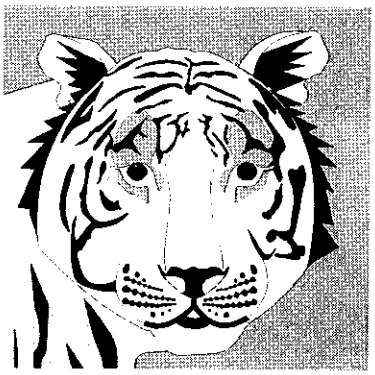
Diet
Grass and twigs

Save the Rhino
In the world there are 5 species of rhinoceros left in the wild: Black Rhino, White Rhino, Jawan Rhino, Indian Rhino, and Sumatran Rhino
They need protection and management.



**Mohd.Fuzi Bin Zulkifli,
Wildlife Assistant, Zoo
Melaka, Malaysia**

Share your hands to



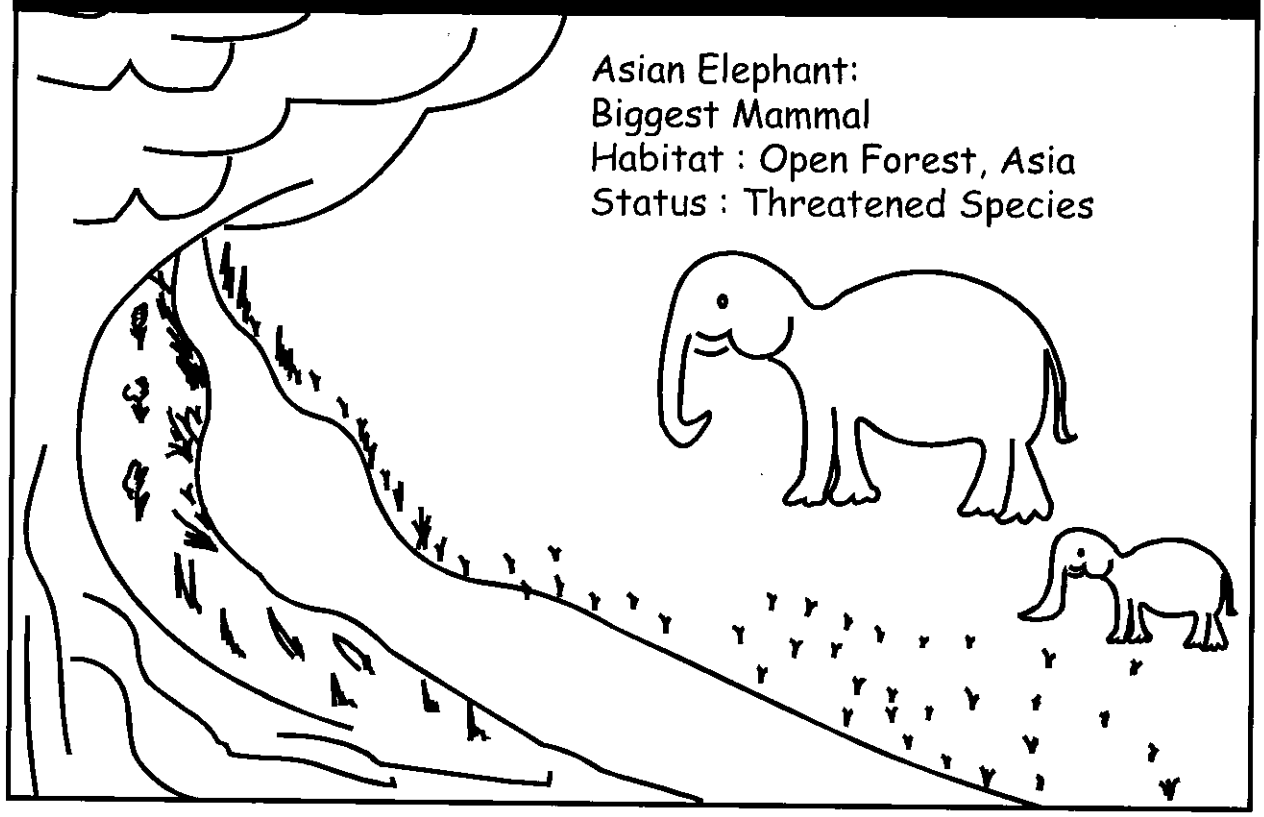
save our

last

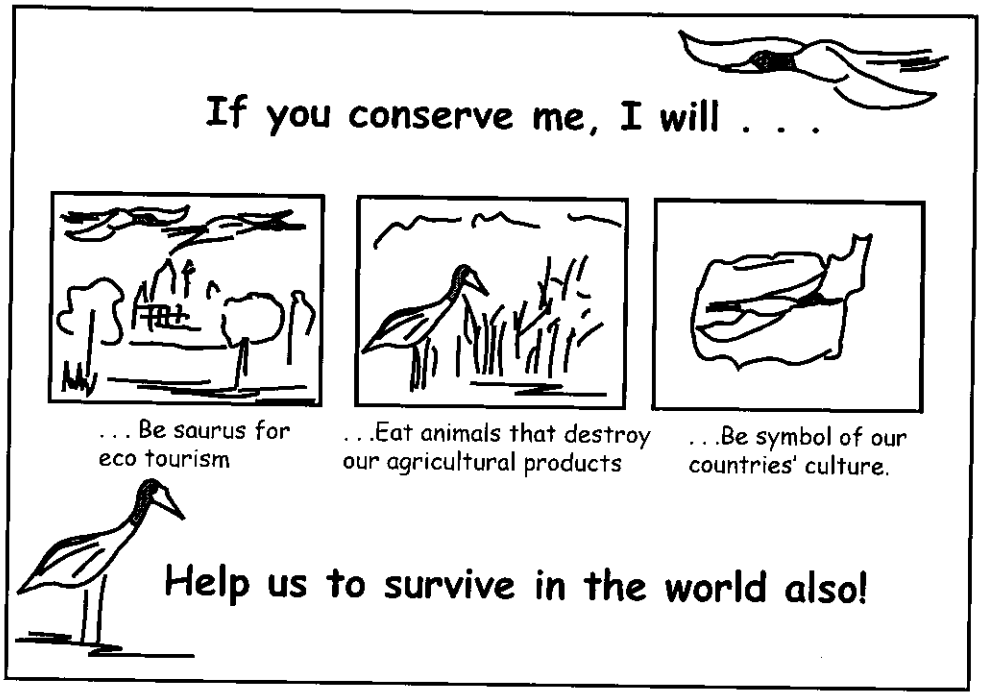
TIGER

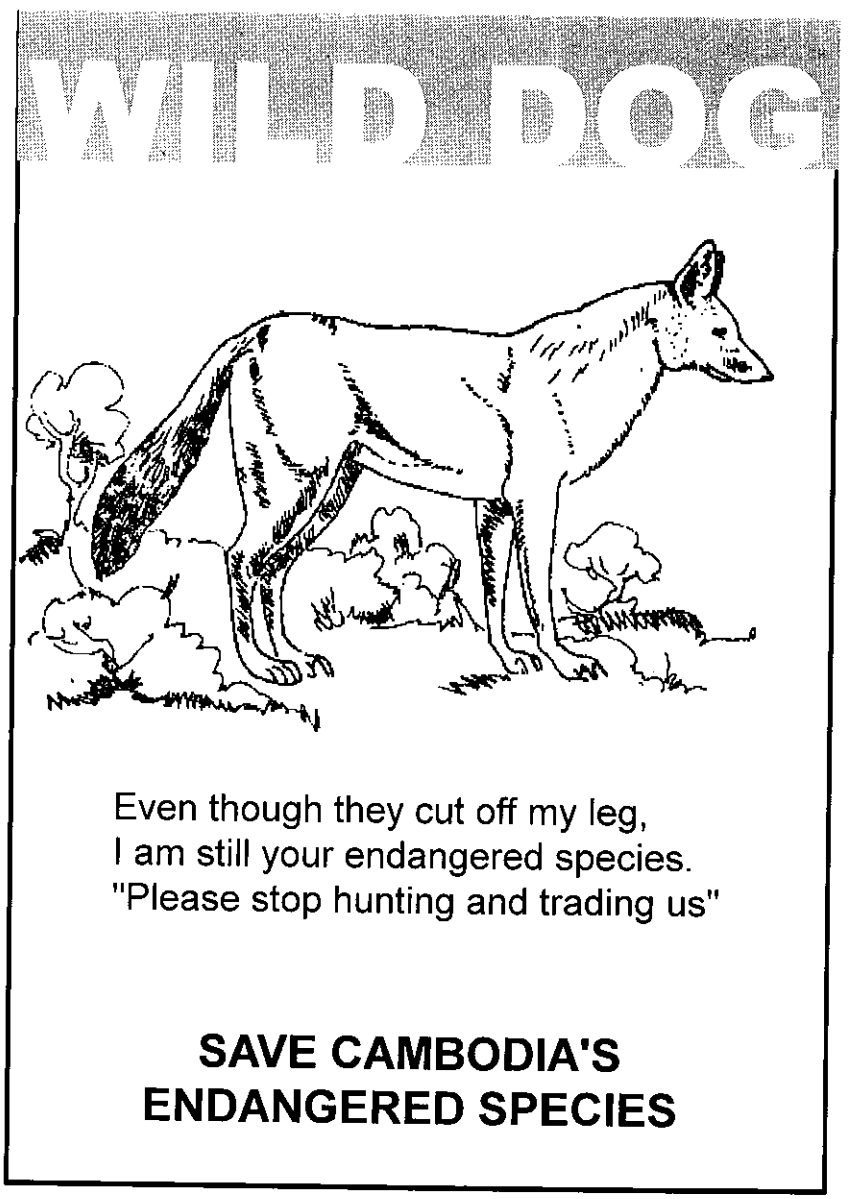
Mr Saikham Bouathongthip
Acting Office Chief, Ministry of Defence, Laos

LETS SAVE OUR ELEPHANT !



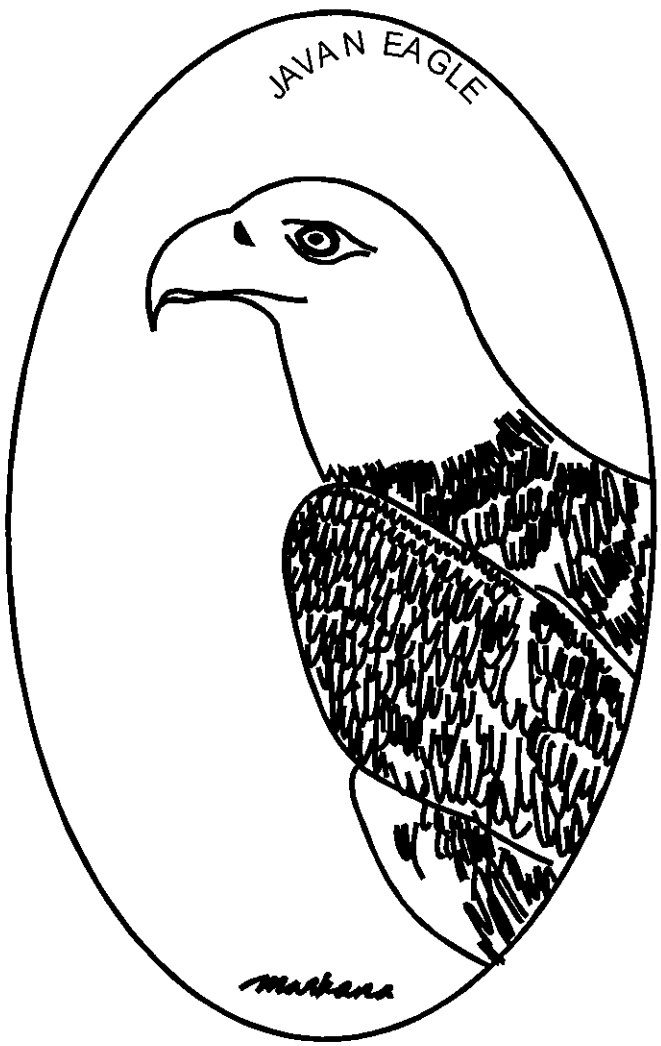
Mrs Phetsamon Soulivong
Technician
Ministry of Agriculture and Forestry,
Laos

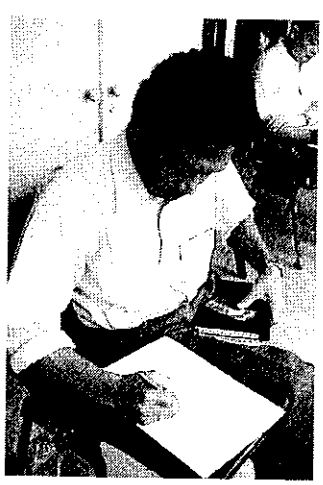




Mr Sun Hean, Dy. Director
Wildlife Protection Office,
Cambodia

Hunting & Trade

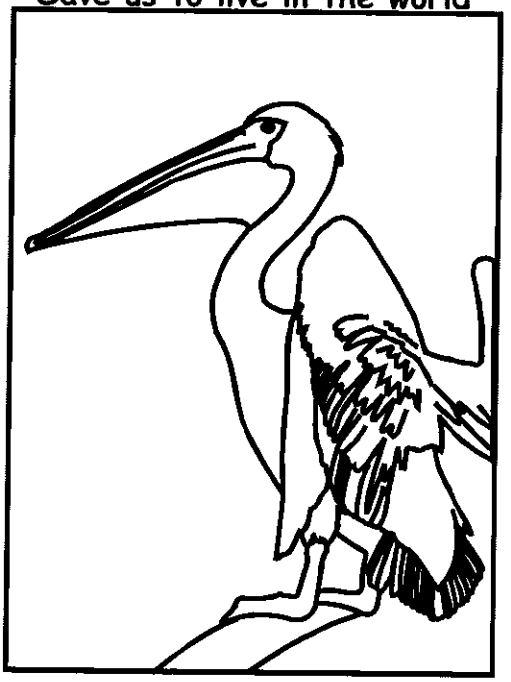




Mr. Maskana
Environment Department
Ragunan Zoological Park
Jakarta, Indonesia

Save Cambodian Water Birds

Save us to live in the world



From 1979 to 1990, Cambodia developed its agriculture sector very slowly especially the zoo, the national park and the conservation zone. But since 1993 up to November, Cambodia Agriculture is more developed and this development has been extended to the local people.

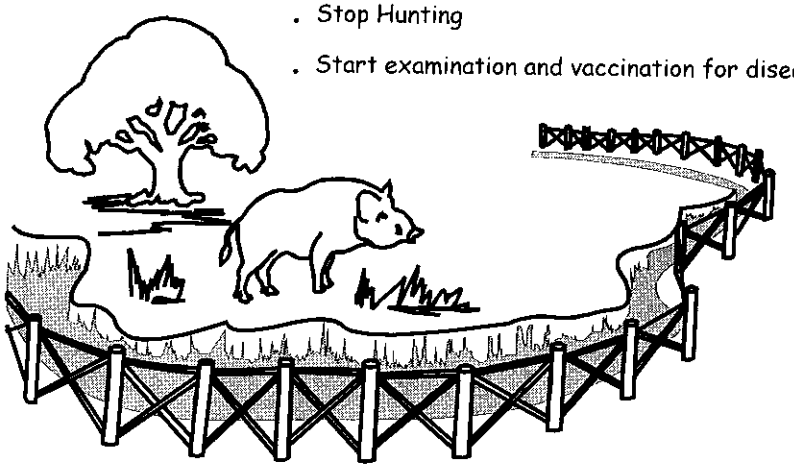
But water birds in Cambodia is still dangerous. So we want to save them as natural water birds and as our resources.

Mr Chea Sopheak Makara,
Official, Ministry of
Agriculture Forestry and
Fisheries,
Cambodia

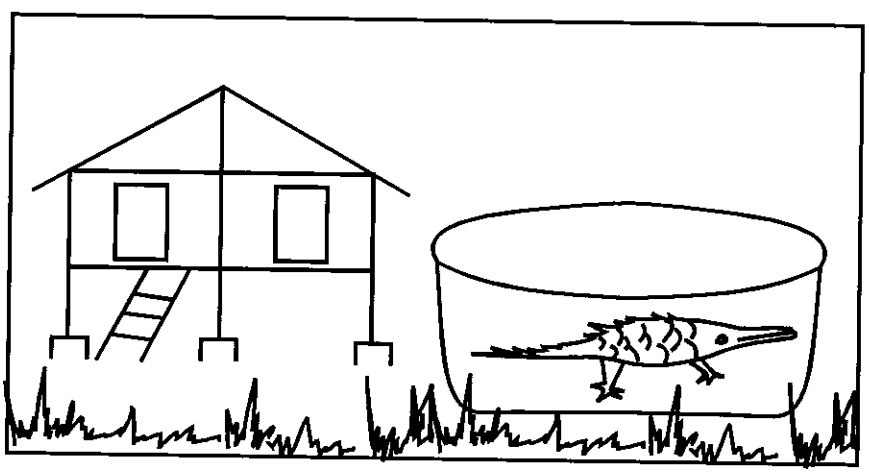
Protect Wild Pig in Cambodia

Wild pigs in our country are nearly finished

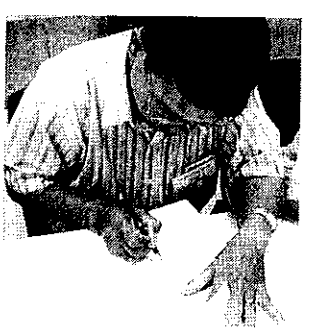
- Stop Hunting
- Start examination and vaccination for disease.



Wild Animals at home can be dangerous

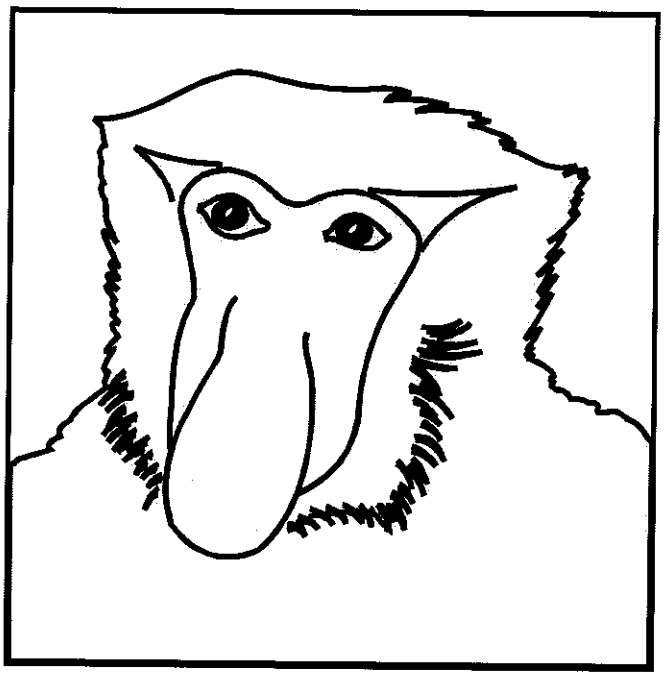


Do not raise crocodiles at home as it is a dangerous animal.



Mr Lim Pak,
Animal Health Officer
Department of Animal Health & Production,
Cambodia

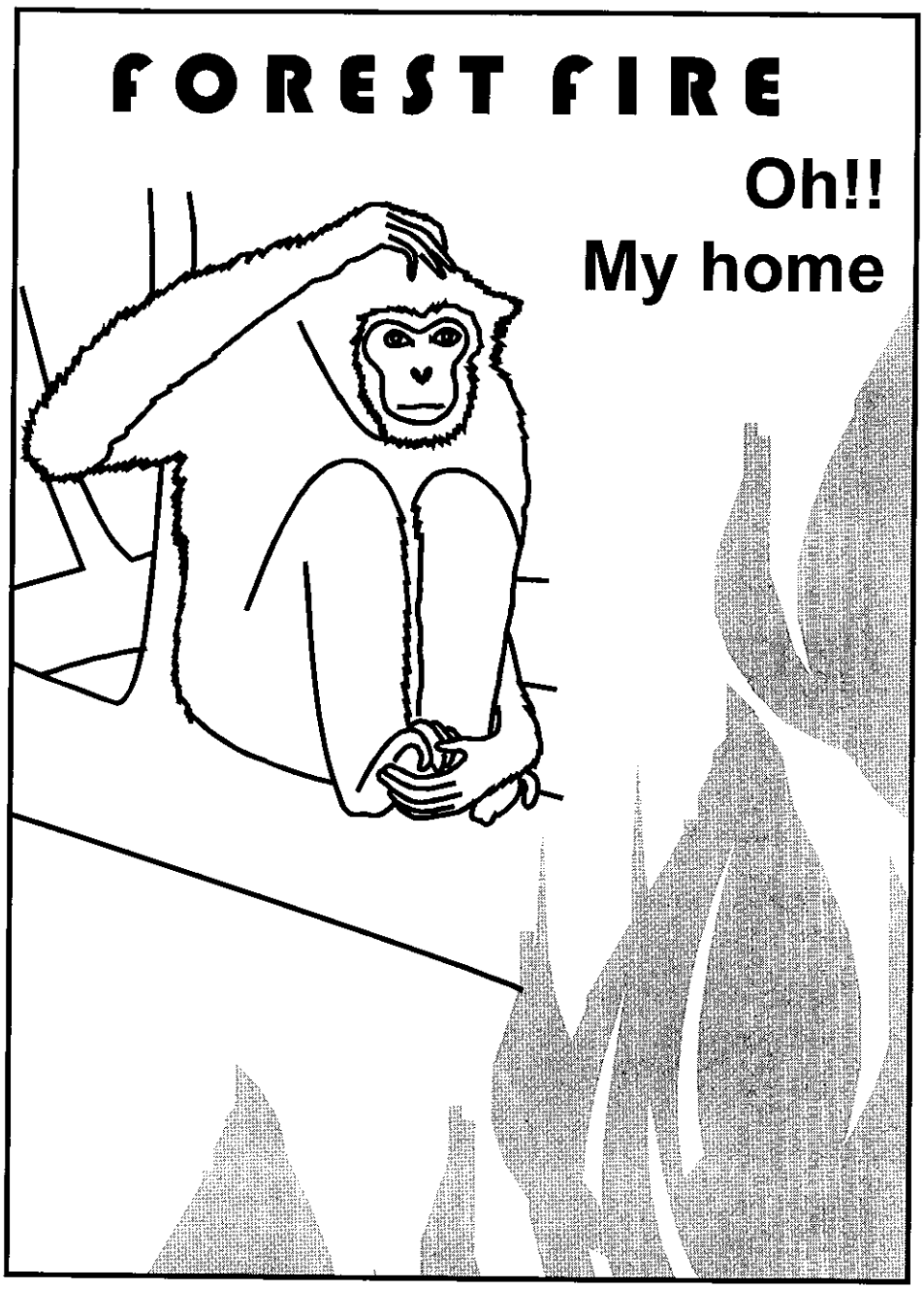
Please !
Save our Nature

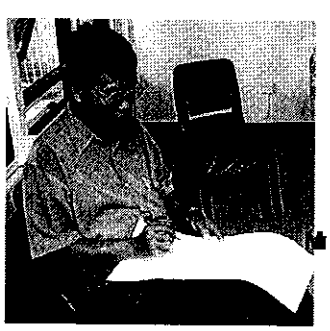


Proboscis Monkey
Nasalis larvatus

We want to live longer
but our species is endangered.
We need your help to save our family

Dr. Litasari, Veterinarian
Surabaya Zoo
Indonesia

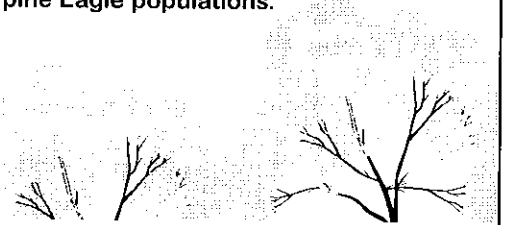




Marta Amnan, PKBSI
Education Division, Zoo
Association of Indonesia

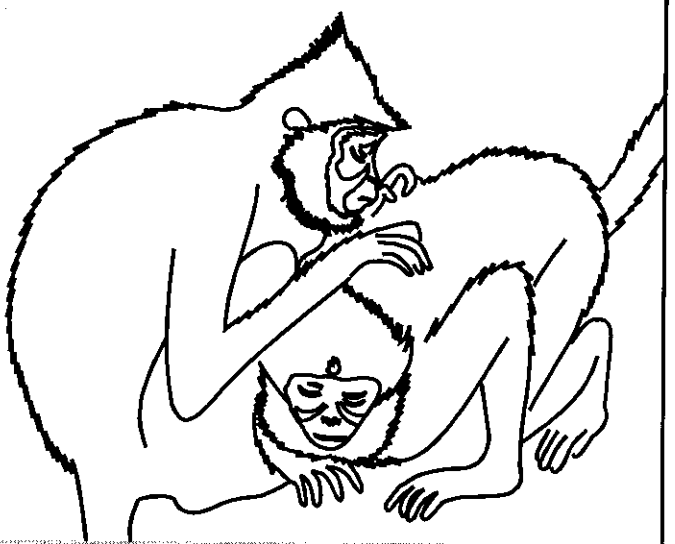
". . . Ibon mang may layang lumipad kulungin moat umiiyak..."
* "... Even a bird flying free... imprison it and it will cry..."

Deforestation and hunting has resulted in rapid decline of Philippine Eagle populations.



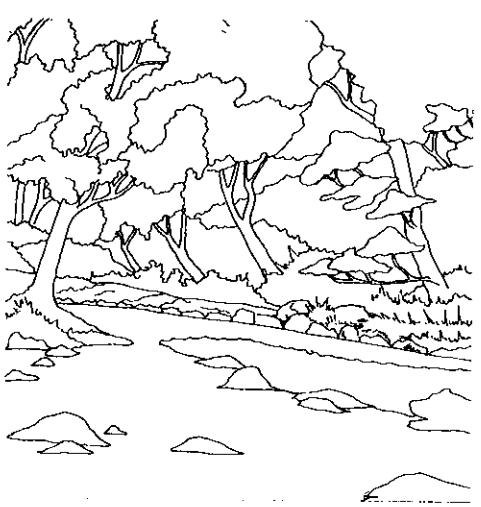
Captive breeding aims to augment losses in the wild and reintroduce our national bird back to its original range. Let us not allow any of our other species get to this point!

If you scratch my back,
I'll scratch yours !!



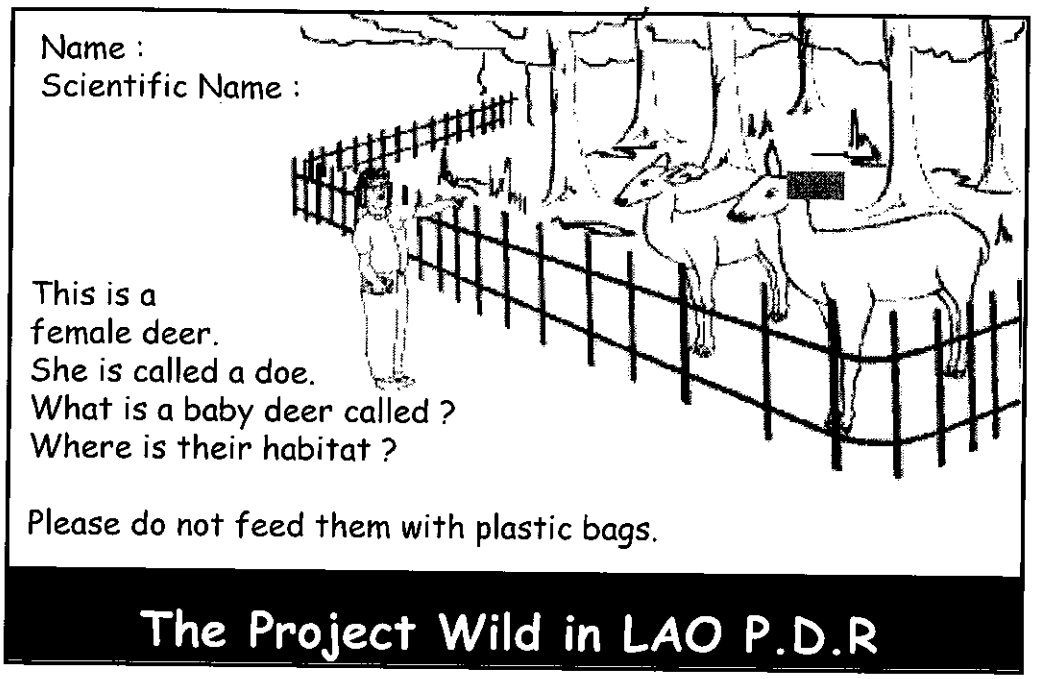
All life forms are interconnected.
Monkeys play a role in our environment.

Biodiversity in
Tropical Forest



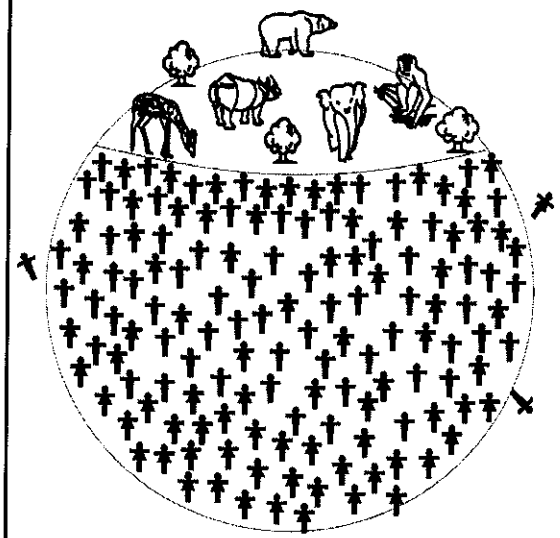
Save it, Study it, Use it

Dennis J.I. Salvador,
Executive Director,
Philippine Eagle
Foundation, Philippines

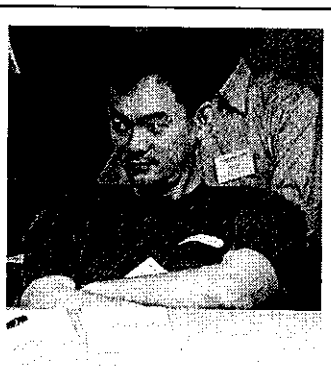


Sakpasueth Sixanone,
Veterinarian,
Vientiane Zoological
Gardens,
Laos

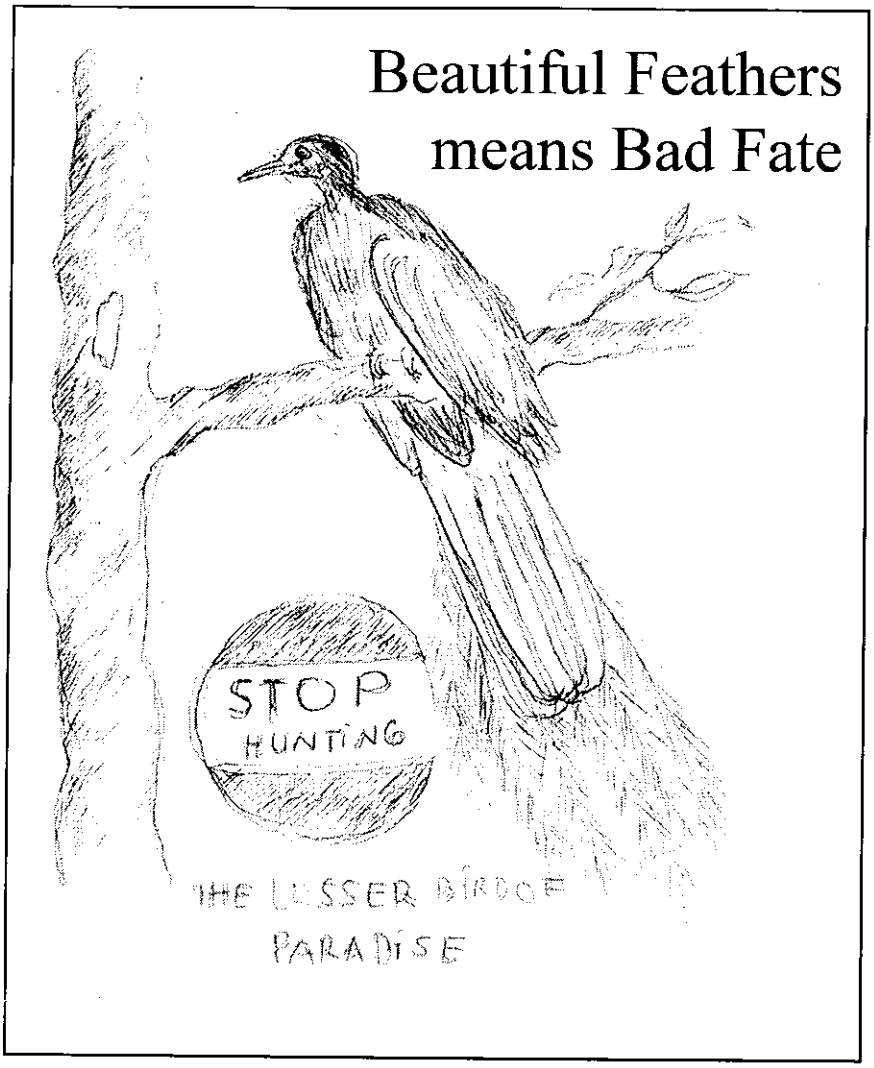
More Human Beings
Less other species



Less human beings
More other species



Dr. Chatri Khoohathapharak
Veterinarian
Chiangmai Zoo,
Thailand

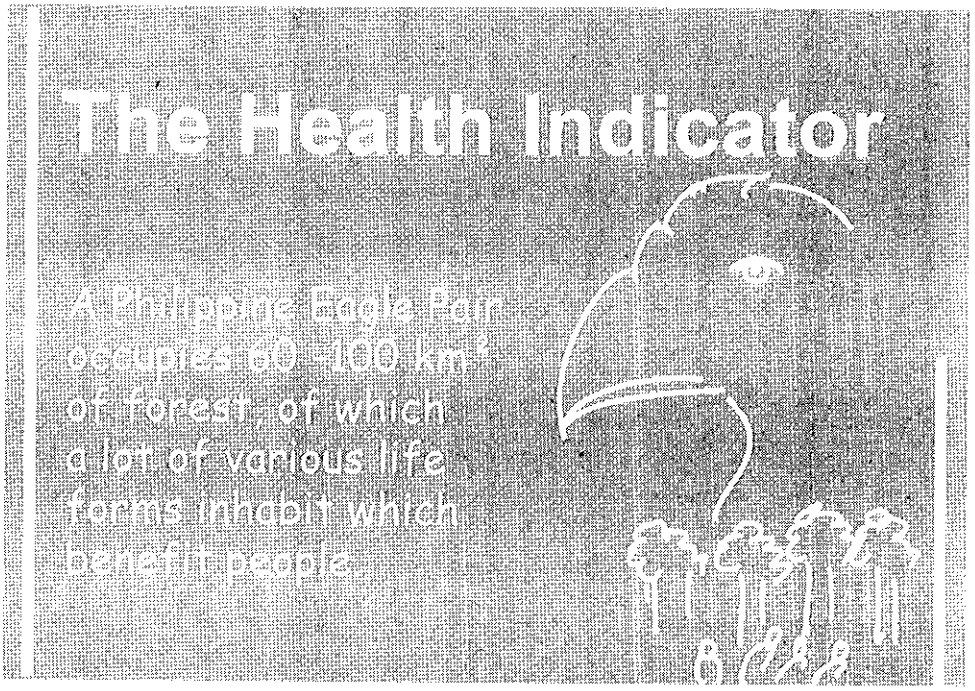


Miss Endang Budi Utami, Head of Division of General Affairs, Taman Mini
Indonesia Indah, Jakarta
Indonesia

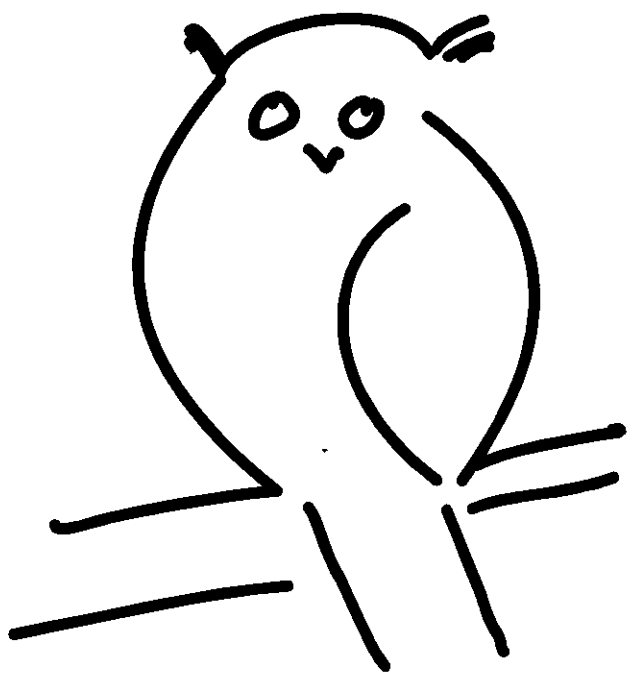
PLEASE DON'T BUY ME

My homeland is in the forest
Formerly I had a big family
but all are scattered because of hunters.
I miss my Mom!

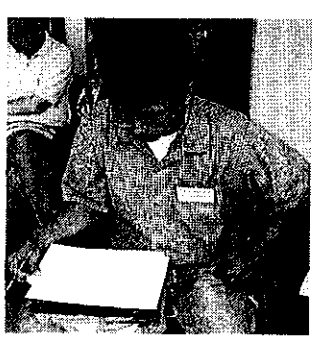
Doan Thi Thanh Tuyen,
Zoo Educator, Saigon Zoo
& Botanical Gardens,
Vietnam



The Queerest of them all



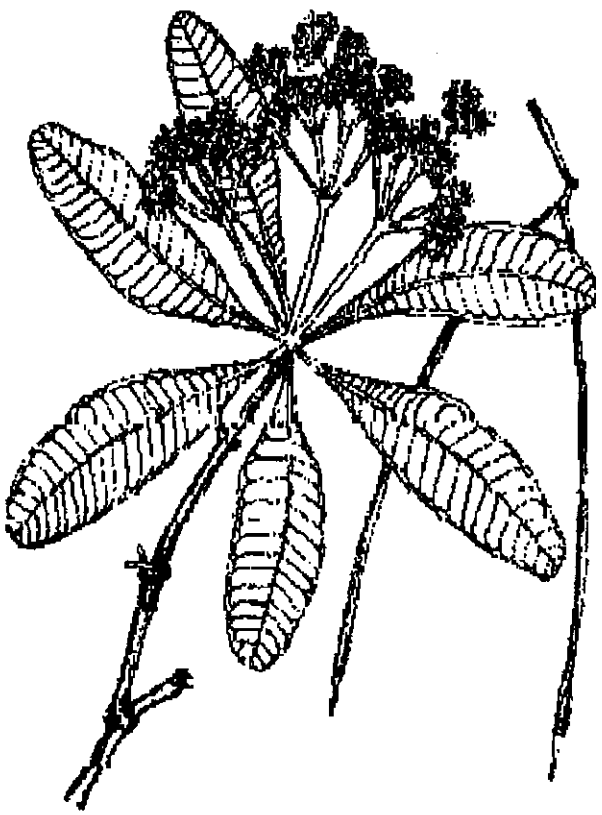
Owls are farmers friends
They eat farm rodents

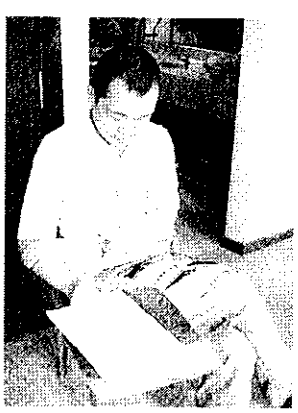


Mr Angelito A. Cereno,
Program Manager
Philippine Eagle
Foundation, Philippines

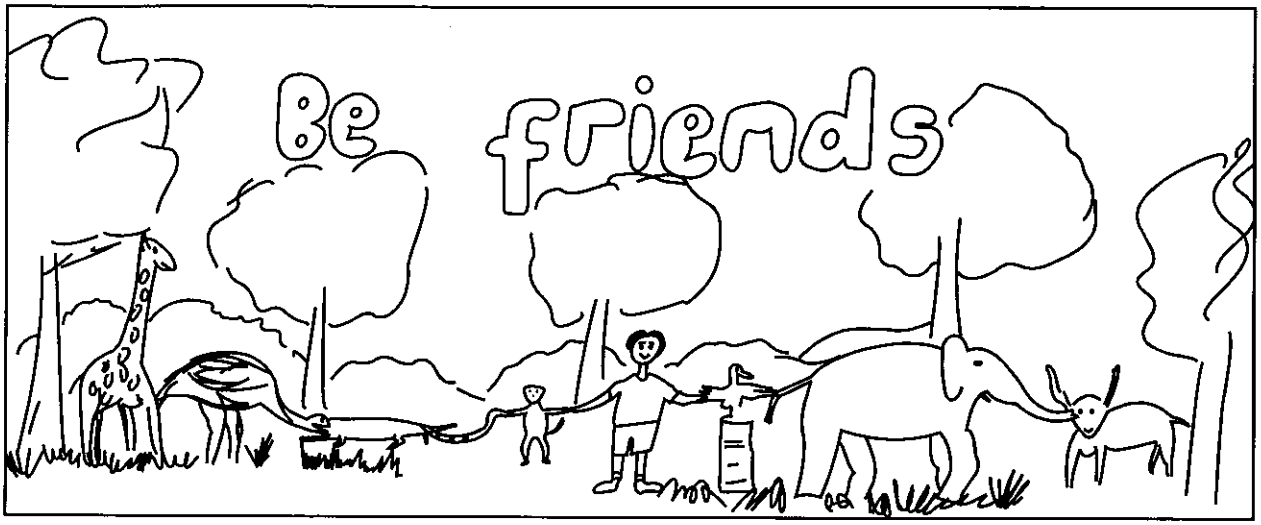
CURE for Colds ?!

Can still be discovered
in the Rain Forest !
Use less water, paper, electricity . . .





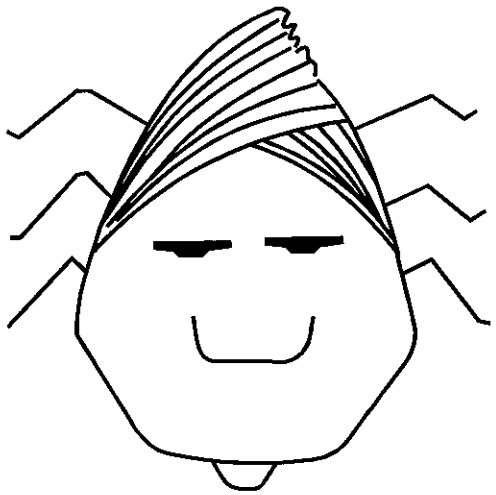
Mr Emmanuel Belmonte Tangco, President, Malabon Zoo & Aquarium, Philippines



Be Friends with all living creatures
Be Cause we all ... walk under the same sun
and we all ... walk under the same moon.

Mrs Yanni Puspitaningsih, Animal's Recorder, Yayasan Margasatwa Tamansari (Kebun Binatang) Bandung, Indonesia

MAN FACE BUG



Scientific Name

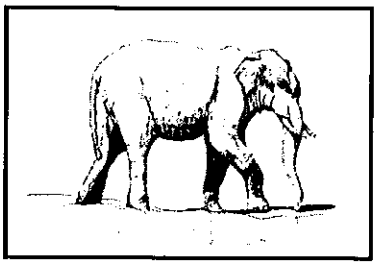
Please treat me as your family member because

You are mankind.

S.D.I!

Miss Lee Yoke Kuen
Biological Researcher
Penang Butterfly House

PLEASE CONCERN:



Common name :
Asiatic Elephant

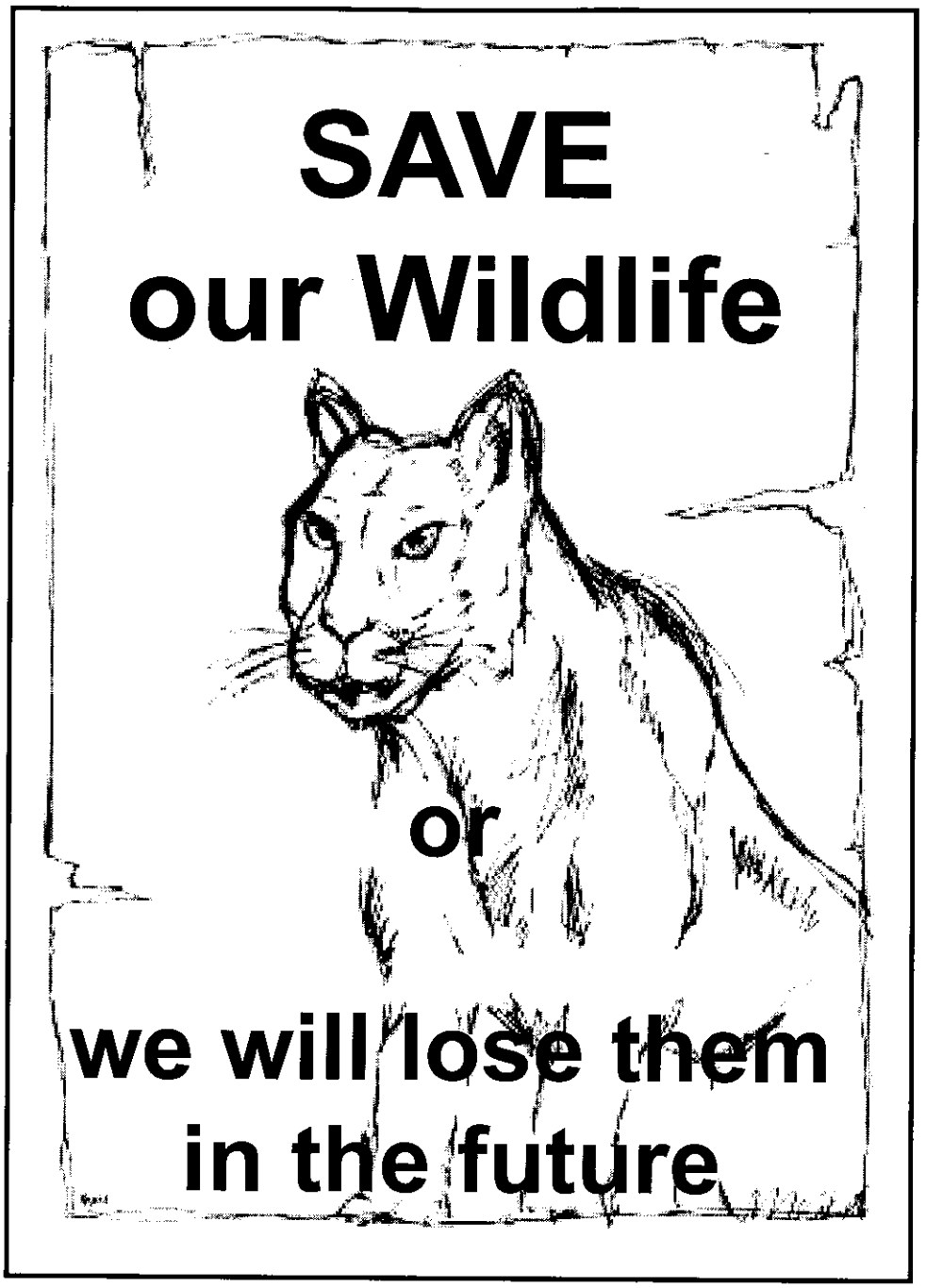
Scientific name:
Elephus maximus

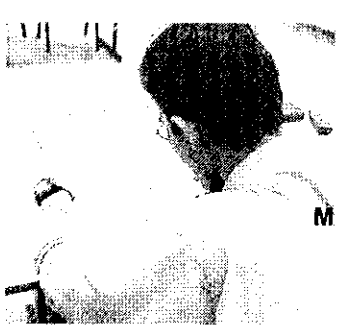
He is . . . !

E - EXCITING
L - LENGTHY
E - ELEGANT
P - PLIANCY
H - HANDSOME
A - ACTIVELY
N - NATIONAL
T - THAI SYMBOL

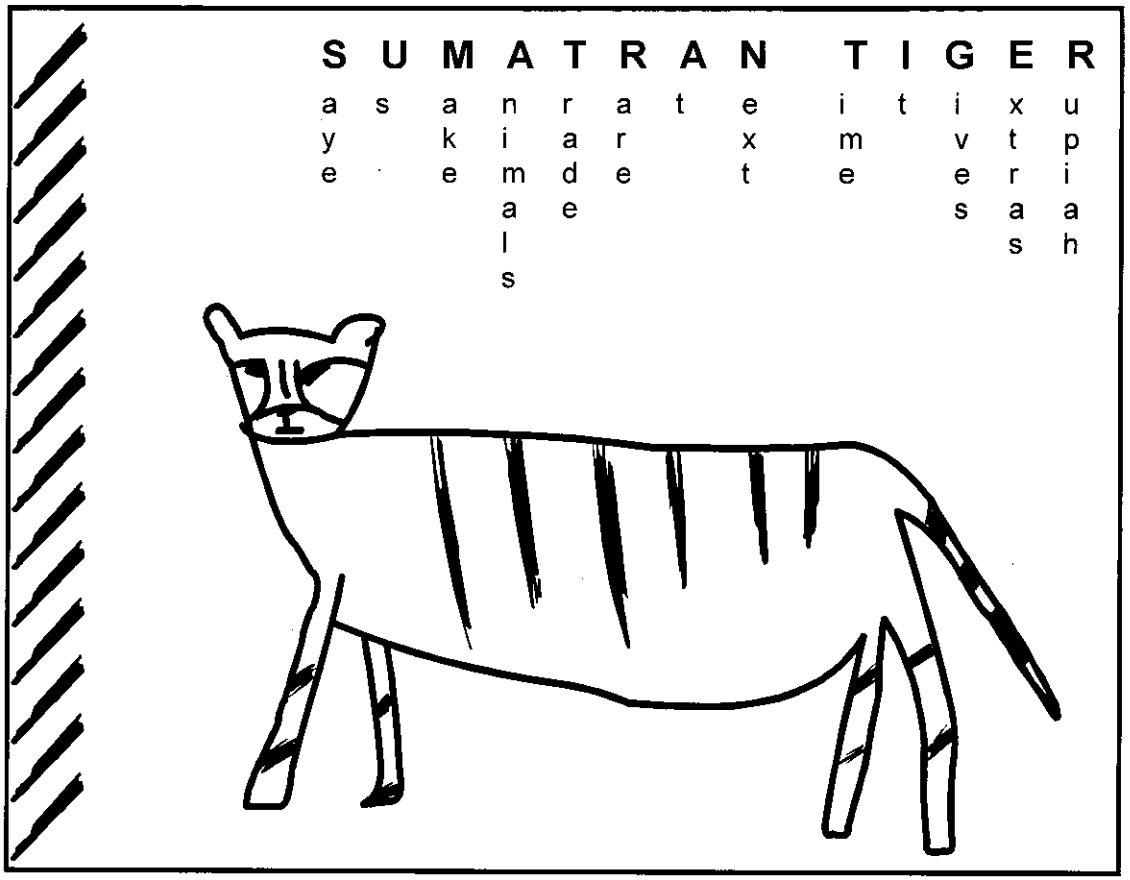
E
L
E
P
H
A
N
T

Mr Attapon Srihayrun,
Zoo Educator
Khao Kheow Open Zoo,
Thailand





Mr. Musnarizal Bin Abdul Manap,
Education Officer
Taiping Zoo
Malaysia



Ms Sharmy Prastiti,
Animal Curator
(Hospital Staff),
Taman Safari Indonesia

THE MOST ENDANGERED PRIMATE SPECIES IN THE WORLD'S WILD
belongs to "25 HIGH TOP ENDANGERED PRIMATES OF THE WORLD"
by IUCN 2000

Cat Ba langur
(Trachypithecus policephalus)

MAP

- One of five endemic Primate species of Vietnam

- Only occurs in limestone forest in Cat Ba Island, North of Vietnam

- Population in the wild : 105 - 135

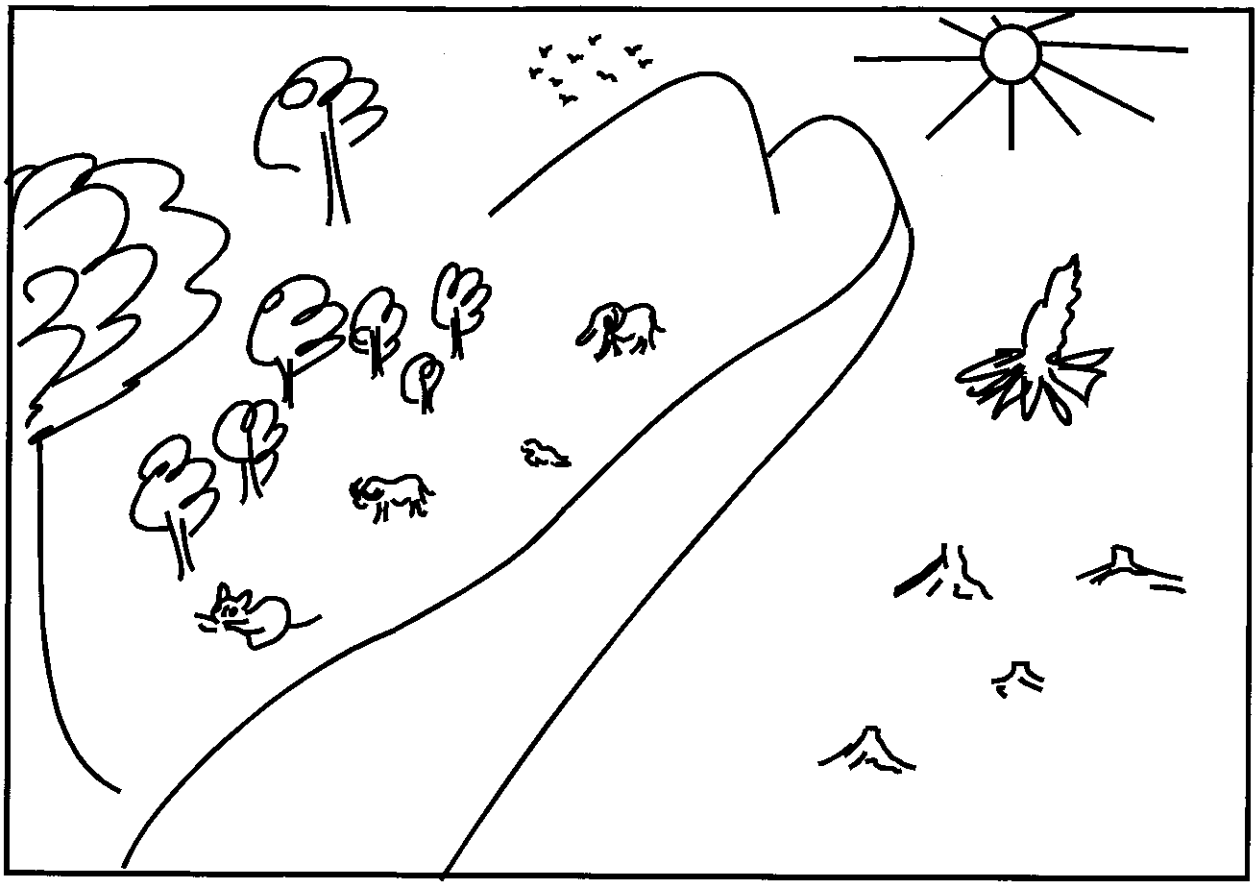
- Population in captivity : 2 at the Endangered Primate Rescue Centre

- Diet : Tropical forest leaves

Hi Dear Visitor !

Thank you for your visit and donation to our Centre. I and all Primates here need your help to save us ... for you and for all the World

Nguyen Thi Thu Hien,
Project Assistant,
Endangered Primate
Rescue Centre,
Vietnam



This ..... or this ?

Its up to you.

Mr. Oman Karmana, M.S.
Director, Yayasan Margasatwa
Tamansari, Bandung, Indonesia

Part V

Designing Cage labels, Posters, Stickers

Each participant presented their label to the group and were evaluated by their tutors and peers.

Part VI

Schools, Programmes, Public speaking

Participants planning school programmes

Schools, Kids and How to Catch their Interest

The South East Asian Zoo Educator course attempted to cover all major areas of zoo education, an important one of which is Kids and Schools.

Topics included
Linking Zoo Education to School Curriculum,
Teachers' training workshops,
Educational packets & worksheets,
Hands-on trial packets,
Tips on making a presentation for groups,
Handling Kids, Keeper Talks,
Presenting with live animals,
Games, etc.

Every field visit included some of these components which were reinforced by lectures and practice sessions in the classroom.

One mistake frequently made by zoos without trained educators involves creating educational material and activities which are not attractive or interesting or even comprehensible to children. Kids don't relate to "dignified" presentations or material which is too difficult to them. Better results can be had by targeting the age group and trying to present a variety of material in a variety of ways to make learning more interesting.

Planning a programme around a theme -- such as a particular species or event -- is useful in creating a storyline which will be interesting a spread of age groups.

Angelino from Philippines practises "Presenting with live animals"

Kids remember everything better with a game. This is the Web of Life game.

Participants work together in Working Groups to plan programmes.

How to handle Kids!!! Don't Thumb them ... Love Them

John Yeo, Education Officer, Singapore Zoo

Impact appearance vs Dull presentation
Know who You are & Know "Your Stuff"
Know your audience

Do's

1. Smile and look excited - facial appearance
2. Make sure they can hear you- demonstration
3. Relax & Enjoy the lesson
4. Be friendly & Patient
5. Use simple language- No jargon, eg gestation, anthropomorphism
6. Observe their body language - signs of losing interest
7. Rehearse.... Practice makes perfect
8. Personalization / Characterization.

Don'ts

1. Bombard them with facts- choose the interest relevant stories
2. Look bored yourself
3. Look frustrated
4. Brush them off- give them space for mistakes
5. Talk down to children- respect them

What about difficult children ???

i) Attention seekers, I "know-it-all" - ignore!!! or shut them up nicely but firmly
ii) Questioners - tell them nicely to keep questions to the end

Lesson notes
Some key points to discuss:

Adaptation
Definition of adaptation
Adaptation is necessary for survival- what do we need to survive
Adaptation for Flight- discuss true fliers vs gliders
Adaptation for aquatic living eg. Excess salt, dispersal, acquisition of oxygen
Adaptation for Terrestrial Life eg. Living in adverse conditions
Others eg. Camouflage

Nature's Food Source
What is a habitat? Compare to Environment
Who are the Food Producers?
Discuss photosynthesis
Food Consumers.
Discuss Herbivores, Omnivores and Carnivores
Symbiosis
What are decomposers?

What are decomposers?

Harmful / Useful Animals
How are animals useful?
How are animals harmful?
What are some control methods?

Body Coverings
Body covering consists of both skin and outer coverings
Discuss the various types of coverings:
Hair
Feathers
Scales
Shell
Exoskeleton
Uses of body coverings

John Yeo addressing participants with his excellent lectures on working with students.

Public Speaking

John Yeo, Education Officer

Effective public speaking skills can be learned by following a few simple points. A good speaker will be organized and have the confidence to present the substance of the speech to an audience. Being able to speak effectively is a valuable skill that can be learned as a student and applied later in life.

The Speech Recipe

The organized speaker will avoid the errors of people who talk in public but don't necessarily make good speeches. The organized speech will follow the following three point recipe:

*** Headline**
Capture your audience's attention by giving them a reason for listening. This establishes a theme for your speech and can be a provocative quote, statistic, or story. The thesis or main idea of your speech is then presented here and it relates to your theme. This is where you tell you audience what you are going to talk about.

*** Main Body**
Break your idea into separate points (three is suggested) that explain or support your thesis and expand upon your theme. This is where your audience is told about your topic.

*** Echo**
Revisit your headline and summarize your main idea by referring back to the points made in your main body. This provides your audience with a complete package and tells them what you have told them.

Better Speech Tips

* Don't point out your own mistakes. You are the expert on this topic during the time your speech is made.
* Be yourself. Your audience will forgive your nervousness, but they will be turned off by false modesty or bravado.
* Speak in the level of language that is suitable to the occasion. If the occasion demands a tux, then your words should be addressed appropriately.
* Look for a creative angle on your topic. Capture your audience's attention this way.
* Think and speak in outline terms. Avoid reading every word to your audience.
* If you stumble, don't repeat sentences or phrases unless they are pivotal to your speech.
* Finish your speech before your audience does. Don't overstay your welcome on the podium. An audience appreciates a short organized speech over a long rambling effort.
* Be confident in presentation. A speaker's poise and confidence communicate as effectively as the words that are spoken.

The purpose of any form of communication is not to make the sender the object of praise or derision. It is the message that really counts. With good organization and a confidence in your topic, you will be able to address any audience and provide them with the substance of your communication.

Programme Process

Sally Walker

A three-point process will work when planning almost any kind of programme, master or mini

Programme

1. Investigate — Who is your audience? What are they learning? What do they want? What will make them come back?

2. Implement — Do it ! Try it ! Experiment ! Innovate ! Make mock-up signs and brochures before going for expensive projects

3. Evaluate — How did it work? Be honest and fearless. You lose far more by not finding out what is effective. You lost the opportunity to educate about conservation

Process

The same process will work when planning almost any kind of programme :

Investigate -- Know your Audience - who are they, what age group, what kind (well- intertioned or mischievious), Do a visitor's survey on behaviour.

Implement - do it; use appropriate symbols and methods, depending on your particular problem - visitors - cultural -context sensitive - appeal to better nature or fears, etc. Make temporary signs at first and .....

Evaluate - test them on your public, with the help of a research student if possible.

Types of Learning Teaching

Factual learning ...things, kinds of forests, plants, animals; distribution of spp., gestation periods of animals; threats to forests; how things work; ecology; etc.

Skills learning ...birdwatching, plants identification; spotting animals; following a trail; collecting and pressing plants; etc...

Concepts learning ...integration of facts into larger concepts.. endangerment, endemism, individual responsibility...

Attitudes learning ... result wanted, e.g. change in attitude followed by behaviour. Example .. overcome fear of snakes, spiders; develop civic sense; develop responsibility; overcome greed; etc.

Education Programme vis a vis educational programme

Sally Walker

Education Programme v/s educational programme

What do we mean Education Programme v/s educational programme?

Aren't they the same thing?

Noooooooo!

Here we are trying to show the difference between

1. Education Programme
2. Educational programme and even
3. Educational activities

Programme, programme, activities

"Education Programme" means

Total educational overview

(as in Master Plan or Management Plan, or "big picture", or long range perspective.)

"Educational programmes" (or activities) means

- Designated programmes such as for a species or an event,
- Long term, short term or seasonal
- Regular school programme

Educational programmes/activities do not make up the entire education programme / focus of the zoo but are just one part of it.

Designated programmes for a species or an event

Long term | Short term | Seasonal

- Indian Sangai (Eld's deer) education programme was a long term programme, involving research and surveys as well as educational activities to a great variety and huge number of target groups. Lasted six years.
- A tiger cub naming ceremony held by the Friends of Mysore Zoo was a "one off" or short term event. The birthday of a popular animal could be held yearly.
- World Environment Day is held every year.

Educational tools

Isolated, focuses, unfocused educational *items* (boards, signs, a brochure, a display) are sometimes called "a programme"

But it is not what we mean by an Education Programme.

These items are our "tools" or components of an Education Programme.

An Education Programme is

- *Structured* -- with a long range purpose and direction consistent with that of the zoo and plans for specific and scheduled events and activities.
- *Staffed* -- normally Zoo Education Programmes are planned and implemented by an Education Department with a staff and perhaps volunteers to help them.
- *Habitual* -- as opposed to haphazard or occasional. An Education Programme is ongoing. There is always somebody (or several somebodies) whose job it is to think of more and more things to do to educate the public.

An Education Programme means

... something is happening for education

... all the time... every day.

Programme Process

TRY THIS 3-POINT PLANNING PROCESS when planning almost any kind of programme, master or mini

1. Investigate — Who is your audience? What are they learning? What do they want? What will make them come back?
2. Implement — Do it. Try it. Experiment. Innovate. Make mock up signs and brochures before going for expensive projects
3. Evaluate — How did it work? Be honest and fearless. You lose far more by not finding out what is effective. You lost the opportunity to educate about conservation.

TYPES OF LEARNING IMPORTANT TO PROGRAMME PROCESS

- Factual learning ... things, kinds of forests, plants, animals; distribution of sp., gestation periods of animals; threats to forests; how things work; ecology; etc.
- Skills learning ... bird watching, plants identification; spotting animals; following a trail; collecting and pressing plants; etc.
- Concepts learning ... integration of facts into larger concepts.. endangerment, endemism, individual responsibility...
- Attitudes learning ... result wanted, e.g. change in attitude followed by behaviour. Example .. overcome fear of snakes, spiders; develop civic sense; develop responsibility; overcome greed; etc.

Species & Event based zoo education activities

- Conducting programmes around species and/or events may enable a zoo to have something going on throughout the year.
- Some ways of using species and events to focus your educational activities follow :

Species-based educational activities

A particular Threatened species,

1. A threatened species in your zoo
2. An endangered species not necessarily in your zoo but in your country or region
3. An endangered species not even in your country but as a symbol in the world.

Species-based educational activities

"Threatened species" in general

1. A group of endangered animals which can highlight the destruction of a particular ecotype. Rainforest spp.
2. The concept of endangered species/ "vanishing species".
3. A "representative" group of endangered animals, i.e. a mammal, a bird, a reptile, fish amphibian, an insect.

Species-based educational activities

Engaging / attractive species - or - the very opposite

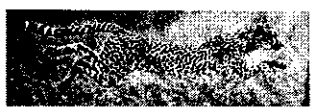
1. An "attractive" animal that is not necessarily in trouble but can serve as a focal point to attract public attention.
2. An "attractive" young animal that has a birthday, or is being "named" etc. that can serve as a focal point.
3. an unattractive or unpopular animal with a negative image but has a story to tell itself can be played upon to make a point on an environmental issue.

Species based educational activities

An extinct animal -- to make the point that we do lose species.

ZOO
ZOO OUTREACH ORGANISATION

Z.O.O. & W.I.L.D.
Both have cheetah -- extinct in South Asia - as their logo.



WILD
WILDLIFE INFORMATION LIAISON DEVELOPMENT

Species-based educational activities

Official / commercial animals

1. Your official, state or national animal

2. An animal that is the symbol or logo of a well-known industry of company that might fund some programme. (There are many, many companies that feature tigers, lions, rhinos in their company logo, for example.)

EVENTS – 1

. . . can be global, national, state, local, in house

1. World events such as World Environment Day, World Forestry Day, etc.
2. National or state national events (do not necessarily have to be connected with wildlife or environment

- Republic Day in India is always a free day for all kids
- Animal Welfare Fortnight is celebrated in zoos in India; there are several "international" animal days that could be used as "events" for the zoo.
- Chinese New Year could be celebrated with costumes

EVENTS - 2

Events can be global, national, state, local, in house

3. Local events — can mean your city or your own zoo.
- Zoo Week,
- Clean-up Day in your community,
- Health Day, etc.

4. In-house events — Zoo special events such as
- animal birthdays,
- zoo centenary, or
- national and international scientific meetings.

Elements of developing a Programme

1. Functions

Functions may include — lectures, parades, parties, ceremonies, press conferences, discussion groups, contests, competitions, special tours, slide shows (both in-house and outreach) etc.

2. Materials

Posters, newsletters, brochures, packets, brochure-stickers, stickers, stamps, rubber stamps, t-shirts, calendars, postal cards, carry-bags, etc.

3. Partners

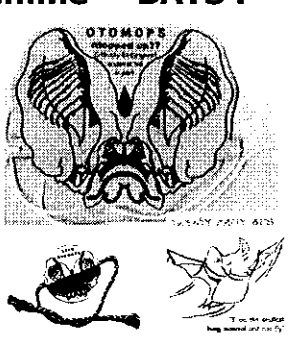
Collaborate on programmes with other organisations such as Rotary Club, nature clubs, conservation organisations, climbing and adventure clubs, churches, schools, businesses.

4. Target group

General visitors, invited school classes, civic groups, etc.

Case Study -- Z.O.O. Species Programme -- BATS !

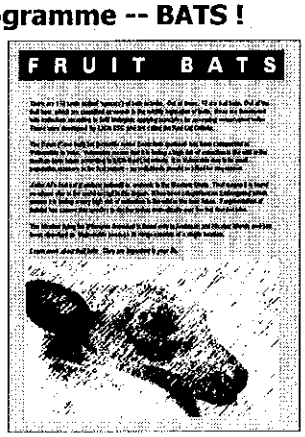
Background : Project 1
THREATENED SPECIES
Otomops wroughtonii
(Wroughton's free-tail bat) is endemic to a few caves in one state. The surrounding area is threatened with mining activities. *Otomops* is Critically Endangered according to IUCN Red List. So endemic + Critically Endangered means, *if we lose it, it is a national disgrace in biodiversity terms.*



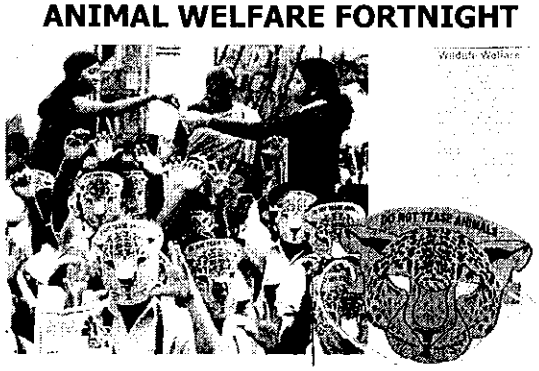
Z.O.O. Species Programme -- BATS !

Background :
Project 2
COMMON SPECIES !

Fruit bats are essential to seed dispersal for keeping the forests green. Fruit bats also eat fruit which annoys farmers. The Government of India listed fruit bats as Vermin on the Widlife Act. We are launching a campaign to have fruit bats upgraded to a schedule which does not allow them to be killed freely.



CASE STUDY : Z.O.O. ANIMAL WELFARE FORTNIGHT



Sooooooooooooo ...

Planning your Education Programme around species and events guarantees exciting and meaningful topics and good visitor turnout.

Try it ... you'll like it!
And so will your visitors

Part VII

Volunteers & Volunteer projects,

Participants construct a "Touch Table" and practice presentation to the public. Participants observing the presentation cooperated by asking annoying questions and trying to remove the items so that the presentor could get practice in handling difficult situation.

Public Outreach Programmes Using Volunteers
Tan Kit Sun

Why do we use volunteers?

- § Because we require the skills they possess and cannot afford to pay them what they are worth
- § Because we only require them for a limited period of the week, month or year
- § Because we do not have enough people to run public outreach programmes

Pros

- § They have skills that enhance the visitor experience
- § Require a low budget to operate and does not represent part of the permanent establishment
- § The people are normally working professionals who can perform their own research
- § They can help solicit for donations from the public

Cons

- § They may cause problems unless properly managed
- § They are privy to insights into the organization and will put the organization under close scrutiny
- § They might become pushy
- § They require 1 staff member to manage
- § If they get injured while on duty what happens?

What can they do?

- § Produce and Websites with regards to the public Outreach porgramme
- § Conduct touch stations and in the SZG context these are called Discovery Stations
- § Conduct behind the scenes tours for zoo guests

Responsibilities

Organization

- § Provide a small operating budget
- § Provide initial training
- § Provide props etc. if available
- § Provide whatever support within your means

Volunteers

- § Provide accurate information to the public
- § Bring problems up to the management
- § Refrain from interacting with the media unless authorized
- § Hold regular meetings to chart progress and direction

Checks and balances

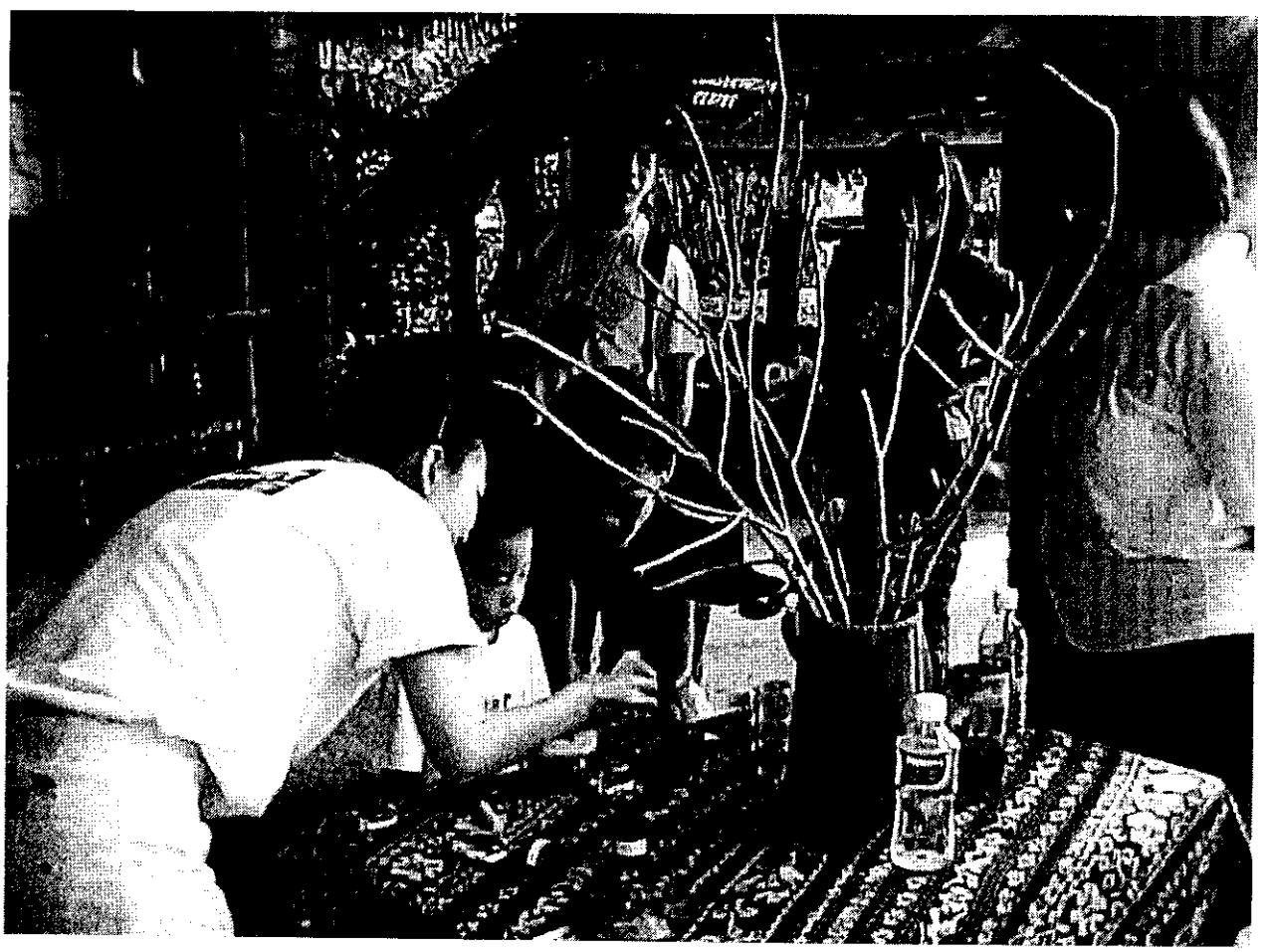
- § Write up and agree on a set of rules for both to follow i.e. a volunteer constitution
- § Form a volunteers Executive Committee operated by the volunteers themselves
- § A member of staff must be on the ExCo, with powers of veto (be sparing and judicious in the use).

Recruitment

- § Newspapers
- § Clubs
- § Internet
- § Supermarkets

Training

- § Draw up a training programme based on what you want them to do … Touch Tables, Tours etc.
- § You must know your subject before you can train or you need to find someone who can
- § Once the initial group are trained they can train the next lot and so on and you can then concentrate on further education of the volunteers.



Singapore Zoo has a large, successful docent (or Volunteer) Programme. Here volunteers manage an elaborate Touch Table outside the Fragile Forest.

Volunteers and Volunteer Projects

Several participants reported using volunteers and wanting to start volunteer programmes. There were discussions on this topic with both Resource Persons and Participants sharing their experience, both good and bad. Volunteer are also called "docents" in many institutions.

There are different situations in which volunteers play a role. One situation is that a zoo voluntarily sets up a programme for outsiders to come and help. This is considered part of the zoo education and public relations role. It IS educational for the volunteers and is a priviledge. Another situation is that a group of interested citizens like animals and want to help the zoo. They make the approach and often try to set the standard and call the shots. If the latter situation occurs it can be difficult for the zoo as these volunteers are often more like activists. They can still be useful but the zoo has to be mindful of the pitfalls of getting involved with such volunteers. Government institutions in particular are vulnerable to such situations.

Nonetheless, there are a great number of useful projects that cannot be done by an education staff due to lack of time and manpower. For these, if a well-behaved volunteer force can be developed, it is extremely beneficial. Two projects which can be done by volunteers were practised in sessions of the course, namely Touch Tables and conducting a Visitors' Survey. These are manpower intensive and also do not involve sensitive issues like using live animals.

For any project, volunteers need briefing and training. For the exercise on Visitor Surveys, some basic principles of surveys were explained. Participants were asked to refer to sample surveys in their briefing books for a basic idea of surveys. In Working Groups, they were asked to think of a problem that their zoo would like to solve by finding out what visitors think and what they want. Their sample survey should be directed towards finding out the information which would help develop the zoo in a correct way. Participants did not practice surveying visitors but were coached that in surveying, the questioner should take care not to influence or prompt the visitor and thus influence the survey.
If volunteers are asked to do this work, they will need a great deal of coaching.

For the Touch Table project, a variety of materials from the education classroom were made available to participants. Again they divided into working groups, selected a theme and created a Touch Table. A team of presentors were coached by the rest of the working group to make a good presentation about the theme and materials,
and also harassed to mimic a genuine zoo situation.

Tan Kit Sun is Docent Coordinator at the Singapore Zoo and had much good information to share.

In any project using volunteers, zoo educators must be prepared to train them, observe and evaluate their performance and finally guide them if necessary.

N.G.O. ... Friend or Foe ?

Dynamics of Interaction Between Governmental and Non-Governmental Organisations and Individuals (Volunteers, Docents)

Sally Walker

Some years ago, I was asked to give a talk at a course organised for forest officers at the Second Refresher Course for State Forest Service Officers, 1-12 February 1993, State Forest Service College, Coimbatore.

The topic given was 'The Role of NGO's in Forestry' and although I requested to talk about my own subjects, the organiser of this course absolutely would not relent. In the course of my trying to convince him to allow me to speak on zoos, small populations, or International cooperation, or something, he commented that he had heard I was "very critical" of the forest department and zoos and expected that it woul be a good, e.g., exciting and controversial session. He was using me to bait the participants, like a baby buffalo in Gir Forest baits the lions !

The interesting thing about this interchange is that, although I DID have some differences with the forest department of a particular state long back, and, admittedly, I DID create a bit of a fuss, I learned that that was not an effective way to get things done and I have not been critical of the Forest Department for YEARS — more one and a half decades. And I am NEVER critical of zoos. In fact it is one of the principles of Zoo Outreach Organisation that we do not criticise zoos — we make members sign a form stating that they will only work in a positive and constructive manner. It was interesting to me that after so many years of 'good behaviour' I was still considered critical and controversial.

Reflecting on the dynamics of characteristics which govern the relationship between non-governmental and governmental organisations, I made a diagram of these dynamics. I used this diagram in my lecture as well as some Guidelines for NGO's working with the Forest Department, based on principles developed a few years ago as a result of my own experience working with governmental and non-governmental organisation. I also asked the participants what they did not like about NGO's and we made the list below.

Some months later I was asked to give a presentation for a group of NGO's and I showed the same diagram and asked the same question ... about government organisations. The NGO's came up with almost exactly the same list of things they didn't like about government officers that the government officers had made about them !

Many of the complaints from both sides were absolutely true. Some of the defects in both were due to the natural of human beings, but others were due to the characteristics of these two types of organisations, governmental and non-governmental.

For example, the NGO's criticised the government officers for being too caught up in what their superiors and the politicians thought. The GO's complained that NGO's were not accountable. This is a fact of life, however, that government servants are beholden to their superiors and to politicians. It is not a choice — if they want to stay in service, they have to do a great deal of compromising. The NGO's don't have those kinds of constraints — whatever they say or do, their job doesn't suffer. This makes them careless and naturally government officers working

with them sometimes will have to take the brunt of this.
What should happen is that both GO's and NGO's should recognise one others strengths and weaknesses and use the strengths of one to compensate the weaknesses of the other.

Fundamental tension.
There is a fundamental tension which exists between governmental departments and non-governmental organisations. This tension is practicaly inevitable in any governmental department but particularly so in the services, such as the Forest Service, or Animal Husbandry Department, etc. due to the following reasons:

Any government service is more like a community or a family which are defined by the bonds that hold its members together. Services become tradition - bound and these traditions, along with the bonds of loyalty, can result in stagnation.

As a result, almost any government department, agency or service acts as an agent for **stability** and **continuity** with a tendency to block or at least slow down change.

Organisations of this type are, by nature, inert. But Government is Government. Governments are alike all over the world. We can try to change the nature of government, but what will happen to the other things we need to do while we are trying. It may be more useful to try and change some the distressing things in society and environment that government itself wants to change, but — with all its power — cannot.

According to Peter Drucker, however, 'the non-profit (or voluntary) organisation ***exists*** to bring about a change - in individuals and in society.'

An NGO is catalytic. It is a destabiliser. Its members normally consider it their duty to bring about change (sometimes even when it is not necessary or justified !). Naturally there will be tension between government organisations and non-governmental organisations.

Bureaucracy by nature does battle with innovation. The stronger and more centralised a Bureaucracy, the more it seems to inhibit change.

Change, or innovation, is good however. Change is stimulating and creates a climate of creativity, excitement and enthusiasm.

In forestry, for example there was very little change for quite some decades - activity revolved around plantation and exploitation. NGO movements perhaps helped to catayse progress towards involving people in forestry and also in giving protection to forests as habitats for a diversity of plants and animals.

In my own office, I am afflicted with 'occupational blindness' - I can't see the dust under my own desk or understand that my employees are suffering. Someone from another office can see — because he is objective and uninvolved. If he is sufficiently caring and courageous to point these things out to me, and if I have the desire or at least the willingness, to improve, improvement in my office can take place.

NGO's can play the role of a visitor from another office, giving an objective appraisal of what is actually taking place.

A good NGO should be catalytic, but not necessarily critical. Suggesting new directions and providing assistance and re-inforcement for bringing change about can be far more effective than criticism. NGO's should establish their credentials by learning the problems of departments or services and helping to solve them by carrying out positive and constructive works. It is only then that they will get — and deserve — a hearing.

NGO's should not try to do the job of the government agency but should instead try and find out what jobs government agencies, with all their restrictions on action and funds, are unable to do for themselves.

NGO's should do for government what it cannot do for itself.

NGO's should use their assets, ie. flexibility, mobility, non-accountability, freedom to help G.O.'s compensate for their liabilities, ie. formalities, red tape, restrictions, political vulnerability, etc.

NGO's can act as catalysts to motivate governmental organisations to act. Individuals in government may want to act but cannot do so as a result of protocol, particularly bureaucrats. NGO's can cut through protocol and initiate or instigate action.

G.O.'s can reciprocate by using their official status and infra-structure to help N.G.O.s compensate for their liabilities, i.e., lack of resources, information, opportunity.

Motive is important. A good NGO should want to help the cause, first and foremost. Most NGOs and NGIs get into trouble becuase they want credit for everything they do and will not stay behind the scenes.

Governmental organisation persons sometimes get jealous because the NGO can get so much done while the governement people are bogged down in red tape. They then deny NGO's the opportunity to participate simply out of bloody mindedness!

Time tested philosophical and ethical principles such as patience, charity, forgiveness, "do unto others as you would have them to unto you", are what are required to make a successful interaction between two very different types of organisations.

NGO's, if they are objective, can play a role in co-ordinating the activities of different governmental and non-governmental agencies. Listed below are some principles, for NGO's and NGI's working with governments. Some of the apply to government officers themselves !

NGO's have to understand that Government has the power. If we want to participate in any meaningful way, we have to learn to cooperate with Government. Sometimes this means compromise but through compromise, cooperation and persistence, a good NGO can make a big difference.

In the chart below, the aspects GO's and NGO's did not like about one another are illustrated. Most of the are the same characteristics. Those which are different are connected by a dotted line with arrows. It should be clear that some of the characteristics of the government officers which NGO's do not like simply go with the territory. They result from the nature of government itself.

Therefore, a strategy of each group utilising the strengths of the other and compensating for the weaknesses can — in theory — produce a whole, effective organism.

THINGS Governmental Officers do NOT like about N.G.O.'S.

N.G.O.'s are
Publicity-seeking -
Too critical -
Questionable objectivity -
Non-accountability -
Negative approach -
Arrogance (Know-it-all-ism) -
Superior Attitude -
Exaggerated response -
Ulterior motives e.g. Acquistion of money, power, fame, property -
Self-righteous attitude -
Impractical politically
Lack of awareness of political Implications
Misdirected energy -
Make up work-
Technically not sound -
Lack of balance -

THINGS Non-governmental individuals do not like about Government officials.

G.O.'s are
Publicity-seeking -
Too critical -
Questionable objectivity -
Too fearful — too obsequious -
Negative approach -
Arrogance (Know-it-all-Iism) -
Apathetic -
Don't do anything -
Ulterior motives e.g. Acquistion of money, power, fame, property -
Self-righteous attitude -
Too much under politicians thumb -
Too much directed by political whims -
Apathetic -
Don't do anything -
Don't know anything -
Too "uptight" ; too conservative

CHARACTERISTIC FEATURES OF ORGANISATIONS

LARGE ORGANISATION
(Government, big business, industry, international NGO)

Stability
——————> **Inertia**
Continuity

SMALL ORGANISATION
(Local NGO, small business, cottage industry,etc.)

Flexibility
——————> **Innovation**
Change

Principles for People -- NGO's and NGI's working with Government Organisations

1. Make Yourself Useful. Provide solutions, not problems.

2. Passion is not knowledge. Love, interest, enthusiasm for wildlife, environment, animals, etc. - however well meaning - can be as destructive as hatred without knowledge. What you think is helpful may not be in the long run.

3. Do what is Do-Able. Concentrate on projects that you **can** do, beginning with simple straight -forward ones. Accept ... for the moment ... the things you can't change and don't let frustration destroy your potential.

4. Establish your Credibility. Rack up some credits ... even for very simple projects and activities ... before asking for big responsibilities.

5. Accept your Limitations. there are many things which you will not be able to do or change, at least overnight. Bad habits die hard. See this as a test of your creativity to work within that context and make the best of a bad situation.

6. Do something! Don't just sit around and complain . . .

7. Satisfaction in having done your duty can be sufficient reward. Don't worry if you don't get proper credit, or even if you could not complete your objective. Do as the Bhagvad Gita says : work not for the fruit of your action but for the action itself.

8. Cooperate with others ... individuals and organisations.

9. Share freely with others ... work, knowledge and experience. There is enough work for everybody.

10. Charity goes a long way. Put yourself in the other man's place .. before you judge.

11. Mind your own business ... such as labour problems in an institution ... focus on your own tasks.

12. Don't tell tales ... you might not really know the inside story; inexperienced persons can grossly misinterpret things they don't understand.

13. Credit others ... you can make your own name by promoting other's activities.

14. Be glad for others' professional good fortune -- don't worry if a colleague gets some benefit. There is an infinite amount of good in the world. If someone else gets some, there is plenty left over for you.

15. Surrender to win .. if an institution is against a particular project you are doing, it may be more productive to just stop and do something else. Fighting is wasteful. Come back to it later and from another angle.

16. Positive is stronger than Negative. Positive and constructive activities and attitudes will achieve more than negativity. Don't criticise, utilise.

17. Be cool. People tend to become fanatical and hysterical about animals. Direct that energy into something productive that achieves a real result. Go for a product instead of a "production".

Participant Project -- Working Groups
Make a Visitors' Survey Aim: Conservation and Education

1. Name:_____ Sex.: M F

Country: _____ Age: _____

2. Why did you come to the zoo:
A) Learn about animals: _____
B) Recreation _____
C) Entertainment _____
D) Others, Please specify below _____

3. Did you come ☐ Alone ☐ in a group ☐ Friends ☐ Family

4. Did you ☐ join a guided tour ☐ Self tour

Was the guided tour informative ☐ Good ☐ Average ☐ Poor

5. Which exhibit did you find most interesting?

6. Which exhibit did you find least interesting?

7. Did you find enough animal information on the signboards?

☐Yes ☐No If no please specify why :

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8. How do you rate your visit to the zoo

☐ Good ☐ Average ☐ Poor

Survey: How our zoo rates in Conservation & Education messages
Members of the Working Group
1. Angelito A. Cereno - Philippines
2. Maskana - Indonesia
3. Sun Hean - Cambodia
4. Karen Chen – Singapore underwater world
5. Chea Sopheak Makara - Cambodia
6. Sakpasueth Sixanone – Lao P.D.R.
7. Attapon Srihayrun - Thailand
8. Sharleen Anthony – Singapore Science Centre

VISITOR SURVEY BY PARTICIPANTS
Purpose: To Improve Services and Educational Programs

Name: _____ Age: _____ Sex: _____

Address: _____

Tel: No. _____ Fax No: _____ Email: _____

Nationality: _____ Religion: _____ Occupation: _____

Salary: _____

1. Did you come: ☐ Alone ☐ Family ☐ Friends ☐ In a group

2. No. of Visits: ☐ First Time ☐ Second Time ☐ More than 2 times

3. How do you know the zoo? ☐ Media ☐ Friends ☐ Brochure
☐ Website ☐ Relatives

4. What do you think of the Entrance Fees?
☐ Cheap ☐ Reasonable ☐ Expensive ☐ No idea

5. Do you satisfied with the services provided?
☐ Good ☐ Very Good ☐ Excellent ☐Fair
☐ Bad ☐ Very bad ☐ No idea

6. How do you find our signages?
☐ Interactive ☐ Non-Interactive ☐ Simple ☐ Complicated
☐ Simple ☐ Complicated ☐ Good ☐ Not Good

7. Have you followed our educational programmes? ☐Yes ☐No
If yes please specify

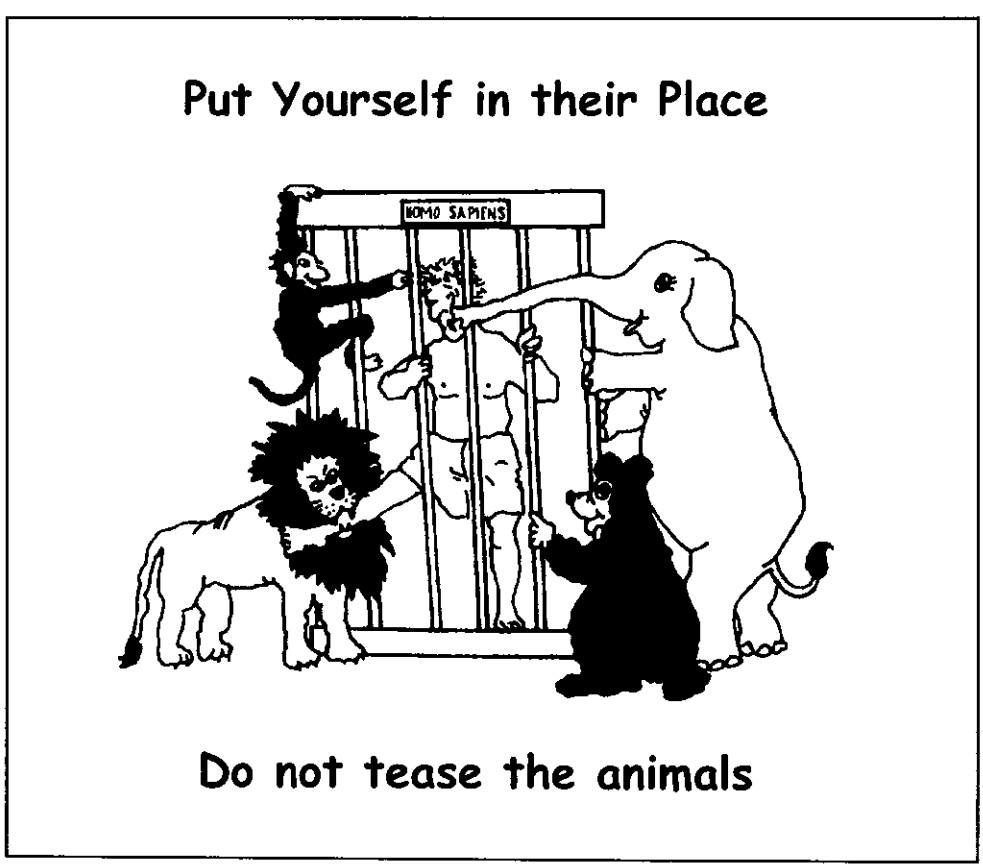
8. Please fill in the blanks with your comments of the zoo

Working Group: "Wild Cat"
Survey purpose: To Improve Services and Educational Programs
Members :

- Mus
- Shakmy
- Mani (Emmanuel)
- Quennie
- Fuzi
- Sakham
- Hien

Part VIII

Welfare, Ethics, Visitor behaviour



SEAZA Welfare and Ethics

SEAZA Mission
To encourage all members to develop and maintain high standards of animal displays and animal welfare in their collections, and if this is currently unattainable, to at least ensure that minimal standards are adhered to. Member zoos will be evaluated periodically and encouraged to improve standards when necessary. National legislation on animal welfare should be reviewed with the long-term view of closing zoos that continuously do not meet minimal standards. Member zoos should conduct all animal transactions in an ethical manner.

A Code of Ethics has been formulated which SEAZA members are expected to adhere to. General Standards For Exhibiting Animals have also been developed, which is listed at Annex 1.

Definition
A set or moral rules with respect to our profession.

SEAZA Code of Ethics
South East Asian region is characterized by a rich diversity of cultures and zoological institutions. Bound by a common vision, SEAZA members must work together to achieve our goals and to bring all our zoos to a shared international standard.

The continued existence of zoological parks and aquariums depends on recognition that our profession is based on the respect and dignity of the animals in our care, the people we serve and most importantly, for each other. In order to promote high standards of conduct in our profession, the following basic principles have been formulated by SEAZA for the guidance of its members.

The Rules

As a member of SEAZA, I pledge to:

1. Realize that I have moral responsibilities to the animals under my care, to my colleagues and to the public.

2. Use my professional skills based on the highest integrity and SEAZA code of ethics to benefit the animals under my care and the community.

3. Deal fairly with members in the dissemination of professional information and advice and to encourage publication of significant achievements and appropriate publications and presentations in the field of breeding, husbandry, medical technology, design, etc.

4. Conform to international conventions, agreements and to national laws, especially when seeking to import and export species of fauna and flora.

5. Promote public education in wildlife conservation, biodiversity, and animal welfare.

6. Maintain well kept records of specimens in the collection and to contribute to ISIS when appropriate.

7. Cooperate with SEAZA-approved zoos/aquariums and persons/organizations in breeding programmes.

8. Endeavour at all times to improve standards of animal welfare, professional training, public education and conservation in zoos and aquariums.

9. Cooperate with the wider conservation community to develop in-situ conservation projects and, where appropriate, work together on small population management. These include governmental wildlife departments, wildlife agencies, conservation organizations, and research institutes in recognizing and enforcing the regulations concerning wildlife.

10. Promote SEAZA and work progressively towards all professional guidelines mutually agreed upon by SEAZA and WZO.

Animal Welfare Satisfying the Basic needs of Animals in Captivity

Prepared by Tan Kit Sun

Food

- Proper food (diet)
- Proper quantities (ration)
- Proper timings

Water

- Access to clean water for drinking
- Available at all times
- Pool for animals requiring daily baths

Shelter

- Shelter from climate
- Shelter for privacy
- Shelter for breeding
- Shelter for recovering sick animals

Space

- Sufficient space to move around and exercise
- Sufficient space to chose its preferred micro climate
- Sufficient space to avoid confrontation
- Clean and healthy living space
- Space free from injuries

Freedom from Stress

- Freedom from undue harassment by other animals
- Freedom from hunger
- Freedom from thirst
- Freedom to exhibit natural behaviour
  __ Breeding
  __ Hunting
  __ Foraging

Animal Welfare Vs. Abuse

- There is a fine line between animal welfare and animal abuse

- Welfare issues can sometimes go unnoticed as the practices may be acceptable in your country

- Abuse cases are very obvious and must be dealt with immediately and corrective action taken

Environmental Enrichment

Prepared by Tan Kit Sun

The Captive Environment

- Reduced complexity
- Increased predictability

Environmental Enrichment Defined

Any action taken to improve normality and desirability of behaviour

Behavioural Enrichment is the outcome of such activity.

Normality

- Full range of behaviours exhibited
- Natural activity budget

Activity Budgets

Percentage of daylight time spent in various activities.

Desirability

- No aberrant behaviours
- Public acceptability
- Educational value
- Practical value (re-introduction & specific management requirements)

Areas for Enrichment

- Social grouping
- Keeper input or contact
- Change of physical environment
- Psychological environment

Types of Enrichment

- Artificial / Unnatural Training
- Naturalistic
- Developing & encouraging more natural behaviours

Enrichment Feeding

- Predictability
- Food acquisition
- Processing time
- Browse or forage

Enclosure Design for Enrichment

- Avoid over engineering
- Change of cage furnishing
- Sensory stimulation -- smell, hearing and sight
- Mixed exhibits

Target Group

- § Inappropriate social groups
- § Special health care requirements
- § Hand raised
- § Stereotyping
- § Poor enclosure
- § Where improved behaviour is desired

Potential Pitfalls

- § Risk to animals
- § Danger to public or staff
- § Cost
- § Time
- § Continuity & Commitment

Restrictions

- § Permission
- § Co-operation
- § Resources

Evaluation

All enrichment must be evaluated after implementation

Behavioural Enrichment

Purpose of the Lecture

- To promote performance of species specific behaviour
- To maintain behaviours necessary for the reintroduction into the wild when the time comes.

Purpose - to illicit natural behaviour.

Behaviours to illicit

- Habitat choice- locomotory behavior
- Comfort behavior – water, sunlight, sand bath, resting, hanging, swimming, etc.
- Foraging behavior – ¾ of movement is a result of foraging of food.
- Social behavior – groups, pairs, mixed habitats, age groups.
- Sexual behavior
- Parental behavior – safety and security of parent and young.

Steps before enrichment is done

- Identify species – background information
- Use wild type behaviors as welfare indicators.

Identify causes of stereotypic behavior

- Eg. Is it due to food?
- Is it to avoid dominant animals in their group?
- Is it because of lack of company?
- Or just plain boredom.

Enrichment as a therapy for stereotypic problems.

- We are trying to simulate natural conditions as a % of a 24hr cycle in the natural activity of that particular species.

Preparation before the actual work

- Organize- strategy (plan)- manpower, equipment, furniture and time.
- Start physical work.
- Stop and see whether it is headed towards the desired result.
- Modify plan if necessary.

Questions to ask along the way.

1. Is there an increase in functional area – surface area.
2. Will it illicit natural behaviour from that species
3. Can it be modified easily if needed in the future?
4. Were there any safety considerations for the animals and the keepers?

Types of enrichment

- Food – variety, breaking up of feeding times, live animals, hiding the food, skin and fur of animals.

- Smell – Scents from the opposite sex (urine and faeces), cheap perfume, aromatic leaves and spices, scents from other animals.
- Auditory-playing back various animal sounds.
- Male to male
- Male to female and vise-versa
- Predator to prey
- Visual
- Group – age group, sex ratio, mixed habitats, sharing enclosures at different times.

Visitor Behaviour

Prepared by Sally Walker

Visitors surveys indicate

1. Greater percentage of visitors do not come to learn, no serious purpose
2. Greater percentage of visitors come in a group of some sort - not alone
3. Average visitor spends 7 seconds reading a sign

ERGO - most visitors probably don't learn much from signs. What do they learn - from signs and other stimuli at the zoo - and how.

Probably visitors don't learn facts so much as gain *fleeting impressions*

We must make sure these impressions are what we want to convey.

What do we want to convey ? Two things :

1. What do we want visitors *to do* and
2. What do we want them ***not*** *to do*

What we want them to do :

1. Conserve nature and protect environment
2. Love and respect plant and animal life.
3. Be aware of variety of life - of the importance of biodiversity

What we want them Not to Do:

1. .. not to trouble other visitors
2. .. not to vandalise the garden
3. .. not to tease animals
4. .. not to feed animals
5. .. not to pull plants
6. .. etc.

Visitor (MIS)- Behavior

There are two kinds of visitor behaviour
1. Good Behaviour
2. Bad Behaviour

Both can be MIS behaviour

There are several kinds of Bad Behaviour
1. Well-intentioned, but misguided
2. Deliberate mischief and worse

When you Instruct you must be very clear about what is Mis-Behaviour
1. Teasing animals - whistling, shouting, throwing things, running in front of cages, roaring, etc.
2. Feeding animals - left over food, food brought for that purpose, non-food items, etc.
3. Vandalism of immovable property-buildings, signboards, vegetation
4. Eve-teasing or bothering other visitors
5. Loitering (including drunken loitering, sleeping, using zoo as a dwelling)

Etc. etc. etc.

It is very clear to us, but it may NOT be clear to visitors precisely what is Mis-behaviour

Of the different behaviours of visitors, nearly ever one can be well intentioned but misguided, or deliberately destructive

Therefore, a Zoo Director, Educator, Keeper MUST be sensitive.

e.g. we don't want to punish misguided affection — only to instruct.

Approaches to Visitor Mis-behaviour

There are two major ways of dealing with Misbehaviour
1. Preventative
2. Curative

and three major approaches
1. Moral
2. Legal
3. Mechanical

Legal Approaches
1. Animal Welfare legislation
2. Wildlife Act legislation
3. Special zoo legislation
4. General vandalism legislation
5. Rules in your zoo/park
6. Enforcement can be delicate or difficult depending on your
   - zoo security staff,
   - cooperation from police and courts the press,
   - political influence of miscreant, etc.

Moral
1. Moral /Ethical/Educational Approaches
2. Play on peoples better nature
3. Convey the message that it's 'low class' to misbehave in the zoo
4. Education of school groups before the visit
5. Education in zoo orientation programme or lecture
6. Education in the zoo-boards, keeper talks, brochures, etc.

Mechanical
1. Make animal enclosures secure
2. Provide guards -- zoo employees or volunteers
3. Divert visitors with other activities that use their energy

Etc.

A Hint or Two

Don't Say "Don't"
(it has the opposite effect)

Human nature is Perverse
The human mind is Contrary
The human soul is Treacherous

Definition of a human being: a creature who, whenever he perceives the phrase "do not" wants only to Do.

Therefore, try and think of more positive ways of conveying messages :

"You won't need to feed the animals here. They are given plenty of food that is right for them".

What are some more?

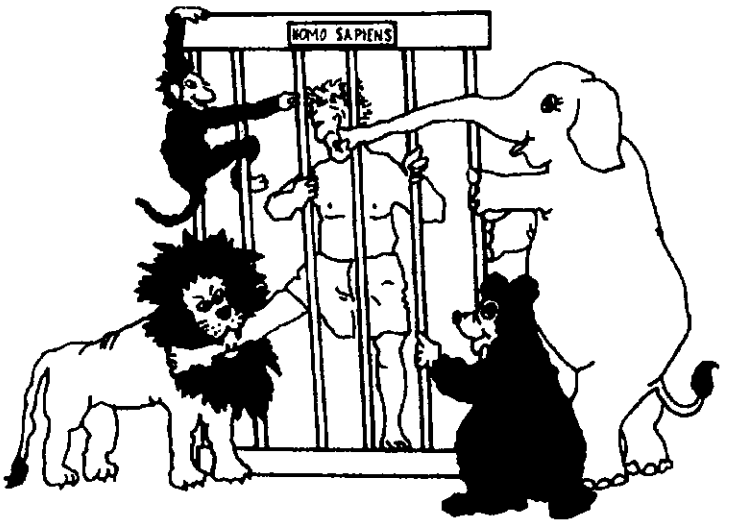
Don't Hesitate to use Humour

And, if all else fails

Mechanical Approaches include

Enclosure design which prevents Teasing
Enclosure design which Diverts Teasing
Interactive devices that sublimate energy or solve problems
- Barriers
- Disallowing open food
- Watch & Ward (Could be volunteers)

Put Yourself in their Place



Put Yourself in their Place

Comment of an Indian Zoo Director in a meeting when topic of conservation came up:
"We are so busy getting ready for and cleaning up after visitors, where is the time for conservation."

He is right. He didn't means "getting ready" to educate or entertain visitors, however, he meant "getting ready" as in a war. The zoo has to gear up to protect the animals from the visitors before the day begins and to repair the damage afterwards.

Some of the zoo's educational efforts have to be directed towards correct behaviour in the zoo.

One of the most important things to remember when trying to control misbehaviour in the zoo is that most of it stems from ignorance and a lack of awareness.

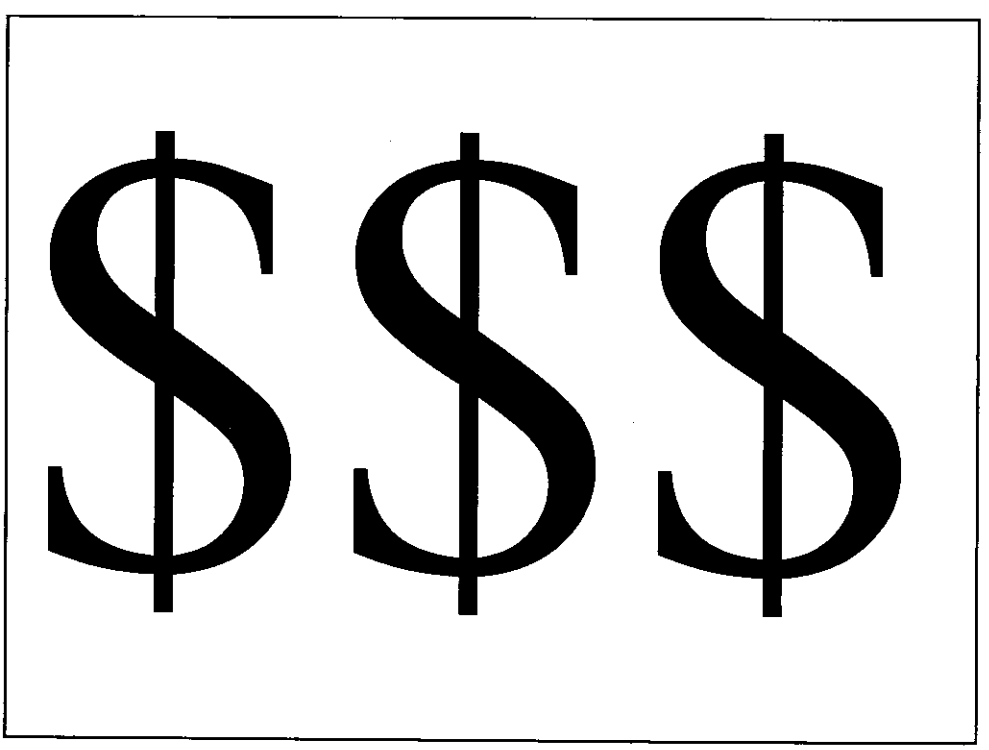
The Golden Rule says " Do unto others as you would have them do unto you." This concept is a universal concept. That is why the cartoon drawing at the top of the page has become so popular in India and other parts of Asia as well.

Appealing to visitors' better nature is the preferred method

Explaining the various reasons WHY they should not tease and feed animals will have a better effect on MOST visitors than any threat or punishment.

Part IX

Fundraising with and for Zoo Education



Money, Money, Money ... its a rich man's world

Fundraising for and with Zoo Education

In most tropical countries, fundraising for zoo education is a big issue. Many of the zoos in these countries are state, municipal and national zoos and, as we all know, governments are perpetually short of funds ! In zoos, particularly, in Asia it seems, the subject area of education always falls to the bottom of the list of items to be funded. Part of the reason for this is the absence of an Education Department and an Education Officer to make specific plans and programmes. Without activities and programmes, it is hard to justify the need for a Department and staff so it is a vicious circle. Few zoos have funds for education as indicated by the survey of participants. Only three zoos had what might be a realistic budget to do some projects, and of those one said their budget was not sufficient to meet expanding project costs. Nearly all participants wanted information of where to apply for grants for education projects.

The lecture on funding from a big zoo perspective, that is Singapore Zoo, did not take place. The presentation given, which is reproduced here, is from the perspective of a small zoo which could do some a project or purchase a needed piece of equipment with a small budget. This presentation, taken from experience, also promotes the need to be creative and innovative in the search for funds.

Helpful hints were given for applying for funds from zoos abroad and the names, addresses and grant formats of several zoos were given. In many ways, this is the best, if temporary, solution as it is good for the tropical zoo to have the funds and good for the western zoo to have a project in a range country.

It is also possible to raise funds from the sale of products, opening a gift shoppe, and providing services. This is difficult to do without a focused plan and an Education Department however, which is the problem in the first instant !

Zoos in some countries support some of their educational activities by putting on programmes for schools, civic groups, and other institutions, charging a fee for the programme. Others sell educational material and even rent out "kits" of material which the school or class could never assemble themselves. These are good ways to make money for an education programme, but difficult to get started.

The Master Plan for Education is probably the best resource for raising funds from the governmental organisation which runs the zoo. This was very useful in South Asia where several participants returned to their zoo with their Master Plan and got funds for Zoo Education within a year.

The Application Forms for applying for a grant from several zoos are included in this chapter. This list is just a drop in the bucket. There are many more zoos and other funding organisations in USA, UK, Europe and Australia which have conservation funds as evidenced by the various lists which follow. The best way to find them is to check websites for information on put up a question on the Zoo Biology List Serve <<zoo-biology@egroups.com>>

MONEY MONEY MONEY
It's a rich man's world

$$$$$$$$$$$$$$$$$$

Funds for Zoo Education from non-traditional local sources and international sources

Prepared for
Zoo Educator Training Course(s)
Sally Walker, Zoo Outreach Organisation

It's hard to do anything without money.

... and it's H A R D to GET money

- ☺ Governmental regulations
- ☺ Budgetary priorities
- ☺ Economic situation
- ☺ Application guidelines stringent
- ☺ Language deficiency
- ☺ Lack of knowledge where to look
- ☺ Time constraint
- ☺ Lack of contacts, referees, etc.

Rules of Thumb

for finding, getting and using Funds for Zoo Education

☺ IT TAKES TIME AND MONEY TO GET MONEY

☺ Research your subject (both donor and subject of funding

☺ Be positive (KNOW that you will get funding for your very good cause)

☺ Put yourself in the donor's place. Try to think as they do.

☺ There is no "free lunch". You will have to do something, change something, . . .

Some Questions

to ask your institutional head or yourself, first

- ☺ Can your institution accept money directly (or does it have to go thru govt.?)
- ☺ Can your institution accept foreign money"
- ☺ Is your institution eligible for tax deductible status
- ☺ If "no", can you create a separate organisation
- ☺ Can you maintain your institutions' integrity ? your personal integrity by accepting this money?

Some Local Sources of Income and Materials

- ☺ Small Shops and Businesses
- ☺ Publications and Souvenirs (Advertisments)
- ☺ Absorption of other Expenses
- ☺ Find out where goods are stockpiled
- ☺ Know your country's 'End of Financial Year' Problems
- ☺ Someone's Problems are your Solution

Education Budget

One year's programme example :

Staff :	Education officer(s), guides, volunteers bata, artist, driver, etc.
Signage:	Visual, Interactive
Publications:	Brochures, Leaflets, Guidebook, etc.
Equipment:	Audio visual, Slide projector, Video, Films, Silkscreen unit, Loudspeaker, DTP Computer, Graphics software, etc.
Transport:	Van, Jeep, bus ? Purchased or hired.
Communications:	Phone, Fax, postage, handouts, etc.

Some things about fundraising that are true for all countries

☺ Money is available; it is just a matter of finding out who has it and how to get them to part with it.

☺ Everybody wants to "look good" and get something out of what he gives. Always make the donor look like a hero and see that he gets something (even a letter, free admission to the zoo, a certificate, a photo).

☺ Laws and loopholes in laws (particularly in relation to income tax) create situations which can be (legally) exploited by charitable causes.

More things about fundraising that are true for all countries

☺ Materials and services are as good as hard cash.
☺ Often businesses will be far more generous with goods and services than with money.
☺ This is both psychological and practical, depending on their accounting system.

☺ People personalise what they invest in (time, talent, fund)
☺ Convince people to donate something to the cause of wildlife
☺ This is more valuable in creating awareness of the cause and good will for your institution than the actual donation.

Zoo Conservation Fund Application

American format

·Name:
·Affiliation:
·Phone No:
·Check payable to:
·Mail to:
·Title of Project:
·Geographic location:
·Amount requested:
·Description of Project:
·Amount requested:
·Field Contact Person(s) and Afilliations
·Other sources of Financial or Technical Support
·Financial:
·Technical:
·Project Goals:
·Methodology:
·Benefits to Indigenous People
·If an ongoing project, what result to date
Intent to Publish? Where and When:

Zoo Conservation Fund Format

British format

- Title of project/funding initiative
- Dates/duration
- Total budget
- Amount requested
- Project aims
- Goals so far achieved
- Conservation/welfare relevance
- Local involvement/support/benefit
- Expected outcomes
- Project monitoring/evaluation

Suggestions for applying for foreign zoo funding -- 1

☺ Build a rapport with the potential donor even before applying. Send a letter/email along with examples of the kinds of things you have done.

☺ Don't be shy about showing even crude drawings from a painting competition -- they will love it. Photos also.

☺ Your project can be zoo based or field based but should always have a strong conservation component.

☺ Project is probably more attractive to funding committee if there is a field or "wild" component supported with an educational component in the zoo.

More suggestions for applying for foreign zoo funding -- 2

☺ Foreign zoo people like to be invited to assist and advise with the project (their expense; your invitation).

☺ Western people are very particular about accounting. Keep good records ; account all funds.

☺ Western people are communicators. Write letters, faxes, emails frequently about the progress of the project.

☺ Always include the logo / name of the foreign zoo on any printed matter or banners. They can put this in their own zoo member publications and raise more mney for such projects.

Suggestions for PROJECTS for foreign zoo funding --3

☺ Plan a programme around a species the foreign zoo has in their zoo. You can find out by seeing ISIS Reports.

☺ Put up a project to supply field researchers or rangers with some needed item to study a threatened species. (This can be a piece of equipment such as a camera or tracking device or even items like boots or raincoats for needy field workers).

☺ Projects which have widespread, long term effect are popular, such as teacher training workshops -- teachers will pass on what they learn to 1000's of students.

More Suggestions for PROJECTS for foreign zoo funding -- 4

☺ A colour poster on a species or a group of threatned species from your country or region is always a good project.

☺ Whenever applying for funds for such materials, always include a plan for distribution ... such as to all schools, all public places (universities, libraries, etc.), offered as prizes, etc. Same holds good for t-shirts.

☺ Avoid applying for money for infrastructure (salaries, rent, etc.) -- project based proposals with a definite time-line have a better chance.

More suggestions for PROJECTS for foreign zoo funding -- 5

☺ Don't ask for huge amounts of money. Foreign zoos usually give from $1000 - 3000 maximum.

☺ Probably your chances are better if you apply for a small amount first ($500), do the project well, provide a detailed report and then ask again for a larger amount.

☺ Use your connection with SEAZA training (this course) and ARNIZE (your membership and this course) when applying. The fact that 1) you have been trained and 2) that you are associated with your regional associations will mean a lot to donors.

☺ You can given names of Tan Kit Sun and Sally Walker as references for your applications.

More suggestions for PROJECTS for foreign zoo funding -- 6

☺ Organise a zoo educator training course

1. in your country for zoo educators
2. in your own zoo for all personnel
3. In your country for docents/volunteers

with the materials given in this course and in local language.

☺ Organise a national network of zoo educators in your own country with communication and a newsletter in your own language. (Details and help available.)

Good luck

IZE Asia

ZOOS THAT FUND

EDUCATION PROGRAMMES

Columbus Zoo Conservation Fund

Address: Ms. Becky Rose, Field Conservation Coordinator
Columbus Zoo; Office of Conservation and Education
9990 Riverside Drive; P. O. Box 400
Powell, Ohio 43065 0400

Tel 1 614 645 3592 (incl voice mail)
Fax 1 614 645 3465
Email <brose@colszoo.org>

Columbus Zoo Conservation Fund Application Format

Name :

Affiliation : (your zoo or organisation)

Phone No :

Check payable to :

Mail to :

Title of Project :

Geographic location :

Amount requested :

Description of Project :

Amount requested :

Field Contact Person(s) and Affiliations :

Other Sources of Financial or Technical Support

Financial :

Technical :

Project Goals :

Methodology :

Benefits to Indigenous People :

If an ongoing project, what results to date :

Intent to Publish ? Where and When?

Pittsburgh Zoo Conservation Fund Application

Address: Dr. William R. Langbauer Jr.
Director of Science & Conservation
Pittsburgh Zoo
One Wild Place
Pittsburgh, PA 15206

email: drbill@zoo.pgh.pa.us

Project Title:

Approximate Start and End Dates:
Principal Investigator :
Name:
Institution and Position:
Mailing Address:

Telephone Number:
Fax Number:
E-mail address:
Names of Collaborators :
Project Summary

Specific Conservation Goals:
Methods/Plan of Action:
Anticipated Outcome/Impact of Project:.

How the Project's Outcome will be Evaluated: Results to Date:

Total Budget :

Amount Requested from the Pittsburgh Zoo :

How funds will be used:

Budget : Rs. US $

Agreement:
I hereby agree that the Pittsburgh Zoo will be given the opportunity to review and approve any manuscript resulting from this work prior to submission for publication. Also, the Pittsburgh Zoo will be acknowledged in any publication or presentation resulting from this research.

Signature Date

The Sophie Danforth Conservation Biology Fund (SDCBF) Application Form

Address: Roger Williams Park Zoo
1000 Elmwood Avenue
Providence, Rhode Island 02907-3659
USA
Phone (401) 785-3510; Fax: (401) 941 3988
email : bclark@rwpzoo.org

The Sophie Danforth Conservation Biology Fund (SDCBF), established by the Roger Williams Park Zoo and the Rhode Island Zoological Society in 1989, supports conservation programs which protect threatened wildlife and habitats worldwide. Field studies and other projects that demonstrate a multi-disciplinary approach to biodiversity and ecosystem conservation and projects that involve in-country collaborators receive the highest funding priority. Environmental education programs, development of techniques that can be used in a natural environment, and captive propagation programs that stress an integrative approach to conservation are also appropriate.

MAXIMUM TOTAL PROPOSAL LENGTH: 1 title page, 3-page proposal narrative, 2-page CV, 2 letters of recommendation

ANY PROPOSALS THAT DO NOT FOLLOW THE STATED GUIDELINES WILL NOT BE CONSIDERED.

TITLE PAGE
Include applicant's name, institutional affiliation, address, job title, degree being sought or highest degree obtained, telephone number, fax number, e-mail address, total budget, and amount requested from SDCBF (maximum annual request is $1,000).

Also on your title page include the title of your project and a 100-word ABSTRACT of the proposed project, stating the purpose, methods, and significance of the project to the field of conservation biology.

PROPOSAL NARRATIVE
Maximum of 3 pages with 10 point type minimum and must include:

*INTRODUCTION TO THE PROJECT explaining the rationale for the project, specific conservation goals and objectives, and hypotheses to be tested.

*METHODS/PLAN OF ACTION describing data collection methods, sample size, and detailed timetable including project's completion date and dissemination plan.

*PROCESS OF EVALUATING THE PROJECT'S OUTCOME and plans for implementation of results into conservation action or policy.
*DETAILED BUDGET for the project. Include a budget justification with a description of how

the SDCBF grant money will be used. List amount and sources of additional support, if applicable.

NOTE: Funding checks are provided to organizations, not individuals. Applicants must be associated with an organization (e.g. NGO, university, etc.) through which s/he can receive funding. Projects can receive funding for two years maximum.

CURRICULUM VITAE
The applicant must include a CV, 2 page maximum.

LETTERS OF RECOMMENDATION
Letters from 2 different individuals familiar with the applicant and the proposal must be submitted.

*June 1, 2002: Applications and letters of recommendation must be received.

*September 1, 2002: Grants awarded. No funds will be provided before September 2001.

*September 3, 2003: Progress report due which must include an update on the status of the project and budgetary expenditures.

Application Guidelines for
The World Association of Zoos & Aquariums Training Grant

Proposals for training programs are limited to two proposals per "region", per year. Priority will be given to projects that;

- involve inter-regional collaboration and exchange of expertise
- affect a large number of institutions and individuals
- emphasize basic principles of animal care and management over advanced technologies
- are continuing, rather than "one time" efforts
- have significant logistical and financial support within the region
- are integrated into the regional conservation strategy
- comply with the The World Zoo Organization's CIRCC Philosophy on International Training and Technology Transfer
- comply with the The World Zoo Organization's CIRCC Ethical Guidelines for International Training and Technology Transfer

These Philosophy and Ethical Guidelines documents are available on this web site.

Procedures: Proposals must be submitted, in English, to Mr. Bernard Harrison who will send them to a committee of four CIRCC members, to assess acceptability (e.g., proper format, budget, subject matter). Projects are then sent for review to 3-5 outside reviewers who rate proposals on a scale of 1-10 (ten is best). Rating totals are summed for all reviewers, and ranked by the Chair from most to least points.

Rankings are reviewed by CIRCC, and recommendations are forwarded to Council for consideration at their mid-year meeting. Council decisions will be finalized at the annual Council meeting.

Evaluation of Proposals: Projects should have direct training components that impact the professional development and basic skills of zoo and aquarium staff. Preference will be given to projects that have "matching" support in place.

Proposals are evaluated once a year. All application materials must be received, by Mr. Bernard Harrison, by 30 November of any calendar year. Each proposal must be endorsed by the region. Evaluation of each proposal is based not only on the proposal's intrinsic merits but also on its merits and quality relative to that of all other proposals under consideration at the same time. Late proposals and proposals not in the exact format requested are not considered under any circumstances. Proposals received after the deadlines will be returned for resubmission at a later date.

How to apply: Submit 10 copies of the proposal to Mr. Bernard Harrison, Director, Singapore Zoological Gardens, 80 Mandai Lake Road, Singapore, 729826 Fax: +65 365 2331, e-mail: singzoo@pacific.net.sg by 15 January 2000.

Proposal Format: All proposals should be in 12pt Courier or Times Roman font, with 2.5 cm (1") margins on all four sides of text. Page numbers should be in the bottom center.

Each proposal should contain:

Title Page (limit one page); including project title, location (region, country, city) of project, applicant's complete address, institutional affiliation, status or title, degree being sought or highest degree obtained, nationality, telephone number, fax number, electronic mail address, total budget for project, total amount of budget requested from WZO, desired starting date, and duration of project. These items should be centered on the page and proceed from top to bottom.

A One Page Non-Technical Summary (limit one page); of the project that clearly identifies; purpose, objectives, procedures, anticipated results, feasibility, and overall significance of project. This should be written in a non-technical style for persons not familiar with the problem being addressed.

A Narrative Section (limit 3 pages); that outlines the specific basis for the project including specific goals and objectives, basis for development of hypotheses, etc. This section should have clear statement of need, target audience, effect of training, evaluation component, and (if applicable) instructor's qualifications for specific roles. Include descriptions and justifications for appropriateness of methods, feasibility of attaining goals with proposed methodology, and plans for implementation.

Material and Methods Section (one page limit); detailing location, justification for approach (e.g., workshop, training in the field, preparation of materials, etc.), basis for assuming the approach will be successful, and names and addresses of all students, collaborators, and academic sponsors.

A Schedule : for the project that includes project initiation, phases of preparation, execution, and completion date.

Literature Cited: in support of the narrative and methods.

A Summary Operating Budget: (one page limit); for the entire project that clearly shows overall expenditures and the role of funds requested with this proposal.

A Two Page CV or Resume: (maximum of two pages per person, strictly enforced!); for each of the principals involved in the project.

WOODLAND PARK ZOOLOGICAL SOCIETY
CONSERVATION/EDUCATION APPLICATION

Statement of Purpose

The Conservation/Education Fund was established in 1998 and is supported by the WPZS Annual Fund. The Fund's goal is to support integrated conservation/education/research projects which lead directly to conservation of wildlife and wildlife habitat while increasing public awareness and understanding of wildlife and environmental issues. The fund emphasizes projects that integrate an educational message as part of their project.

Funding Guidelines

Preference will be given to those projects that fall within the following guidelines.

1. Involves collaborative effort with other zoos or conservation organizations.
2. Relates directly to habitat protection and/or conservation of a species.
3. Project is relevant to the WPZ's current or planned animal and plant collection, particularly those related to the Northwest/Pacific Rim ecosystems.
4. Includes a strong educational component.
5. Has significant potential to generate interest, support and public involvement by zoo visitors.

- Applications for SSP, TAG or CAP (section 3 of proposal) will be accepted from the WPZ curators on a semi-annual basis.

- Emergency requests (section 17 and 18 of the proposal) may be submitted at any time. Funds for emergency requests are extremely limited and grants are lower than for other applications. (An average non-emergency grant for 1998 was between $3,000 - $4,000.)

- **Requests for upcoming funding cycles will be accepted February 1 – March 11, 2000.** Grantees will be notified and funds distributed approximately 6 weeks after the closing date.

- All research involving plants and animals must adhere to regulations listed under the USDA Animal Welfare Act, and any appropriate sections of professional ethics or mandatory standards of the American Association of Zoos and Aquariums and the Association of Zoological Horticulture. If the project requires collecting or trapping of specimens, for any purpose, a "Specimen Handling Methodology Sheet" must also be submitted. (Attached for you review)

Application Procedure

- Incomplete applications or those that do not follow the application format will not be accepted for review.
- 10 pt type or higher must be used.
- Applicants will have an opportunity to make an oral presentation to the WPZS Conservation and Education Committee. Presentations will most likely take place the week the first week in April.
- Applications must be received in the office of Harmony Frazier, WPZ Conservation Coordinator (address below) by the end of the day **March 11, 2002**. Applications may be sent via E-mail or through regular mail. If sending through the mail please include a disc as well as a

hard copy. Applications cannot be accepted via FAX.

Conditions of Acceptance

- It is the responsibility of the grant recipient to obtain all needed permits, visas and/or permissions before carrying out this research.

- Grant recipients must keep the committee informed of their progress. They will be required to submit an informal "field" report and two to three project images six months after receiving the grant as well as a final report with additional images one year from receiving the grant. A report format will be provided to you and must include a complete financial statement and a summary of accomplishments to date.

- Publications or presentations resulting from this support must include appropriate acknowledgment formally recognizing the Woodland Park Zoological Society Conservation Education Fund and Woodland Park Zoo. Copies of any publications, thesis or PR materials must be sent to the Committee.

- The Woodland Park Zoological Society and The Woodland Park Zoo has the right to use information about the project in Zoo publications and promotions.

Questions about the application process may be addressed to Harmony Frazier, Conservation Coordinator, Woodland Park Zoo, 5500 Phinney Ave. N., Seattle, 98103. Harmony may be reached at (206) 684-4866, E-MAIL: harmony.frazier@zoo.org, **or FAX (206) 684-4873. (Note: applications will not be received via FAX).**

Woodland Park Zoo,
5500 Phinney Ave. N.,
Seattle, 98103

PHONE (206) 684-4866
FAX (206) 684-4873
E-MAIL: harmony.frazier@zoo.org

NORTH OF ENGLAND ZOOLOGICAL SOCIETY
APPLICATION FOR CONSERVATION AND RESEARCH FUNDING SUPPORT

Address

Chester Zoo c/o Steve McKeown
Caughall Road
Upton on Chester CH2 1LH UK

Tele +44 1244 650201
Fax +44 1244 371273
Direct Line: +44 (0)1244 650206
Direct Fax: +44 (0)1244 650234
email: s.mckeown@chesterzoo.co.uk
Website: http://www.demon.co.uk/chesterzoo/index.html

Project title:

Location of project (region & country) :

Project start and end dates :

Applicant name, address and institutional affiliation :

Project Co-ordinator
address and institutional affiliation (if different from applicant) :

Project type :
(tick any components that apply)

- Biological/ecological research
- Veterinary/conservation medicine
- Animal welfare
- Captive breeding
- Re-introduction/re-stocking/translocation
- Human-wildlife conflict
- Education/public awareness
- Training/workshops
- Community-based/social policy
- Ecotourism/sustainable development
- Sustainable use
- Wardening/law enforcement
- Protected areas management
- Other: _____

Focal species

IUCN Red List status (or other endangerment listing) of focal species :

Project background :

Project aims (purpose) :

Project outputs :

Monitoring and evaluation – how will the progress and outcomes be measured?

Will local people/communities participate in the project? If yes, please describe how they will benefit.
Has the project been approved by the government of the host country? Please identify collaborating agencies/ministries.
Does the project collaborate with other overseas or range state NGOs? (please identify)

Budget: Total project budget:

Matching funding already available:
Total requested from NEZS:

Budget breakdown:
- Travel
- Salaries
- Accommodation
- Equipment
- Communication
- Miscellaneous

Matching funding: please identify any additional sources of financial or in-kind support:
Name of organisation(s):
Amount of commitment:

Expected publications from the project (where and when):

Please use this page to provide any additional information that may be important for your application:

Please attach a brief Curriculum Vitae for key project personnel.

THE CONSERVATION AND RESEARCH SMALL GRANTS PROGRAM OF THE CLEVELAND ZOOLOGICAL SOCIETY

Each year Cleveland Metroparks Zoo and Cleveland Zoological Society award funds through a competitive grants program to provide financial support to conservation and research projects. Annual awards ranging from $1000 - $3000 are made to conservation and research initiatives involving animals and their habitat, and educational or cultural activities that involve or impact animals and their habitat. Ideal projects will have clear, long-term conservation implications, positively impact local people and create opportunities for capacity building in country.

Proposals requesting funds may include projects in the field or in captivity and funding is provided to projects that are consistent with Cleveland Metroparks Zoo's mission "To improve the future for wildlife...". Examples include:

- § Natural history, ecology and habitat studies
- § Programs that establish, evaluate or enhance ecotourism, community-based conservation, conservation education, community development, etc.
- § Professional development or education of individuals, student scholarships, etc.
- § Conducting conservation or training workshops
- § Materials and supplies for *in-situ* projects, infrastructure and equipment support
- § Projects that improve the management of a species in the wild or in captivity

CRITERIA FOR FUNDING

Requests for funds should include all information listed under the **Proposal Guidelines**. All requests should provide adequate information for evaluation of the project and the specific request. Projects should contain a clearly defined beginning and end point. Although exceptions can be made, ongoing costs such as salaries of permanent staff and other administrative costs are generally not considered. Funds to cover contingencies or indirect costs are not granted. Partial funding of a project may be considered if a particular component of the project can be supported and completed independently, or of it is made clear that additional funding has been obtained or is being sought from other sources to cover remaining costs. Subsequent phases of previously funded projects may be submitted. Cleveland Metroparks Zoo is not required to be a collaborator on a project for it to be eligible for funding.

THE PROCESS FOR APPLICATION AND REVIEW

Requests for funding should be sent to the Curator of Conservation and Science at Cleveland Metroparks Zoo. The principal investigator or project manager will be notified that the proposal has been received and is being considered for funding. All proposals will be pre-reviewed by appropriate referees then submitted to a committee for final review and award determination. Projects involving research will be reviewed by scientists familiar with the research techniques and/or the species being studied. Non-research based proposals will be reviewed by persons familiar with the field, situation or topic of the request. All research, whether it is by students or professionals in the field, must adhere to the rigors and ethical principals established for valid and responsible scientific study. A time period of at least 4-6 weeks should be expected for the review process (unless the proposal is being held until the next competitive grant cycle).

EXPECTATIONS OF GRANT RECIPIENTS

Grant recipients are expected to:

§ Maintain contact with and provide periodic updates to Cleveland Metroparks Zoo.

§ Acknowledge the financial support of the Cleveland Zoological Society in any presentations, meetings or publications resulting from the project.

§ Submit a final report, including accounting of funds, within one year of receipt of the awards. If the project is more than one year in duration, a progress report should be submitted one year following the award in addition to a final report at the end of the project.

§ Provide photos and/or slides of the project, people or animals. These may be used in presentations or publications of Cleveland Metroparks Zoo and Cleveland Zoological Society. Photos used in

publications will credit the photographer if noted.
All reports and follow up information should be sent to the Curator of Conservation and Science at Cleveland Metroparks Zoo.

PROPOSAL PREPARATION GUIDELINES

The following components of the proposal should be provided, and should be organized in the order listed below. Proposals should be submitted in English and should not exceed 8 pages of text (summary through time-line described below). All proposals must include a project summary immediately following the cover page. Enough information should be given for reviewers not familiar with the project to adequately evaluate the request. Proposals may be sent through standard mail, email (preferred) or fax. Specific information will vary depending on the request and type of project. As appropriate, the following should be included in the proposal.

Proposal Outline:

1) **Cover page**: Provide the project title, list of collaborators and their affiliations, identify the principal investigator or the person to whom inquires and correspondence should be made (include address, phone, e-mail etc.), and identify who will be the recipient of the funds, if awarded. If the proposal is approved, the designated person will be notified and will be required to provide a taxpayer identification number or tax exemption certificate (U.S. based recipients only).
2) **Summary**: Provide a short summary of the proposal giving an overview of the project / request.
3) **Introduction**: The purpose of the request should be clearly stated (i.e. research question, project goal, etc.). Sufficient background information should be provided in the introduction to enable reviewers to understand the significance of the project and why the funds are being requested. Include the goals and objectives of project.
4) **Methods**: Describe how the project will be conducted. Include specific information on techniques to be used, data analysis, and how information will be disseminated once the project is completed.
5) **Project Impact**: Explain the benefits of the project and what impact it may have on conservation or research.
6) **Time-line**: Include a time-line showing the time frame of the proposed project. Exact dates are not required. Provide estimated start / completion times and duration of various phases.
7) **Budget:** Provide a detailed, itemized budget that clearly indicates the amount being requested. If requesting partial funding, include a complete project budget. Clearly indicate which budget items are being submitted for funding, and note other funding that has been obtained or is being sought to complete the project.
8) **Curriculum Vitae**: Provide a CV for the person responsible for completing the project for which funds are requested. Edit CV to two pages.
9) **Letters of support**: As appropriate, these may be from governmental organizations, community counsels, AZA groups, zoos, university advisors, and established field scientists.
10) **Copies of Permits**: As required by location of the proposed project.
11) **Other**: You may include other information that you feel is appropriate for consideration.
Any additional information however, should be included within the eight pages of text.

Completed proposals or questions regarding the application process, eligibility criteria or proposal format, should be directed to:

Kristen E. Lukas, Ph.D., Curator of Conservation and Science
Cleveland Metroparks Zoo
3900 Wildlife Way
Cleveland, OH 44109 USA

Phone : 216.635-3314 Fax: 216 661-3312
email: kel@clevelandmetroparks.com

Zoos and others with Conservation Funds

List contributed by Beth Armstrong, Brevard Zoo

California

Jeffery Opdycke, Habitat Analyst
Zoological Society of San Diego
P.O. Box 551
San Diego, CA 92129
Phone: (619) 738-5069

Thomas Hanscom,
Cons. Mrkt Spec.
Zoological Society of San Diego
P.O. Box 551
San Diego, CA 92129
Phone: (619) 738-5069

William Toone, Dir. Applied Cons.
Zoological Society of San Diego
P.O. Box 551
San Diego, CA 92129
Phone: (619) 738-5069

Eva Sargent, Ph.D.
Director of Conservation & Science
San Francisco Zoological Gardens
One Zoo Road
San Francisco, CA 94132-1098

Norman Gershenz, Director
Center for Ecosystem Survival
Department of Biology
San Francisco State University
1600 Holloway Avenue
San Francisco, CA 94132

Phone: (415) 338-3393
Fax: (415) 338-2295

Colorado

Richard Reading, Ph.D.
Director of Conservation Biology
Denver Zoological Gardens
2300 Steele Street
Denver, CO 80205-4899

Illinois

Steven Thompson, Ph.D.
Director of Conservation & Science
Lincoln Park Zoological Gardens
2200 North Cannon Drive
Chicago, IL 60614-3895

Kansas

Robert Klemm, Ph.D.
Director/Conservation & Research
Sunset Zoological Park
2333 Oak Street
Manhattan, KS 66502-3824

Louisiana

Betsy Dresser, Ph.D.
Audubon Park & Zoological Garden
P.O. Box 4327
New Orleans, LA 70178-4327

Susan Mikota, D.V.M.
Audubon Park & Zoological Garden
P.O. Box 4327
New Orleans, LA 70178-4327

Michigan

Terrence DeRosa, Dir/Collections
Detroit Zoological Park
8450 West 10 Mile Road
P.O. Box 39
Royal Oak, MI 48068-0039

Phone: (810) 398-0903 3231
Fax: (810) 398-0504
E-mail: terosa@detroit zoo.org

Minnesota

Ron Tilson, Ph.D.
Director Conservation
Minnesota Zoological Garden
13000 Zoo Boulevard
Apple Valley, MN 55124-8199

Montana

Jay F Kirkpatrick,
Dir. of Science & Conservation Biology
Kimberly Frisbie,
Cons. Biology Assistant
Zoo Montana
P.O. Box 80905
Billings, MT 59108

Phone: (406) 652-8100
Fax: (406) 652-9281
e-mail:
jkirkpatrick@montana.net

Ohio

David Jenike, Conservation & Science Director
Penny Geary
Cincinnati Zoo & Botanical Garden
3400 Vine Street
Cincinnati, OH 45220-1399

Patricia McDaniel, Ph.D.
Coordinator of Scientific Research
Cleveland Metroparks Zoo
3900 Brookside Park Drive
Cleveland, OH 44109

Phone: (216) 661-6500 x214
Fax: (216) 661-3312
E-mail: pmcdan@ix.netcom.com

Evan Blumer, D.V.M.
Director of conservation and Science
The Wilds
14000 International Road
Cumberland, OH 43147

Becky Rose
Conservation Coordinator
Columbus Zoological Gardens
P.O. Box 400
Powell, OH 43065-0400

Phone: (614) 645-3592
Fax: (614) 645-3465

Pennsylvania

Reginald Hoyt. Conservation Director
Heidi Jamienson, Dir. of International Programs
Philadelphia Zoological Garden
3400 West Guard Avenue
Philadelphia, PA 19104-1139

William Langbaner, Ph.D
Director of Conservation
and Science
Pittsburgh Zoo
One Hill Road
Pittsburgh, PA 15206-1178

Rhode Island
Anne Savage, Ph.D.
Director of Research
Roger Williams Park Zoo
1000 Elmwood Avenue
Providence, RI 02907-3600

Texas
Tarren Wagener
Conservation Science Manager
Fort Worth Zoo
1989 Colonial Parkway
Fort Worth, TX 76110

Natasha Schishakin
Conservation Research Director
Houston Zoological Gardens
1513 North MacGregor
Houston, TX 77030

Christine Jurzykowski, President
Fossil Rim Wildlife Center
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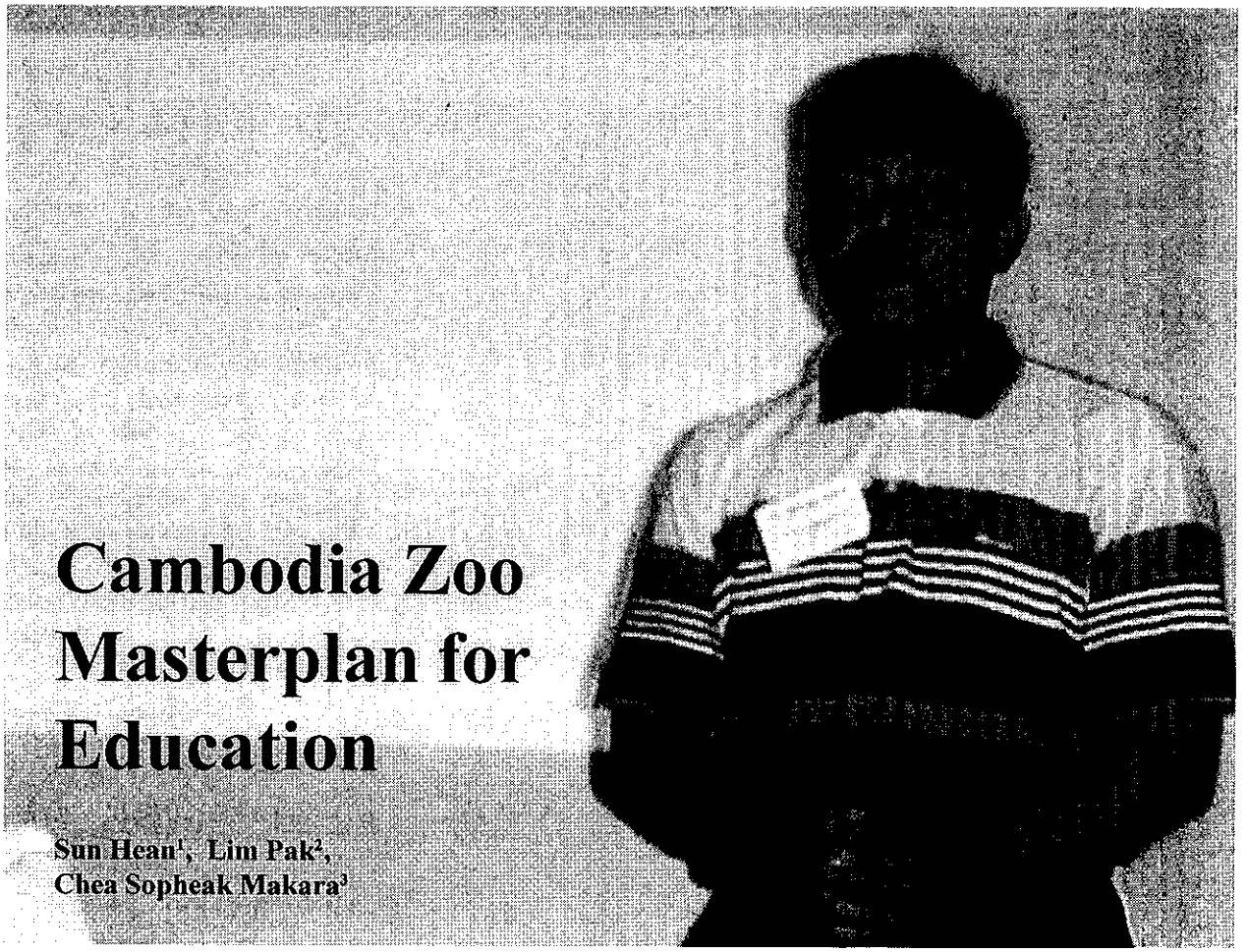
Part X

Participants' Master Plans for Education in their Zoo

Mr Chea Sopheak Makara, Official, Ministry of Agriculture Forestry and Fisheries, Cambodia gives the Master Plan Report on behalf of his colleagues.



Cambodia Zoo Masterplan for Education

Sun Hean[1], Lim Pak[2], Chea Sopheak Makara[3]

I. Introduction:

The purpose of this paper is to help Phnom Tamao Zoological Garden and Wildlife Rescue Center to design and implement conservation education programmes that will effectively bring improved environmental and natural resource management. Since three decades ago, Cambodia has been influenced by bad conditions, including political and social unrest. Therefore, conservation education and public awareness programs had never been conducted. Moreover, after the past political regime, much of the remaining population still suffers from mental health problems. Moreover, poverty and lack of education make understanding and appreciation of natural resources very difficult. As a result, a large area of forest habitat has been cleared for timber production, financial security, agricultural cultivations and land encroachment. Endangered species of wild fauna and flora have been harvested for local foods and traditional medicines, and traded to other countries for commercial purposes. To improve such conditions in this country, a Zoo Master Plan for education has been developed to address potential education programs and activities through a variety of strategies and techniques.

II. Background:

In 1995 the idea of keeping confiscated animals from all the checkpoints and provinces over the country had been made at Phnom Tamao Mountain, where is now designated as the Cambodia National Zoo administered by the Ministry of Agriculture, Forestry and Fisheries. The zoo area is 1200 ha covered by secondary dried depterocarpe forest, which the local people of the surrounding are always cut for firewood to produce palm sugars. The creation of the zoo has also supported the local community with eco-tourism and marketing of local foods and services,

especially with souvenir products made from palm leaves and other products. Since the education program at the zoo is so poor and virtually unconnected with other NGO's and their activities, a Masterplan for Education in this zoo is urgently required to begin the process of effective conservation education. However, the Masterplan will have a nationwide effect on conservation: it will help decrease illegal hunting and trade of wildlife and address needs of local community development by promotion of their local product marketing, and sharing techniques on animal and crop farming. After three decades of war and killing field regime it is necessary that the Cambodians make a move such as this.

III. Philosophy, Goals, and Objectives.

"People will not initiate change, if their stomach is empty" As in other developing countries, poverty, poor planning, over-exploitation of natural resources without consideration of environmental consequences are major causes of environmental degradation. Thus, in Cambodia many people are so poor after the war that they need to fill up their stomachs before they will have interest in doing anything else. Therefore, the Masterplan needs to include a wide range of subjects, especially within the areas of science and natural resource management, and can be directed, formally and informally to a variety of target audiences. Its major goal and objectives are:

Goal:

To help people to appreciate the importance of their environment and to help them to find alternative economic gains and sustainable use of their natural resources.

Objectives:

1. to assist people become aware of and appreciate the value of natural resources and the ecological process that maintain them:
2. to help people know and understand what threatens the well-being of their natural resources and how these natural resources should be managed and sustainably used.
3. To motivate people to use substances such as non-timber products or common species of wildlife, and to promote how to successfully raise or farm them.
4. To help people to find appropriate markets for their products. To fulfill the above objectives, the target audience need to be identified first and conservation education themes and topics should be matched accordingly. Each education program's objective information, communication methods and audiences must be carefully identified if the programs are to realize their ultimate goal-oriented environmental management.

IV. Identification of Target Groups:

In order to identify different target groups and their educational needs, a broad and representative survey need to be conducted. The inclusion of a wide range of public from different economic, political, social, and religious backgrounds will be helpful in identifying broader needs. In identifying these groups, not only the people who directly cause the problems should be considered, but also others such as intellectuals, community leaders governmental officials and the general public, who can influence these people and their decision making. Survey questionnaires should be designed for different target groups. For example, we should include the general public, both zoo visitors and non-visitors, foreign tourists, and the whole spectrum of educated and uneducated persons. We especially want to include people who cannot read and write and therefore must be surveyed orally, in their mother tongue.

Probable target groups:
General - Adults, Children, Community

a. Educated public
b. Uneducated public
c. Foreign tourists
d. Tertiary students
    i. Children (not-in-school)
    ii. Pre-school
    iii. Primary class (1-6)
e. Secondary class (7-12)
    i. Local community
    ii. Minority people
    iii. Religions groups

V. Conservation Themes and Topics:

The conservation education programs should be sensitive to the local cultures, languages and different ethnic backgrounds. These programs must also address other groups, such as woman and minorities, since these latter groups are the major users and collectors of firewood, for example. However, an understanding of key environmental issues is important for the development of successful conservation education programs. To reach a consensus of which are the major environmental issues to focus on, a joint effort of different environmental organisations and experts is required. This effort should use or include the following themes and topics.

Suggested themes and topics for each target group.
General adult
Children
Community
Themes
Awareness and appreciation of wildlife
Wildlife and ecological systems
Human value and wildlife
Wildlife Conservation
Wildlife issues and trends
Alternative and consequence
Responsible human actions
Survival beside hunting and trading of animals
Environmental and conservation awareness.
Respect of the environment
Awareness of our interconnectedness Awareness and appreciation of wildlife
Protected species and species of hunting
Sustainability of wildlife
Production beside hunting endangered species

Topics
Population explosion
Deforestation
Soil erosion
Habitat loss
Wildlife depletion

Human and wildlife conflicts
Alternative animal farming
Wild and domestic animal
Habitat and animal adaptation
Balanced ecosystems
Food changes
Prey and predator relationships
Water cycles
CO^2 cycles
Pollution Habitat loss
Wildlife threats
Eco-tourism
Animal and crop farming techniques
Sustainable uses of wildlife

VI Strategies and techniques

How people receive new information and ideas, are important aspects of the conservation education programs.

Strategies

1. Extension or Outreach programs
2. School programs
3. Club and Non-Government Organisations
4. Mass Media-Television, Radio, Newspapers, Magazines...etc.
5. Special printed materials: Brochures, flyers, coloring books, comic books, story books, photo novels, etc.
6. Exhibits and demonstrations
7. Street theater, Road shows
8. Buddhist Myths, Cambodian talk telling, songs, panoply proverbs, poems, art displays and dancing.
9. Miscellaneous Materials: Bumper stickers,T.shirts, posters, games, toys, etc.
10. One-to-one communication.

Programs:

A. Public programs

1. School programs
2. Workshops, Lectures, Special events
3. Press, TV and Radio
4. Volunteer activities.

B. Interpretive programs

1. Signage, labels and Graphics
2. Interactive stations
3. Tour guides and zoo keeper talks
4. Visitor center
5. Printed materials

C. Conservation Education Outreach Programs

1. Street theater shows
2. Direct village conservation workshops

A. Public programs

Having established a captive audience of diverse groups and backgrounds, it is essential to design a variety of programs for various target groups and to present them in different ways. Furthermore, a conservation education program's content should be carefully selected and organized so that it will meet the needs of each target group.

1. School programs

The public's perception of education is often limited to formal school learning. In the zoo, the school programs is the only visible form of education since signs, graphics and other methods may not be directly perceived as education by the public. Despite the fact that school programs are a priority, they should not be implemented before the zoo is prepared to offer quality programs. Therefore, the long-term goals for school programs should be determined and different phases of implementation should be established first. Curriculum and the necessary materials will need to be designed. Individual topics for different age groups should be identified, and games and activities collected and designed for each group.

2. Workshops, lectures and special events

The zoo staff could run programs for adults and/or for children. The zoo could invite and coordinate outside resource people to offer lectures for the public and university students at the zoo. University students could also do research that could be beneficial for the zoo animal management. The zoo should also sponsor special community events such as World Environmental Day, King and/or Queen birthday and Tree Planting Day. However these types of programs require staff to be creative, motivated and organized to facilitate the events. In many cases other organizations or individuals can run the programs, but the zoo needs to take the initiative and organise events. The zoo needs to be active in any programs that take place on the zoo grounds.

3. Press, TV and Radio

Education should not be limited to the zoo itself. Mass media could also be an effective way to educate the public. It will also help in the publicity and advertisement of the zoo. Cambodia TV and Radio could both offer programming that is educational and entertaining. Again it requires staff creativity and initiative to make the arrangements and get them interested.

4. Volunteer activities

Volunteers can be of great assistance to the zoo. It is also a great way to get the community involved and to help the zoo to achieve some of its goals. Volunteer activities can include one-day events or long-term volunteer activities.

B. Interpretive programs

In the context of a zoo, "Interpretation" refers to all the programs offered within the zoo for the visitors. Collectively, interpretive programs are intended to explain, demonstrate and facilitate a zoo experience, there by interpreting what the visitors are seeing. It is a general term that includes a variety of educational materials. Therefore, program design requires long-term planning with different phases of implementation. The following is a list of programs that should be included in zoo education.

1. Signage, labels and graphics

Signs, labels and graphics need to be visually pleasing and interesting. They need to have consistent/complimentary color schemes and be located in strategic positions. Signs and graphics should be limited to priority topics so that visitors can comfortably absorb, rather than be over-

whelmed by information. The target audiences need to be identified and then priority topics should be selected and prioritized. It is essential to know how people receive information because signs, labels and graphics are open to individual interpretation. Careful planning is required to communicate the intended messages.

a. Signs: Signs should be inform visitors about the zoo rules, give directions and locate facilities. Signs should be bilingual (Khmer – English) to enable a large percentage of the visitors to understand, and as many signs as possible should have non-verbal graphics for those visitors who are unable to read.

b. Labels: Labels for exhibits should do two things: identify the exhibits and give visitors information about the exhibits. How much information and explanation is provided depends on visitor's interests and priority topics. Some exhibits may require more information which means that others should have less. As stated above, labels should not offer more than visitors can reasonably absorb.

c. Graphics: Graphics are the visual representation of a concept. They are essential for illiterate visitors and can provide all visitors with better understanding of certain concepts. Food webs are a good example of a concept that is difficult to convey without graphic representation. Knowing how visitors receive information is especially important for graphic design, as pretrial messages are even more open to interpretation than written ones.

2. Interactive stations.
Interactive displays need to be designed to be safe, durable, and to communicate specific messages. They must be designed for specific target audiences. Space and traffic flow need to be considered and again, topics should be prioritized, because there should only be a limited number.

3. Tour guides and zoo keeper talks
Verbal information transfer and visitor interaction with staff is essential for effective zoo education. Direct communication is one of the most effective ways to educate people because it can be personalized and visitors can ask questions. Positive interactions with staff will often be what visitors remember most.

a. Tour guides: A variety of programs should be implemented to accommodate the diversity of visitors. Some visitors are interested in general tours about the entire collection. Others want more specific, in-depth tours, such as just birds, or just endangered animals. Staff training is the most, essential aspect of a tour guide program. It requires knowledge about the collection, and perhaps more important, effective interpersonal skills. A training is needed to be designed that includes techniques and information for tour content. It should be decided if staff or volunteers will serve as guides.

b. Zookeeper talks: Zookeeper talks are opportunities for visitors to see first-hand and understand animal management at the zoo. There can be regularly scheduled talks for activities that keepers do every day, such as mounting the visitor carriage on the elephant. Keepers could also talk at feeding times. They can provide information that nobody else can, such as "This monkey is in a bad mood today"? This type of personal information is essential for instilling a respect for animals and teaching people to view them as other living beings. Keeper talks require staff training for proper animal handling and developing interpersonal skills. Scheduling and visitors' interests should also be considered.

4. Visitor center

The visitor center should provide visitors with a variety of information. It should include information on the different programs offered and current zoo events and news. It should be a resource center that has a variety of resources such as books, posters and pamphlets to be used in the center. Most of all, it should be a place to welcome visitors and prepare them for their visit by explaining the zoo rules, what is offered and what to look for. The visitor center should be located near the entrance to encourage visitors to make use of it. The layout of the room must be planned and materials must be created and attractively displayed.

Printed materials

A zoo map, guides and brochures on special topics need to be produced. Brochures are more specific and provide more in-depth information. Priority topics and visitor's interests need to be determined. Again, these materials should be bi-lingual. Printed materials should provide information in clear and simple language (and in the languages that the visitors can read). They need to be attractive and interesting. It needs to be determined which printed material will be free and which will be offered at charge. Printed materials need to be updated and new items offered on a regular basis.

D. Conservation education outreach programs

1. Zoo street theatre

This could be one of the programs for the general public that Cambodia Zoo can run in collaboration with other organisations, since they have already launched such programs and they have been very effective in raising people's awareness of and interest in environmental subjects. These programs could also include exhibits, demonstrations, films, slide shows, dramas, puppet shows, etc. The information presented could range from practical guidance in conservation techniques to general ecological concepts.

2. Direct village conservation workshops

This is another opportunity to raise education and awareness programs directly at the village level for people who are not able to come to the zoo. These village workshops will be organized in cooperation with local authorities (commune leaders, village chiefs, etc.) The workshop should be made by presenting conservation messages, slide or video shows, and other poster display.

VII. Implementation

To implement the above-defined programs, the Phnom Tamao Zoo must first recognize the paucity of its existing resources and capabilities. The following requirements must be made before launching any of the above programs.

1. Staff, equipment and material

One of the main constraints facing the Phnom Tamao Zoo Conservation Education section is the lack of trained manpower, and equipment for running conservation education programs. Therefore, staff requirement, equipment, housing and facilities are all major considerations. Even now, there are two staff and other volunteer people helping education programs at the zoo, but their knowledge is limited. So, a national zoo educator's training should be organized to provide these people experience and capacity to run the programs. A back up generator to avoid computer generated materials being lost due to electrical failures. Second, a computer and printer is also required for the efficient and quality production of conservation education materials. Third, a video camera and photographic camera is required for the production of videos, photos and slides. For example, events such as new baby animals born in the zoo could be easily videotaped and used as educational resources for the conservation education programs. Other equipment

such as a unit projector, slide projectors, microphones and speakers are also needed for presentations and talks.

2. Timetable

This masterplan is developed for a year time based implementation but it will also be used for repeated years if some programs be updated after work. However, a zoo educators' training course should be conducted at the beginning of the project start. The deadline for the project is from June 2001 to May 2002.

3. Coordination with other Zoo department and conservation organisation

Since Department of Forestry and Wildlife is already responsible for Zoo and other captive programs, the coordination will be need only with the Ministry of Education and other conservation organization such as Wild Aid, Sangkros Satprey and others to start and assist the masterplan is enough.

VIII. Ongoing Monitoring and Evaluation

"A conservation education program cannot be considered successful unless it is reflected in people's behavior and unless that behavior change favorably affects environmental problems". However, evaluation should be carried out while the education program is in progress as well as after the effort has ended on the basis of its short term and long term goals. Carrying out periodic evaluation while the program is in the progress can enable to make mid-course changes and improve the effectiveness.

IX. Budget estimates

A. Salaries		
1 Principle Coordinator	$300 x 12 months	$ 3,600
2 Staff	$180 x 2 x 12 months	$ 4,320
Zoo keeper (5 persons)	$60 x 5 x 12 months	$ 3,600
B. Equipment		
Generator (1 unit)		$ 4,000
Computer and printer		$ 1,500
Video camera		$ 1,200
Photographic camera		$ 600
Unit projector (Panasonic LC 50)Lurat		$ 2,300
Microphone and Speakers = 5 set x 120		$ 600
Slide Projector		$3,000
C. Surveys and training		
Survey for identifying target groups		$ 300
Zoo educator's training		$ 2500
Tour guide and keeper talk training		$ 1000
D. Public programs		
School program		$ 500
Press, TV and radio		$ 1500
Workshop, lecture and special events		$ 3000
Volunteer activities (transportation)		$ 1000
E. Interpretive program		
Signage, lables and graphic		$ 3000
Touch tables		$ 500
Visitor center (book, post, posters, Etc)		$ 2000
Printed materials		$1500
F. Communication Education Outreach Programs		
Zoo street training		$ 800
Village workshops		$ 3000
Total		$ 45, 660

Masterplanning Conservation Education Activities in Saigon Zoo

Saigon Zoological Gardens, Saigon,Vietnam
Doan Thi Thu Tuyen

Introduction

The present conservation education program at Saigon Zoo is only confined to students from grade 6 to 11, consist of lectures and discuss, practice, guide tour, video show (but now very often).

The purposes of the masterplan are to help Saigon Zoo to implement conservation education activities that we have doing, build up a new program for children and extend to the public and visitors. These activities will improve environment awareness and behaviour of people toward nature and wildlife.

II. Background

Saigon Zoo Botanical Gardens is located at the center of the Chi Minh City, South of Vietnam. It had been built since 1864 by French with its first name was Botanical Gardens. In 1956, the government of Saigon had the botanical garden renovated and rebuild and changed the name into Saigon Zoo Botanical Garden, this name has been maintained to the present.

A zoo is an institution for managing and exhibiting a collection of living specimens of animal and plant, it has a unique and enormous potential for conservation education. It can play a vital role in increasing environmental and conservation awareness to people. So, one of the most important roles of Saigon Zoo nowadays is to educate to the public on the conservation of living creatures and environments.

In 1995, Director of Saigon Zoo requested the CBSG of the IUCN to undertake a strategic masterplan for Saigon Zoo. One of the masterplan's key recommendations was the establishment of Education Department, managed by "an education coordinator who understands the education systems of the Chi Minh City and conservation education needs and roles of Saigon Zoo". The result of this recommendation is the establishment of Conservation Education Department on September 1995.

III. Philosophy, Goals and Objectives

Vietnam is a developing country; it has to face with many troubles so environment and wildlife hasn't received more attention yet. People don't care environment and wildlife if they don't believe the benefit from it.

However, there are some organizations and individuals know how important of the environment is and improved management of country's natural resources means protect life of ourselves. So, many efforts have been done to maintain the environment and wildlife. And the most important and reliable way to obtain the cooperation of people is to demonstrate how it will benefit them. And this is the role of conservation education activities in the zoo. Conservation education activity can be fulfilled under any type, which can improve the environmental damage and the survival of wildlife.

The main goals and objectives of conservation education activity are:

- Distributing children's knowledge of environment protection and consequence of environment pollution
- Encouraging children to perceive Vietnam fauna and wildlife conservation
- Providing children opportunity to interact and learn
- Increasing awareness of public about the role of nature and natural habitat projection
- Motivating public to do what they can improve environment management.

IV. Identification of target group

- Children (pre school and primary school)
- Teachers
- Visitors/public

V. Conservation themes and topics

1. Children

- Awareness about environment, conservation wildlife, endangered animals, interaction of human to nature.
- Topic:

Wild animal
Endangered animal
Adaptation
Habitat
Ecosystem and balanced ecosystem
Food web

2. Teachers and public/visitors

- Awareness about wildlife and ecological system, wildlife issues and trends, responsible human actions, human value and wildlife.
- Topic

Habitat loss
Deforestation
Endemic and endangered animals
Exploitation and use of wild animal – how to protect and develop

VI. Strategies and techniques

- Audio and visual program
- Tour guide
- Brochure, leaflet, material
- Animal show
- For children: organize with class with some outdoor activities. Example: Creative a house for specific animal, model of rainforest, game, quiz, tests.

VII. Implementation

a) Staff

- Volunteers to help conduct the program
- A designer to design material that delivered to children

b) Equipment

- Photocopy machine
- Colour printer

- Wildlife video film, slide

c) Material

- Brochure, leaflet, map of the zoo
- Materials delivered to children
- Teaching – aids (poster, plastic model, ...)

d) Timetable

Long-term activities (one year)

e) Coordination

This program needs to cooperate to to:

- Education Department of HCM: encourage and easy to children to participate in
- Media: HCM city television station, press, ...

VIII. Ongoing

The aim of this program is children from 22 districts schools in the city and 5 million city dwellers. We estimate that there is 20,000 children will participate in and million visitors will receive conservation messages from our program. After six months of running, we will make a survey to evaluate the effect of program and we will make some adjustments.

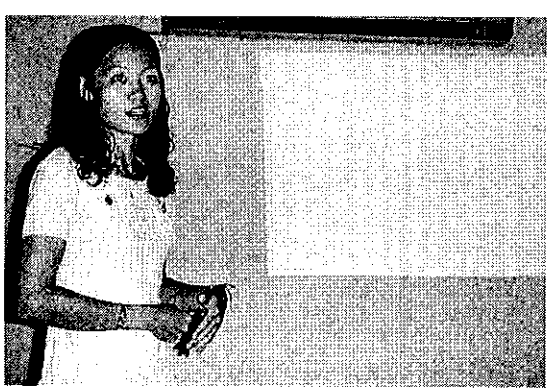
IX. Budget estimates

Training volunteer
Print materials, brochure, leaflet (1,020,000 version)
Photocopy machine
Colour printer
Teaching aids

X Conclusion

If this masterlan can be run, we hope that it can give some contributions to the conservation of wildlife in Vietnam in specific and in the world in general.

Doan Thi Hianh Tuyen
Zoo Educator
Saigon Zoo Botanical Gardens
Vietnam



Saigon Zoological Gardens, Saigon,Vietnam
Doan Thi Thu Tuyen

Master plan for the Educational Research Activities of the EPRC in CUC Phuong National Park, Ninhbinh/ Vietnam.

Introduction :

Education - zoos have a great potential to increase public and political awareness for nature conservation and environmental protection.

Conservation - zoos should contribute to species conservation by captive breeding programme (*ex situ* conservation)

Research - zoos can make important contributions to scientific knowledge (animal biology, behaviour, food and feeding, reproduction and others)

Recreation - zoos are mostly established on nice and quiet places and give the people a good impression to be "close to the nature".

A modern zoo can and should contribute to species conservation and against the loss of biological diversity but this is not relevant or possible for most of the zoos in developing countries. In Vietnam, our country research has also a subordinate position. Because the level of scientific knowledge mostly very low. Recreation is also often understand as "Entertainment".

Philosophy Goals, & Objectives :
The goal of the rescue center is different to a zoo and the main points of the EPRC are:

1. Conservation - The goal of the EPRC is to make a vital contribution to preserve some rare and endangered primate species, not only single individuals.

2. Research about the species specific conditions for captive keeping and captive breeding and for future release to the wild to otherwild populations or to establish new populations in habitats where the population already extirpated.

3. Education is not a main task like it is for a zoo but the EPRC should like the possibility to educate the public and to inform about the threat for endangered species and especially endemic primates of Vietnam. In last five years was increasing of the visitors in the National Park. Last year 50.000 visitors visit the park with 10% are foreigners.

Target groups:
Based on our center goals, the target group for education of the center should be:

1. Forest protection authorities, wide spread from low level (normal rangers) to the high officer in the provinces and center administration.

Mrs Nguyen Thi Thu Hien, Project Assistant, EPRC, Vietnam

2. Studies in biology, forestry, and environment) probably also older children to influence the choose of the profession or occupation (to the direction for biology, nature conservation or environmental protection) to suggest or stimulate activities to establish or to work in "conservation groups" and Conservation clubs"

3. Policy makers for conservation and environmental problems, like biological scientists and also higher Government officials.

Conservation themes and topics:
The main message of EPRC has to improve the protection for some highly endangered primate species on the brink of extinction.

Especially the forest protection authorities and the Government official should be aware about the danger and threat for these species. Included in the list of the worlds 25 most endangered primates species are 5 Vietnams species 20% of the worlds most endangered primates occurs in Vietnam.

The forest protection authorities, Government officials and politicians should beware that they have responsible for a Vietnams National responsibility to preserve Vietnamess endemic species.

The main threat for the endangered species are hunting. The forest protection authorities should encourage to strict law enforcement and to reduce the poaching and (wildlife) trading.

Strategies and techniques:

1. Education training by lecturer and course for forest personal (rangers).

2. Design, print and distribution from information material for forest protection personal (rangers). (Postcard, Brochures or leaflets) Rangers poster with information about protected species and with the Information about punishment for violators, villagers, public place.

3. Field guides to identified protected and endangered species.

4. Publications in print media about the threats of primates (popular and scientific papers, colouring book for children).

5. Presentations on scientific or national conferences.

6. More or less regularly reports on TV news about the necessary protection and problems (protection, hunting, or animal trade) also reports on Radio and press.

7. Movie for TV about primate protection in cooperation with the Vietnams scientific film center.

8. Exhibition for the public on the new year time (MARD exhibition)

Implementation:
The team at the EPRC to conduct education work is very small. It consists of only four persons, one project leader, one project manager, one veterinarian and one biologist.

All Education material must be developed designed and produced, from the EPRC leader crew. The equipment to develop and produce educational material is very simple - for example it do not exist an office computer equipment, no photo or video equipment. In use only private computer and others. Close cooperation for education campaign exist with Vietnams offices (TV, Radio, Press,) and Foreign organisation, but not with Vietnams zoos.

Evaluation:
The education activities of the EPRC had a high influence to make the laws for animal protection and threat for endangered and protected primates and animals in General public in the local forest protection authorities in North Vietnam (Ranger station, Ranger Departments in District or Province) This is the first important step for law enforcement and persecution. The EPRC is also a partner for discussion. Over decisions for the protection area system in Vietnam.
The EPRC Cooperations with the forestry college Vietnam and biological department of National University, students worked in the institution for practical & Diploma

Budget:
The EPRC has not a fix budget for education. All funds is to raise from different sources inside and outside the country (Embassies, Zoos community, around the world, nature conservation, organisations, private donors). The activities are also depend from the raised funds and different over the year the required infrastructure and equipment for organizing the education programmed are as follows:

- Signboards at the visitors center - $ 500
- Sticker and education material - $ 200
- Posters and postcard - $ 1000
- Information brochures, leaflets - $ 200

Various communications systems will be use like:
- Computer - $ 2000
- Printer - $ 1500
- Photocopy machine - $ 2000

Conclusion: Long term project of the EPRC will conduct research, protection and education activities for Vietnamess Nature Conservation.

Singapore 21 March 2001

Nguyen Thi Thu Hien
Project Assistant
EPRC - Vietnam

Philippine Eagle Foundation, Inc.

Education Master Plan

Dennis I. Salvador & Angelito Cereño

Introduction

The Philippine Eagle Foundation is a private non-profit organization dedicated to the conservation and protection of the critically endangered Philippine Eagle. By using the eagle as its flagship for conservation, it has been able to undertake direct actions that benefit the species, other endemic wildlife and the people who share its rainforest habitat with the eagle. Its track record of successes are considered milestones in Philippine natural resources conservation history.

The PEF prides itself with taking direct action and achieving results. This has earned itself an enviable reputation among the NGO community in the Philippines. More importantly, the dedication and transparency with which the Foundation undertakes its tasks have engendered a broad base of support among grassroots communities, schools, local government units, the private business community, and the general public.

The PEF is funded almost entirely by private voluntary contributions and has never had any direct financial support from the national government. By employing an holistic approach to species management, it was able to address its mission despite limited resources. This integrated approach involves field research, captive breeding, community-based enterprise development, and conservation education. Education is considered the lynchpin that ties these programs together and promotes communication of PEF efforts to the public.

Background

The ***CONSERVATION EDUCATION PROGRAM***
is directed at furthering support for action based initiatives by increasing public awareness on and understanding of raptors and their environment.

Our small collection of endemic wildlife at the Philippine Eagle Center in Davao City serves as an education resource for people of all ages from all walks of life. The animal exhibits at the Center provide people with a window for appreciating animal behavior and the roles they play in our ecosystems. The program also serves as our extension arm for reaching out to people. Education extension includes working with teachers, radio broadcast stations, the print and television media, civic organizations, and grassroots communities. Over 1,500 secondary school teachers have been trained through our projects. Our projects with the private business sector have also helped further public awareness and muster support for our work.

But despite its importance to furthering conservation goals, the PEF's education program receive limited funding or support. Although the education program has been able to attract contributions to our work, its potential has not been fully realized. This may probably be attributed to the staff's lack of training and appreciation for education's potential for generating public involvement and revenues essential to the pursuit of our mission. The Zoo Educators' Course recently held in Singapore is considered an important first step in this direction.

Philosophy, Goals & Objectives

"The Philippine Eagle Foundation believes that the fate of the vanishing Philippine Eagle, the health of our environment and the quality of Philippine life are inextricably linked. We are therefore firmly committed to promote the survival of the Philippine Eagle, the biodiversity it represents and the sustainable use of our forest resources for future generations to enjoy."

Towards this end, the Conservation Education Program aims to promote public awareness on and understanding of wildlife and their environments. Education goals will be achieved through strategic Center-based and Extension-based approaches. Specific goals for 2001 include:

1. To enhance the learning experience of schoolchildren visiting the Philippine Eagle Center;
2. To further public awareness on Philippine wildlife and the role they play in our ecosystem;
3. To build capability of teachers in teaching life sciences in the classrooms;
4. To provide hands-on opportunities for tertiary students on conservation work;
5. To promote awareness and direct participation of upland communities in the conservation of natural areas;
6. To generate revenues in pursuit of conservation goals.

Identification of Target Groups

A. General Public
   a. Adults
   b. Children

B. Academe
   a. Teachers
   b. Pre-school
   c. Primary
   d. Secondary
   e. Tertiary

C. Upland Communities
   a. indigenous peoples
   b. migrant farmers
   c. women

D. Media
   a. radio broadcasters

E. Corporate
   a. local business community in Davao City
   b. business community based in Manila
   c. multinationals

Conservation Themes & Topics

Children:

Themes - conservation awareness, respect for environment, role of children in conservation, interconnectedness of life, human impacts

Topics - animal identification, resource use, adaptation, animal behavior, food chain, deforestation, watersheds, water cycle, population, traditional values

Adults:
Themes - awareness and appreciation of wildlife, human values and wildlife, deforestation, mitigation planning and protection, sustainable resource use, community capability building, current wildlife issues and trends, opportunities for taking action

Topics – biology and breeding behavior of the Philippine Eagle, role of wildlife in ecosystem functions, resource and land use, deforestation and wildlife populations, soil erosion, community organizing, leadership training, rapid resources assessment, local area management, sustainable livelihood techniques

Strategies & Techniques

A. Center-based Actions
   a. staff re-echo and training
   b. keeper-talk
   c. lectures and audio-visual presentations
   d. exhibits
   e. special events
   f. guided tours
   g. information & campaign materials – brochures and posters
   h. signage improvement
   i. enclosure improvement
   j. wild trails project
   k. touch tables
   l. volunteer training and development
   m. open classroom project

B. Extension Actions
   a. teachers' training
   b. radio broadcasters project
   c. training of partner-communities in the uplands
   d. media campaign
   e. posters and flyers

Implementation

A. Staff, equipment and budget recommendations

The education program is currently manned by a program manager, two education officers, and three allied staff (gates, gift shop, and maintenance). The staff requires further training to improve capacity for furthering education goals. A new building will be built to serve as the education facility as well the program office. Current equipment available to the program include an overhead projector, slide projector, projection screen, TV and VCR machine, an outdated computer, camera, and a copying machine. The program will need a LCD projector, two new computers and a digital camcorder.

B. Timetable

On-Going

There was a recent visitors' survey conducted at the Center conducted by the Holy Cross of Davao College faculty. The data is currently being collated and analyzed. We plan on using the results of this survey to undertake corrective measures and launch activities on the basis of information provided by the survey. A quarterly evaluation and monitoring of all activities and stand-alone projects undertaken by the education program.

Budget Estimates

Personnel	P 583,200
Information campaign materials	P 350,000
Education Building	P 2,485,000
Projects' monitoring	P 100,000
Equipment	P 200,000
Furnishings	P 200,000
Training Management	P 310,000
Documentation	P 60,000
Communications	P 72,000
Repairs and Maintenance	P 50,000
Office Supplies	P 60,000
Transportation	P 66,000
Open Classrooms	P 473,250
TOTAL PROGRAM COST	***P5,009,450***

Conclusion

This master plan will serve as the education program's guideline and benchmark through the year 2001. Specific targets have been quantified for each project or activity. This information is available upon request.

We believe this master plan and the processes involved in its development can be a useful tool in helping our own staff understand organizational goals, program goals, implementation tools, who our target audiences are, and the resources available and needed to make this work. Additionally, we want the staff to have a sense of ownership over the plan and thus motivate them to see its goals through. Because of the implications and benefits we can derive from developing an annual master plan, we have made a decision to incorporate it into our annual review and planning processes.

Actions	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
Staff training	x											
Tours, keeper talk, presentations	xxx	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx
Special events		xx		xx				x			xx	
Exhibits			xxx		xxx	xxx	xxx		xxx	xxx		xxx
Poster, brochures, flyers				xxx x								
Open classroom				xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x
Trainings		xxx x	xxx x		xxx	xxx	Xx x	xxx	xxx	xxx	xxx	xxx
Education Bldg.				xxx x	xxx x	xxx x	xxx x					
Touch tables								xxx x				
Volunteer devt	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x		xxx x	xxx x	xxx x	Xx
Media campaign	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx x	xxx
Surveys	xxx x			xxx x			xxx x			xxx		

Education Master Plan
Malabon Zoo & Aquarium Zoo
Emmanuel B. Tangco

I. Introduction

Mr Emmanuel Belmonte Tangco, President, Malabon Zoo & Aquarium, Philippines

My 5 year old son hugged me before I left for Singapore and the following conversation issued:

Son: "Why are you leaving again"
Me: "Because I have to learn about Zoo Education and Zoo Education Masterplan"
Son: "But I thought you know everything already"
Me: "No, The only thing I know much about is how much I love you!"
Son: "But why in Singapore"
Me: "Because there I will be taught by the best teachers in the world -- Ms. Sally Walker & Mr. Tan Kit Sun "The Malabon Zoo for the last ten years have taught more than a million students to conserve nature. The importance of Zoo Education to the youth has produced over the past ten years new professionals who have conserved about the environment". "To be even more effective the Malabon Zoo through a Masterplan guided and inspired by the Singapore training will now be even more effective and efficient in "Churning" out lovers of nature and environment"

II Background

Thirty-nine years ago, my parents brought me to the forests of Mindoro. At night the forests around me were aglow in flames. During the daytime, the whole place was belching with smoke. While walking, a small black bird fell on top of my head and while it lay there on the forest floor, its eyes started at me. That share would haunt me in my dreams for many years. I saved the book of Noah's Ark and after the trip, I decided to make a Noah's Ark in our Malabon property.

Every time I got a high score in my tests, I would request from my parents a pet. I started with rabbits, parakeets, turtles, goldfishes, angel fishes, etc. And as I grew older, I saved my allowances for the feeding and further acquisition of additional pets for the "Malabon's Ark". My family of animals grew and I was inspired by the care and preservation of my now increasing population of endangered species. Despite this, the nightmare of the dead black bird staring at me continued to occur. My work involved travel and we would fly over an island with forest cover. A month later, flying over the same island, the forest would have disappeared due to logging or burning. What bothered me most is the statistics I read that the Philippines had 12 million hectares of virgin forests before, but after the logging and the burning, there remained only 900,000 hectares. Even now, the Phillippine population continues to grow and the virgin forests continue to dwindle.

Through my reading of the life stories of the world's greatest environmentalists/ conservationists, they have a common denominator, that is, in their youth, they were exposed first hand to living nature . . . an eye to eye contact with a living tiger or lion, or orangutan, or a forest experience or a dive in the coral reefs. From this first hand experience, the seed of love for nature is implanted into their hearts and minds. The charisma of living animals and fishes has a strong and lasting

impact in the hearts and minds of young ones. And when they grow up they become the greatest defenders of nature and the environment. This common denominator struk me as lightning in one of my flights up there in the sky. I realized that I have living nature there in my backyard. I realized that the future leaders of the country, the youth, are born, raised and educated in the concrete jungles of Metro Manila and other urban communities in the Philippines. Living nature has more or less disappeared and chances of these children seeing it was nil.
Thus I made the decision to open my collection to the public and named the place of Malabon Zoo and Aquarium with the mission to instill positive environmental values and attitudes in the Filipino people via first hand exposure to living nature.

Immediately, the first group who entered our gate was the principal of a nearby elementary school and all his young students, many of whom saw for the first time in their lives, living creatures from out of this world. Nearing the end of their enthusiastic visit, the principal requrested all his students to sit down around the cage of a small bird. The principal then requested me to say a few words to the students. I told him I had nothing to say, that I had no idea what to say. But the students started clapping their hands and I addressed the students : "these are animals that stay in our forests. But because man continues to cut down and burn our forests, they will soon all become extinct. Do you want this to happen? And I heard the loudest "no" in my life. Then I asked : "If you don't want this to happen, then what can you do as young people?". And there was a long silence in the whole zoo as the children had no idea. I said: "Plant a tree today in your backyard and take care of that tree until it grows old. You are the greatest influence on your parents. When your parents see you taking care of that tree, they too will take care of the environment." And this message is repeated everyday at the Malabon Zoo & Aquarium beginning that very first day.

And finally, that very same evening of the day I opened the zoo to the public, I had the most wonderful dream. That black bird that fell on my head in Mindoro and which started at me in death on the first floor became alive, flew at my eye level, and with a joyous smile said, "You're doing the right thing, Manny." Then it flew away and that was the end of the nighmares.

Since then, many school educational field trips and families go to the Malabon Zoo & Aquarium. As such there is an urgent need for me to learn the latest technique, skills, activities, programs, materials, information on zoo education so that the Malabon Zoo and Aquarium can give the best standard of zoo education to the public it serves reagarding why and how we should all work together to protect and conserve wildlife, nature and the environment. And this the need for education masterplan emerged.

III. Philosophy, Goals and Objectives
Mission Statement: To provide emotional growth experience that will incite action to conserve the environment

IV. Identification of Target Groups:
Adults & Children

V. Conservation Themes and Topics
Each animal is called an "Ambassador"
Each exhibit has a letter from the "Ambassador" therein
Each letter starts with an attractive word or phrase which has a theme of "What in it for me (Humans)". This is to grab the attention of the zoo visitor.

The middle part of the letter contain how nature can help in the above human need. And the last part contains what day to day or practical actions/ activities we persons can do to achive the "What's in it for me".

VI. Strategies and techniques

Here we would like to quote Prime Minister Goh Chok Tong n a speech to leaders from six African nations on 7 November 1995.

"Singapore learnt a great deal from other countries in the early years of our development. If we have done well today, it is due in no small part to the help that we received from other countries. Not only did we learn real skills, but we also avoided their mistakes. We did not try to re-invent the wheel. If you think our experience is relevant, we are happy to share it with you."

We are extremely fortunate to have been sponsored by the Singapore government to attend this zoo educational course. Here we were given the latest and most effective sign boards by Ms. Sally Walker.

Due to the fast disappearing forest which we are experiencing in the philippines, we do not intend to reinvent the wheel. We want to immediately implement in the happen zoo the things shared with us by the resources persn. Those are all written and printed in the zoo education book and handouts given by the course.

VII. Implementation

We want to do something that is doable and not present some high facilitating plans which will never really be implemented. On the short term we want to come out with 300 new billboard which will replace our current billboard which will replace our current billboard which only last for about 1-2 years because of the low quality of materials used. The rain and the heat really do a lot of ware and tear to low quality of material used in our current signboards. We want to have new high quality signboard containing messages crafted locally and those provided by Ms. Sally Walker. These billboards will be metal sheets painted with epoxy primer after which same will be covered with high quality enamel paint.

On the long term we would like to install a sound system that has speakers located all over the zoo. So that when we have a show in one of the exhibits then all zoo visitors can hear the conservation message that we say during the shows which we give every 30 minutes. So this give us more change to influence people who are inside the zoo. We consider this as something wonderful because if somebody stays in the zoo for about 2 hours, he/she would have heard at least 5 lectures on conservation because loud speakers are located all over the zoo from the canteen to pathways to the comfort rooms. If after installing the sound system there is still excess fund then we can purchase our first overhead projector and slide projector and screen.

VIII. On-going

All is dependent on the available fund. If we get funding for the new signboards then we can finish same by October 1, 2001. If we get funding for the proposed loud speakers same can be ready by December 1, 2001. If no funding comes, then whenever there is extra fund then we will proceed accordingly with the above.

IX. Budget estimates

1. US$ 3,000.00 for the 300 signboards
2. US$ 3,000.00 for the New Sound System
   o/h Projector
   Slide Projector
   Screen

X Conclusion

We believe that people remember
What they near 10% of the time,
What they see 20% of the time,
When they laugh 30% of the time,
When they cry 40% of the time,
Student field trip 90% of the time
As part of Childhood memories

So our goal in the Malagon Zoo is to give our zoo visitors an emotional experience and hopyfully they will be teary eyed as they leave the zoo. This emotional growth experience will incite them to action geared at conservation!

MTP Zoo Master Plan For Education Programme

Mr. Musnarizal B. Abd. Manap, (Education Officer, Taiping Zoo, Malaysia)
Mr. Mod. Fuzi B. Zulkifli, (Wildlife Assistant, Melacca Zoo, Malaysia)
Ms. Kuennie Lee Yoke Kuen, (Biological Researcher, Penang Butterfly Farm, Malaysia)

Introduction

A zoo is a place where wild animals (from the smallest to the biggest) are kept in captivity and exhibited. A zoo has its own important roles and objectives. It plays an important role in conservation, i.e. breeding wild animals, especially the endangered ones. A zoo is also a resource center for learning wildlife conservation and it is functional as a living classroom.

The purpose of this paper is to help MTP Zoo to design and implement conservation education programs that will effectively bring improved environmental management. Through education, a zoo should create a learning ground for the public with the young generation as the main target, not forgetting the adults. Education should increase their understanding and appreciation of wildlife conservation.

With a stimulating conducive environment, to learn more about wildlife; a zoo should have a proper educational program in order to fulfill the roles. And with a proper zoo educational program, it represents our sincere to be a medium to educate and raise public awareness.

Background

A zoo as an institution for managing and exhibiting a collection of living specimens of wildlife has unique and enormous potential for conservation education. It can play a vital role in bringing environmental and conservation awareness to the Malaysian population but initiating an Educational Program for a zoo is not easy. MTP plays also an important role in wildlife conservation in the country, while providing the recreational opportunities for people from all walks of life. Until today, MTP as created awareness and promoted education and conservation activities. It still continues its services towards its missions. The exhibits are presented in an environment similar to the animals' natural habitat or well know as open concepts.

Successes in Recreation:

- The first zoo in this region to exhibit the rare Sumatran Rhinoceros
- The largest collection of hornbill in this region
- The only zoo to exhibit the smallest primates of the world
- Experience on the free flying butterflies (more than 100 species) in an enormous enclosure

Successes in Conservation and Research:

- The first zoo in the world to have Sumatran Rhino born in captivity (1987)
- Well known in the world for the Malayan Tiger Breeding Program
- Managed to breed up to 120 species of Malaysia butterflies

With its already established audience, MTP Zoo must not miss its opportunity to educate the diverse groups of Malaysians.

Philosophy, Goals and Objectives

Philosophy

"Knowledge is not necessarily available form the classroom, but can be gained from anywhere, anytime and especially from our environment."

Goal

To raise-up awareness and appreciation for our nature resources.

Objectives

1. To increase awareness, develop positive attitudes; encourage appropriate practice through education activities in the community regarding wildlife and nature conservation.
2. To make use of recreational and tourism opportunities in the zoo as sufficient teaching medium in the role to educate the public.
3. To motivate the public to do what they can for conservation

Identification of Target Group

For successful conservation education, it is important to identify the target audiences. Survey needs to be conducted to identify their educational needs. Survey questionnaires should be designed for different target groups and should include the general public, foreign tourists and the whole community of both well educated as well as uneducated persons.

Probable target groups

General public:
Adults

Students:
Primary school (7-12 years old)
Secondary school (13-17 years old)
Tertiary school (18-23 years old)

Conservation Themes and Topics

The conservation education program must be sensitive to the local cultures, languages and different ethnic backgrounds. Understanding of key environmental issues is important for the development of successful conservation education programs.

Suggested themes

Adults: Refresh human values on wildlife and environment; awareness of the responsibility of human actions

Students: Knowledge of living biodiversity; awareness of our natural resources and interconnectedness; environmental and wildlife conservation.

Suggested topics

Adults:
- Habitat loss: loss of aesthetic values
- Wildlife depletion: illegal trade, poaching etc.
- Destruction and pollution: plantation development, chemical waste etc.
- Conservation needs

Students:
- Biodiversity (Animal Kingdom)
- Balanced ecosystem; food chain, prey and predator relationship
- Problems for nature (deforestation, pollution, poaching, bush fire etc.)
- Function of zoos and human responsibilities

Strategies and Techniques

Suggested strategies:

- Outreach programs
- School programs
- Club and NGO's
- Miscellaneous materials; posters, caps, stickers, t-shirts etc.
- Audiovisual program
- Mass media
- Printed materials: brochures, flyers etc.
- Exhibition
- Demonstration
- One to one communication; word of mouth

Suggested programs:

- School outreach programs
- Guided tours
- Workshops, lectures
- Seminar, courses, forums
- Press and media
- Graphics and signage
- Printed materials/contests
- Audiovisual programs
- Websites
- Behind the scene activities
- Club and society activities
- Keepers talk

Implementation

To implement everything, the existing resources and capabilities must be recognized.

First priority: There should be an Education Department or Unit with an officer as the head.

Second priority: Coordination
Equipment (sponsorship, funds)
Well-trained and qualified facilitators (staff training)

Time Table (short and long term)

Educational Programs	Status	# of participants
Coordination with other departments and organizations	ongoing	
Educational Projects:	school holiday:	
- Science lectures	November-December	20 pax/group
- Breeding program	2001	
Exhibition and workshop	13 April 2001	
Information center	ongoing	
Interpretation room	ongoing	
Newsletter/bulletin/zoo-print	quarterly	500
Seminars/courses	end of September	200
Slide shows	monthly	30 x 12
Shows and presentations	monthly	100 x 12

Ongoing

Comment card will be given to every entry, randomly, after every presentation while periodic evaluation will be done for every continual program and there will be a post-mortem for every single program.

Proposed Budget for Educational Master Plan

Printed material (brochures, flyers, posters, worksheets etc.)	RM 21,000
Club activities	RM 15,000
Publication (advertising and promotion purposes)	RM 7,000
Signage development	RM 43,000
Refreshment for teachers and volunteers	RM 5,000
Equipment (computer, projector, printer, audio-equipment)	RM 10,000
TOTAL BUDGET	RM 101,000

Conclusion

It is hoped that these programs will contribute to society, mainly the Malaysians, to be more conscious and aware of issues related to nature and the environment. Furthermore, it will help the students to enhance and increase their skills and knowledge thus achieving a generation with high sensibility towards wildlife conservation.

Miss Lee Yoke Kuen, Biological Research, Penang Butterfly Hous, Malaysia

Mr Musnarizal Bin Abdul Manap, Education Officer, Taiping Zoo, Malaysia

Mr Mohd.Fuzi Bin Zulkifli, Wildlife Assistant, Zoo Melaka, Malaysia

Master Plan for Vientiane Zoological Garden Education in Laos

Saikham Bouathongthip, Sakpasert Xixanone, Phetsamone Soulivong

Introduction

As Laos has established the first and the only Zoological Garden, it is essential to initiate a zoo education programme for people of Laos as a whole, especially the people of Vientiane to begin to learn and know about their animals.

Background

Vientiane Zoological Garden is located in Tulakhome District, Vientiane Province, which is 70 kilometers away from the capital city Vientiane. It was officially opened to public in 1994, at the time that the zoo was state-owned business unit. Because of mismanagement, the zoo was not profitable; at the meantime the government was unable to finance the zoo because of its financial difficulties. The government has semi-privatized it and the management and ownership has been transferred to private hand, although this process as not been finalized. Since this change has been made, the zoo has developed in a more positive direction.

As the zoo as evolved, zoo education needs to go parallel wit it, in order to turn public attention to the zoo, which will become the elements of the zoo's viability in the future.

Philosophy, Goals and Objectives

The goal of this programme is to:

- Enable public to understand about animals and their importance to human beings
- Change public attitudes and behavior towards animals, so they will stop harassing and hunting them
- To train staff and personnel to be zoo educators
- To put zoo education into formal education course of the country

Identification of Target Groups

The target groups of this programme are:

- Primary schhool, lower and upper secondary school, university, forestry, agricultural and zoological students. These groups normally come to the zoo three or four times per year as their study tour programme
- Middle and upper class families who have their own vehicles to travel to the zoo, which is 70 kilometers away from the capital city Vientiane, where the majority of the people lives. These groups come to the zoo at the weekend in most of festival, national, woman and children special days.
- Foreign visitors and tourists
- General public

Conservation Theme and Topics

Themes: awareness of endangered and rare species; awareness of nature and acceptance of animals' rights to live.

Topics: white and pigmy elephants are endangered and also national symbols; peacocks, peasants, douclanquers, pangolins, antelopes, tigers and calescence are also facing danger.

Strategies and Techniques

- To build a 10 x 15 meter building, in the zoological Garden to be used as conference, seminar, workshop, lecture and teaching room. It will be equipped with studio equipment such as overhead projector, white screen, computer, etc.
- To hold a short training course for trainers, which will take 3 months. In making this possible, overseas teachers are necessarily needed.
- To design and print teaching materials, signs, transparency, stickers, posters, etc.

Mrs Phetsamon Soulivong,
Technician
Ministry of Agriculture and
Forestry, Laos

Implementation

Staff: Office assistant
Tour guide
Coordinator

Construction materials of new studio are listed in Annexure A.
Equipments needed are listed in annexure B.
Timetable attached as Annexure C.

To enable this project to be implemented, coordination, assistance and cooperation from Forest, Zoological and Business Departments, and other relevant governmental bodies are necessarily needed.

Sakpasueth Sixanone,
Veterinarian, Vientiane
Zoological Gardens, Laos

Feedback

- Survey form will be given to the visitors, get them to fill them and return them to the Zoo
- Verbal survey
- Statistic collection and make it into charts or graphs

The results obtained from such surveys will be treated as guidance and adjustment of the plan in the future. The survey will be carried out quarterly and annually.

Mr Saikham Bouathongthip,
Acting Office Chief, Ministry of
Defence, Laos

Budget

Studio construction budget is US$ 14,202 as specified in Annexure A
Studio equipment and material budget is US$ 4,250
Staff and teacher's salary is US$ 14,400 per annum
Printing and printing-material costs US$ 5,200
Total: US$ 38,050.

Conclusion

This will be the first zoo education programme that has been established in Laos, which aims to turn public attention of Lao people as well as relevant government bodies to the Zoo. Not only to educate people, but also their coordination, cooperation and contribution are necessarily needed in order to achieve this plan. Besides, external technical and financial assistances are determined elements of making this plan possible.

Annexure A: Studio Construction Plan

Construction materials are needed (all amounts in kips):

No.	Description	Unit/price	Amount	Total
1	Cement	36,000 kip/ton	20 tonnes	720,000
2	Bricks	80 kip/piece	5,000,000 piece	400,000,000
3	Sand	150,000 kip/truck	15 trucks	250,000
4	Gradular stone	100,000 kip/truck	15 trucks	1,500,000
5	Iron bars	2,500,000 kip/truck	15 trucks	27,500,000
6	Timber	1,500,000 kip/m3	50 m3	7,500,000
7	Corrugated irons/ roof tiles	8,000 kip/piece	3,500 piece	28,000,000
8	Nails	7,000 kip/kg	50 kg	350,000
9	Window frame	79,000 kip/piece	5 piece	395,000
10	Door frame	96,000 kip/piece	2 piece	192,000
11	Windows	150,000 kip/piece	5 piece	750,000
12	Doors	65,000 kip/piece	2 piece	130,000
13	Window pane	34,000 kip/pane	5 piece	170,000
14	Air conditioner	2,400,000 kip/unit	2 units	4,800,000
15	Keys	25,000 kip/unit	2 units	50,000
16	Floor tile	3,100 kip/piece	350,000 piece	1,085,000,000
17	Paints	79,000 kip/piece	18 piece	1,422,000
18	Paint brush	14,000 kip/piece	5 piece	70,000
19	White paint			150,000
20	Electrical appliance			340,000
21	Water equipment			760,000
			Total	12,781,800 kip = 14,202 US$

Annexure B: Studio Equipment and Furniture

No.	Description	Unit/price	Amount	Total
1	Computer	1,600 $	1	1,600 $
2	Printer	400 $	1	400 $
3	Scanner	150 $	1	150 $
4	Overhead projector	500 $	1	500 $
5	Video camera	1,200 $	1	1,200 $
6	Screen	75 $	1	75 $
7	Television	750 $	1	750 $
8	Video player	350 $	1	350 $
9	Whiteboard	25 $	1	25 $
10	Tape player	400 $	1	400 $
11	Table	25 $	20	500 $
12	Chair	15 $	25	375 $
13	Filing cabinet	75 $	2	150 $
14	Fan	25 $	4	100 $
15	Office supply			750 $
16	Fridge		1	350 $
17	Photocopier		1	450 $
	Total			4,250 $

Annexure C: Time Table

No.	Jobs to be done	Period
1	Organize teamwork	September
2	Construct studio	October - July
3	Train personnel	August - October
4	Zoo education begins	November - December

INDONESIA

Ms Sharmy Prastiti,
Animal Curator (Hospital Staff),
Taman Safari Indonesia
Bogor, Indonesia

Ms Litasari, Veterinarian
Surabaya Zoological Garden,
Surabaya, Indonesia

Miss Endang Budi Utami,
Head of Division of Gen. Affairs,
"Taman Burung",
Taman Mini Indonesia Indah,
Jakarta, Indonesia

Mr. Maskana
Environment Department
Ragunan Zoological Park
Jakarta, Indonesia

Mr Marta Amnan, Head
PKBSI Education Division,
Indonesia Zoological Park
Association (IZPA).
Jakarta, Indonesia

Mrs Yanni Puspitaningsih,
Animal's Recorder,
Yayasan Margasatwa Tamansari
(Kebun Binatang)
Bandung, Indonesia

Mr Oman Karmana M.S., Director,
Yayasan Margasatwa Tamansari
(Kebun Binatang) Bandung,
Indonesia

Master Plan for Zoo Education in Indonesia

Marta Amnan, Litasari, Maskana, Sharmy Prastiti, Yanni Puspitaninsih, Endang Budi Utami

1. Introduction

Today the ultimate goal of zoos is the conservation of animals in the wild. In order to achieve this goal, zoos conduct research on the habitat of animals. By educating people in general about the status of and the threats to wildlife, zoos create support for conservation. The objective of zoos is conservation, research, and education.

For education, the zoo has tremendous potential for educating people of different ages and backgrounds about wildlife. They are excellent institutions to increase public awareness about the values of nature. Considering the number of visitors to zoos, the scope of zoo education becomes large and positive. Zoos would be appropriate places to impart information to visitors about animals, their habitats, bio-ecology, and threats for their existence.

Indonesia is the World's largest archipelago extending between two continents, Australia and Asia. In tropical countries, it has a higher number of mammals including both Asian and Australian. Nowadays, the animal habitat, especially the rain forest area is exploited heavily for many purposes. Therefore, many habitats are reduced and populations of wild animal decreased.

For increasing public awareness and understanding about wild animal and their habitat, education is very important and zoo is one institution that can educate people best on wild animals and their habitat as well as environmental issues.

2. Background

Indonesia is a big country with more than 28 zoos spread all over the country. The large zoos are in Java and Bali, i.e., Ragunan Zoo, Bird Park and Fresh Water Aquaria – TMII (Jakarta); Safari Park (Bogor); Bandung Zoo; Gembiro Loka Zoo (Yogyakarta); Surabaya Zoo; Safari Park Prigen and Bali Bird Park – Reptile Park. The zoo in Java and Bali important to educate the people because most of the population stays in Java and Bali.

3. Philosophy, Goal and Objectives

Philosophy:

Education in the zoo is very important to increase knowledge and understanding the people about wild animal and their habitat and how to conserve them, because many people visit zoo.

Goal

Conservation wild animal and their habitat

Objective

1. To educate pre-school teachers, elementary school teachers and high school teachers (to be conducted by Ragunan Zoo, Bird Park TMII, Taman Safari Bogor, Banding Zoo and Surabaya Zoo.)

2. To educate zoo educator from zoos division, e.g., all divisions of zoo in Indonesia (to be conducted by Indonesia Zoological Park Association (IZPA).

5. Conservation Themes and Topics

Workshop for Biology Teachers
Bandung Zoo and Surabaya Zoo

Masterplan for Education *Bandung Zoo and Surabaya Zoo* -- Workshop for Biology Teachers		
50 persons elementary school teacher for 1 day		
- Transportation	50 x Rp 50,000	Rp 2,500,000
- Meal and Tea Break	50 x Rp 50,000	Rp 2,500,000
- Accommodation	1 day x Rp 500,000	Rp 500,000
- Printing booklet	50 x Rp 50,000	Rp 2,500,000
- Stationery	50 x Rp 50,000	Rp 2,500,000
- Honoration	50 x Rp 200,000	Rp 10,000.00
- Lecturers	4 x Rp 300,000	Rp 1,200,000
Total		Rp 21,700,000
50 persons junior high school teacher (1 day)		Rp 21,700,000
50 persons senior high school teacher (1 day)		Rp 21,700,000
2. Staff (2 persons)/ temporary staff		
Salary: 2 x 12 months x Rp 300,000		Rp 7,200,000
3. Publication		
Publication, guidebook, leaflets, brochures, stickers, posters etc., are important for zoo education		Rp 35,000,000
4. Audio Visual		Rp 30,000,000
Multi Media Projector		
5. Education Kits		
- Animal's boards	2 x Rp 2,000,000	Rp 4,000,000
- Brush drawing	5 x Rp 3,000,000	Rp 15,000,000
- Information boards		Rp 20,000,000
- Information machine	5 x Rp 5,000,000	Rp 25,000,000
Total		Rp 201,300,000
Bandung Zoo		US$ 20,130
Surabaya Zoo		US$ 20,130

a. Indonesia Zoological Park Association -- To increase knowledge and capability of zoo educator for educate the people on wild animal conservation.
b. To educate the school teachers and also the students so they will know more wildlife and help to save the wild animals.

6. Strategy and technologies
a. Zoo education -- Lecture, discussion, seminar, study tour and create programme
b. zoos

7. Implementation
a. Zoo education -- Conducted by IZDA work together with Ragunan Zoo and Institute of Science.
Conducted on November 2001
b. Zoos
Zoos work together with local government schools and natural conservation offices.

8. On going monitoring and evaluation
a. Zoo education
- Assign material of course
- Brochure and posting
- Design of questionnaire
- Teacher survey
- Student survey

9. Budget estimate
1. Zoo educator – US$ 10416.32
2. Bird Park – US$ 15527.50
3. Surabaya Zoo – US$ 20130.00
4. Bauding Zoo – US$ 20130.00
5. Ragunan Zoo – US$ 71880.00
6. Safari Park – US$ 2000.00

Total – US$ 150,083.82 (Detailed budget overleaf)

10. Conclusion
The education of people in the zoo is very important to increase awareness of the people on conservation especially wildlife and their habitat and also environment.

Zoo Education Training for Indonesian Zoo Educators
Indonesia Zoological Park Association (IZPA)

Indonesia Zoological Park Association (IZPA)			
ıning budget for education of zoo educator in Indonesia (25 participants for 6 days).			
Transport			
	1. Surabaya Zoo (Jakarta – Surabaya)	2 person x Rp.360.00	Rp.720,000
	2. Safari Park, Prigen (Jakarta – Surabaya)	1 person x Rp.360.00	Rp.360,000
	3. Madiun Zoo (Madiun – Jakarta)	1 person x Rp.300.00	Rp.300,000
	4. Solo Zoo (Jakarta – solo)	1 person x Rp.250.000	Rp.250,000
	5. Semarang Zoo (Jakarta – Semarang)	1 person x Rp.250.00	Rp.250,000
	6. Jogyararta Zoo (Jakarta – Jogyararta)	2 person x Rp.250.00	Rp.500,000
	7. Bandung Zoo (Jakarta – Bandung)	2 person x Rp.100.000	Rp.200,000
	8 Taman Safari Bogor (Jakarta – Bandung)	1 person x Rp.100.00	Rp.100,000
	9. Jakarta (4 zoo)	8 person x Rp.50.000	Rp.400,000
	10. Bali (4 zoo)	4 person x Rp.1.600.000	Rp.6,400,000
	11. Padang Zoo	1 person x Rp.1.600.000	Rp.1,600,000
	12. Medan Zoo	1 person x Rp.2.000.000	Rp.2,000,000
		Total A	Rp.13,080,000
Hotel		25 person x 8 days x Rp.150.000	Rp.30,000,000
Coffee and ck		30 person x 7 days x 2 time x Rp.15,000	Rp.6,300,000
Perdiem		25 person x 7 days x Rp.125.000	Rp.21,875,000
Material		Education kit, audio visual aid, photocopy, binding, etc.	Rp.7,500,000
alary	1. Lecturer	- 8 hours x 6 days x Rp.150.000	Rp.7,200,000
	2. Consumable	- 8 days x 3 person x Rp.250.000	Rp.6,000,000
		Total F	Rp.13,200,000
Study Tour	1. Rent a bus		Rp.1000.000
	2. Assistant lecturer and ticket		Rp. 1000,000
		Total G.	Rp. 2,000,000
Misc.			Rp. 5,000,000
		Grand Total	Rp. 98,955.000
		1S$ = Rp 5,200	S$ 19,029.81
		1US$ = Rp 9,500	US$ 10,416.32

Interpretation and Conservation Education
Taman Safari Indonesia

Masterplan for Education for Taman Safari Indonesia` Education budget for one year	
Interpretive programs	
1. Newsletter for every 3 months	Rp 800,000
2. Brochure	Rp 2,000,000
3. Signboard and banner	Rp 1,500,000
4. Officer training for 3 month (12 session) for 10 person	Rp 700,000
5. Keeper training for 6 month (24 session) for 150 person	Rp 5,000,000
Total	Rp 10,000,000
Conservation education program	
1. Research	Rp 10,000,000
Total program	Rp 20,000,000

Workshop on Awareness and Applications on Indonesian Birds
TMII Bird Park, Jakarta, Indonesia

Masterplan for Education for TMII Bird Park – Jakarta

A. Project: Workshop on awareness and applications on Indonesian birds

Target group: Biology school teachers (100 person each group)
Collaboration agency: Department of Education
Dates and duration: During all environmental days celebration

1. Earth day — April 22
2. Bird Park birthday — April 27
3. Environment day — June 5
4. National Flora and Fauna day — Nov 5
5. Biodiversity day — Dec 29

The required budget, infrastructure and equipment for held this program and follows.

I. Reusable materials/ Facilities				
1. Auditorium OHP, Slide projector,VCD Player ,Sound System,(already available)				
2. Slides, handout, photograph etc.,				Rp 2,500,000
II. Disposable materials, honoraria etc.		115 x Rp 60,000	1 person ????	Rp 3,900,000
- Accommodation and food		111 x Rp 30,000		Rp 3,330,000
- Transportation				
- Honoraria		5 x Rp 400,000		Rp 2,000,000
Instructor		6 x Rp 250,000		Rp 1,500,000
Facilitator				
- Seminar Kit		100 x Rp 90,000		Rp 9,000,000
1st class Total I + II		Rp 2,500,000 + Rp 19, 730,		Rp 22,230,000 US$ 2,223
2nd – 5th Class		4 x 1,973		US$ 7,892
1st – 5th Class				US$ 10,115

B. Project : Publications				
1. Brochures				
Preparing, designing, references exploration			Rp 2,700,000	
Photographing	6 x Rp 300,000	Rp 1,800,000		
- Printing	5,000 x Rp 3,000	Rp15,000,000	Rp 19,500,000	~ US$ 1,950
2. Posters				
- Photographing	3 x Rp 300,000	Rp 900,000		
- Designing		Rp 1,000,000		
- Printing	1000 x Rp 5000	Rp 6,000,000	Rp 7,900,000	~ US $ 790
3. Newsletter				
- Honoraria				
Photographing		RP 1,300,000		
Writing articles	15 articles x 2500 words x Rp 30	Rp 1,125,000		
Designing		Rp 500,000		
Technician	2 x Rp 400,000	Rp 800,000		
- Printing	2000 x Rp 5000	Rp 10,000,000		
- Distribution	1500 x Rp 2000	Rp 3,000,000		
Total			Rp 16,725,000	~ US$ 1,672.5

B. Interpretive programs

1.Leaflets, brochure and Newsletter

a.	Leaflets	1000 pcs x $1	1,000
b.	Brochure	1000 pcs x $1	1,000
c.	Newsletter	1000 pcs x $1	24,000

2. Signbord Flora – Fauna

a. Flora	1000 x $5	5,000
b. Fauna	500 x $5	2,500

3. Medicine Herba Garden 20,000

3. Zoo Keeper's Training

a. Salary	10p x $50	500
b. Accomadation	50p x $30	1,500
c. Consumition	60p x $5 x 10	3,000
d. Documentation		1,000
	Total	**59,500**

C. Conservation

1. Orang Utan Studbook 2,500

Total 71,880

Budget Required
Public Program
1. Training Environmental Case

a. Equipment	50 P x $ 50 x 4	1000
b. Accommodation	50P x $ 20 x 4	400
c. Documentation		200
d. Consumption	50P x $20 x 4	1000
e. Salary	4P x $ 50 x 4	800
f. Report		100
	Total	**3,500**

B. Exhibition on improvement developing Flora-Fauna

a. Equipment		
- display photo	20 x $ 10	200
- cage	3 x $ 10	30
- Stationary		50
b. Documentation		100
c. Transportation	10P x $ 10 x 10	1000
d. Salary	10P x $ 50 x 10	5000
	Total 6,380.00	
	Grand Total 9,880	

C. NGO awareness program

Target group: anti captive NGO, management authority, Scientific authority

Goal: to enhance the NGO awareness, understanding and knowledge on the existence of Birdpark (Captive)
Date Biodiversity day (Dec 29)

Activity = meeting 40 person
Budget = 40 x Rp 250,000
Rp 1,000,000 ~$1,000 $1,672.5

Total budget A+B+C$ 10,115 + $ 1,672.5 +
US$ 1,000 = US $ 18,827.50

Master Plan for Education and Research Activities
Ragunan Zoo, Jakarta, Mr. Maskana

1. Suggested Programs

A. Public Programs
1. Environment Care Training
2. Exhibition on Improvement Flora-Fauna

B. Interpretive Programs
1. Leaflets, brochure and Newsletter
2. Signboard Flora-Fauna
3. Medical Herba Garden
4. Zoo Keepers Training

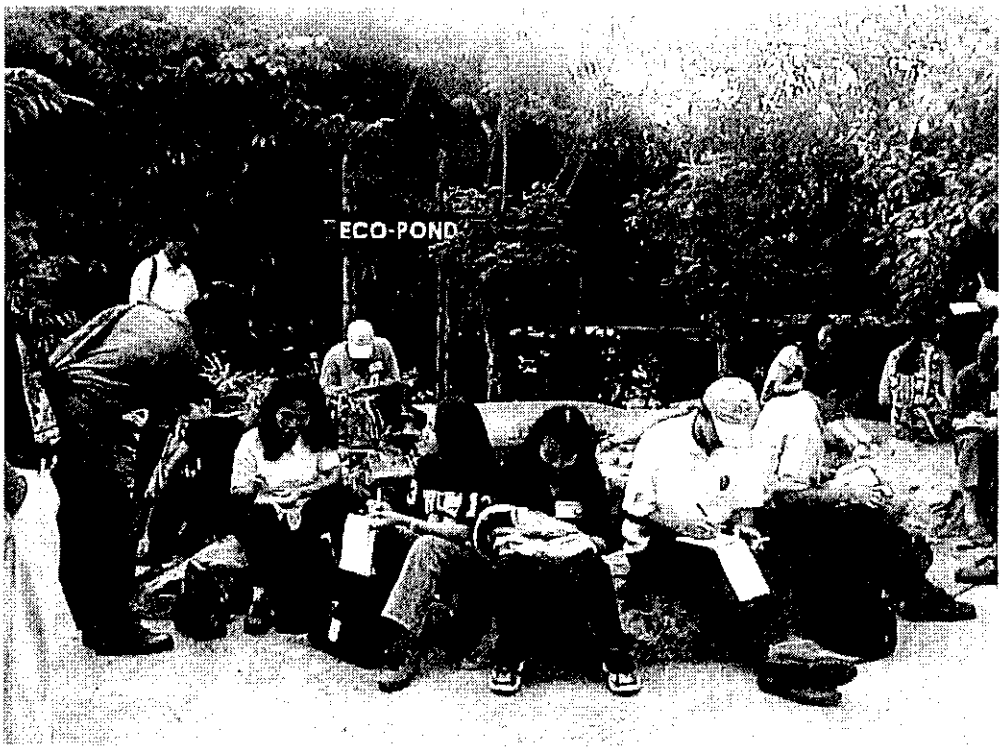
C. Conservation Education Programs
1. Orangutan Studbook

Part XI

Application of Field visits, Personal Commitments, Course Evaluations, Proof of the Pudding,

Participant at Underwater World

Field Visits -- a Cornacopia of Tools and Techniques for Application Back Home



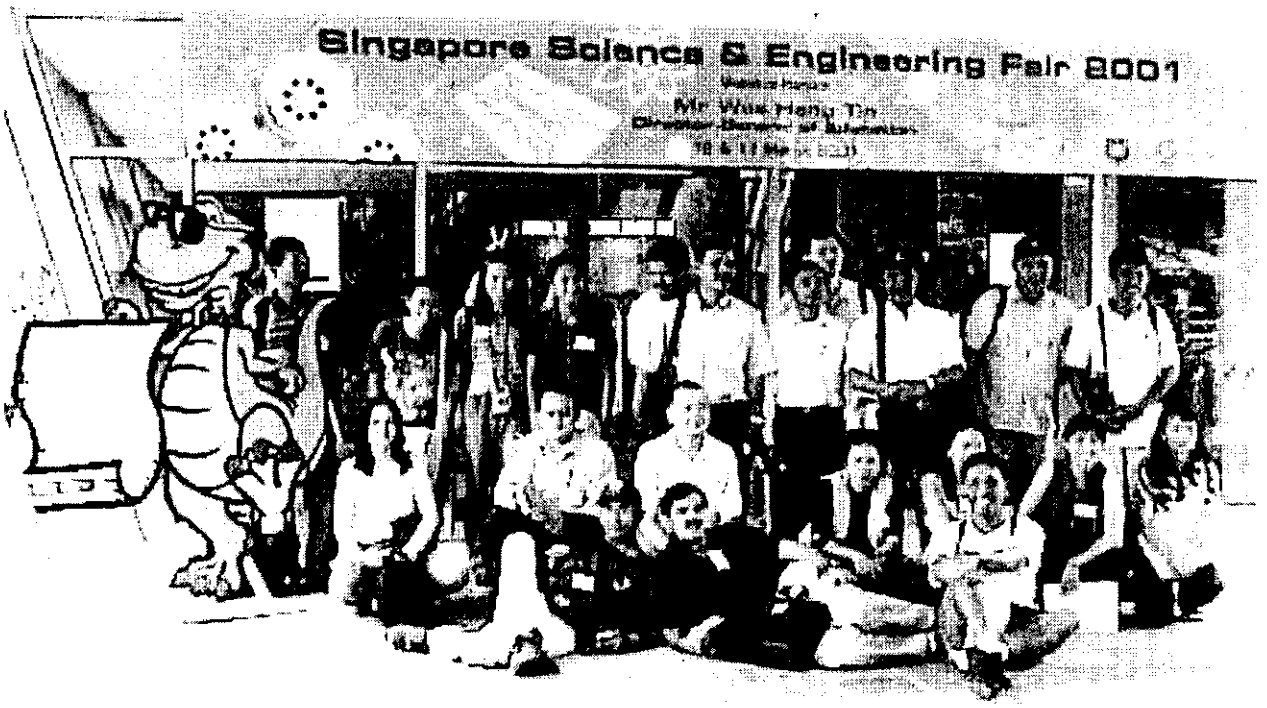
Before class, participants relax around the Eco-Pond beside the Education Classroom and listed three items which they learned from the previous day's field visit that they can use in their country.

One reason Singapore was selected for the first South East Asian Zoo Educator Course was because there are so many excellent educational and leisure facilities themed around wildlife and science in Singapore. An integral part of the course structure was a field visit every afternoon to follow didactic sessions in the mornings at the zoo.

Participants were taken on three organised visits within the zoo
- Singapore Zoo
- Singapore Night Safari
- Fragile Forest & Tropical Crops

and five visits outside
- Discovery Centre/Science Centre
- Underwater World
- Bukit Timah Nature Reserve
- Jurong Bird Park
- Singpore Botanical Garden

Almost every morning before class, participants were given time to list the features of the facilities they visited which inspired them and which they thought they could apply back home in their zoo. These are listed on the following pages.



Marta Amnan, Indonesia

Jurong Bird Park

1. Education for bird distribution and migration of birds in the world
2. Education for relationship between bird and many types of ecological niche, e.g. swamp, mangrove forest, highlands
3. Education for eco-biology of many kinds of birds

Bukit Timah Nature Reserve

1. Education for Ecology
2. Education for Nature Conservation
3. Education for Tropical Rain Forest

Angelito A. Cereno Philippines

Science center – ideas generated from …

1. Touch table
2. Creative drawing
3. Footmark

Underwater World

1. Entrance signage
2. Touch areas
3. Good reception

Attapon Srihayrun, Thailand

1. Monorail car is good for education
2. Behind the scenes tour gave good ideas

Bukit Timah Nature Reserve

1. Souvenir shop was very good

2. It was real nature, room for everybody
3. Educator had more knowledge for people and could discuss everything on the trail

Participants handle sturdy sea creatures at an educational pool at Underwater World, Singapore.

Chetri Khoohathapharak
Thailand

Science centre
1. Dinosaur Park
2. Insect museum
3. Farm animal exhibit

Underwater World
1. Fresh water fish conservation signage
2. Turtle conservation signage
3. Freshwater aquarium design

Jurong Bird Park
1. to do egg education
2. to do feather education
3. to do the bird show

Bukit Timah Nature Reserve
1. Learned to do tree signage with spring circle instead of a nail
2. Learned to do a nature trail
3. Learned to do a visitors centre

Participants photograph exhibits at Underwater World

Chea Sopheak Makara,
Cambodia

Jurong Bird Park
1. High technology is a good educational aid
2. Good guides and presentation
3. Egg breeding machine

Doan Thi Thu Tuyen
Vietnam

Science centre
1. Habitat exhibition of the country, such as mangrove, tropical, highland
2. Explanation of the development of non-human primates to the human primate

3. Climbing man to explain about the animal

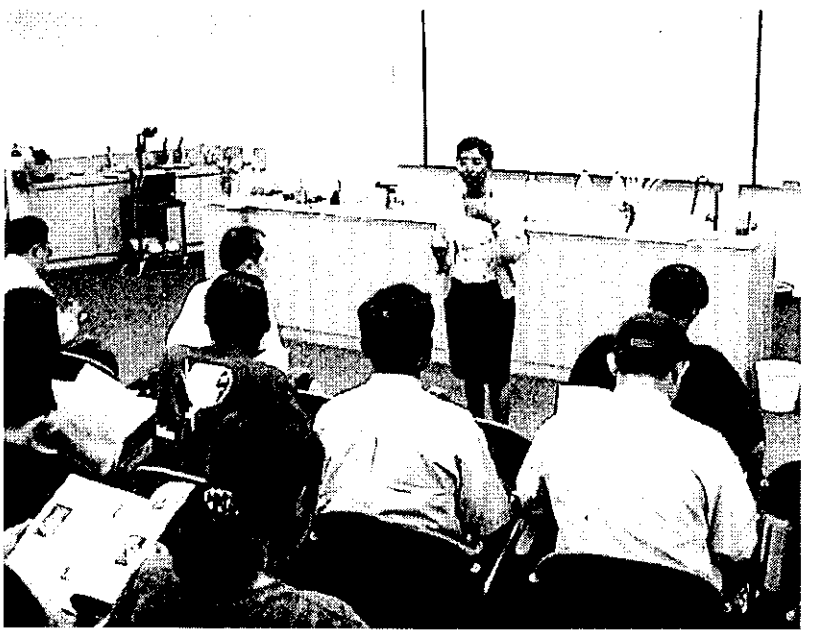
Jurong Bird Park
1. Slide Shows
2. Good signage and boards

Endang Budi Utami, Indonesia
Science center
1. Drawing, sketching on the patterned plate
2. Digging to explore buried animals body parts
3. Reconstructing the separated animal bone of body parts
4. Postering – bird evaluation

Participant clowns with machine man at Science Centre.

Underwater World
1. Tame animal touch
2. Completed sign board in
3. Languages at special species
4. Three-dimensional glass

Jurong Bird Park
1. Establishing water-birds, nocturnal birds, etc. in special aviaries to educate people about their behaviour and habits
2. Bird show stressing on sustainable utilisation in captive breeding
3. Educational tools, e.g. collecting feathers, eggs as identification material



Participants one of the many excellent demonstrations at the Singapore Science Centre.

Kuen, Lee Yoke, Malaysia
Underwater World
1. Besides labels, it has the Q&A ... e.g. "do you know" . It this way it will be more attractive in sending a message.
2. "Save the dugong" documentation

Jurong Bird Park
1. Cooling fan system is good idea for tropical open-air exhibition
2. The attitude of the staff to give a treat to the parrots - they make this a habit to appreciat the presentor
3. Labels/signage around the restaurant played its own role in educating the public even during their rest time.

Participant examines egg shells at Jurong Bird Park Museum Lab.

Bukit Timah Nature Reserve

1. More than one train up to the top was designed. This gives more choices to the visitor for an easy way or a short cut way

Lito Cereno, Philippines

1. Poster presentation
2. Touch table, particularly feathers
3. Hawk walk signs

Litasari, Indonesia

Visit to Science Centre

1. Touch table with some information about the species : Name, habitat, nutrition, behaviour
2. Animal board – picture of the animal printed on a wooden/metal plate, so everytime we move the plate we see information about the animal
3. Electronic information, such as television, with button,when we press the ubtton it will show us some information through the monitor – interactive educational material

Underwater World

1. Touch pool for some turtles or any other animals that live in water. For animal that live on the ground, we can make such as touch pool to teach to kids to love animals
2. Animal feeding time
3. If it is possible we can use camera/video to shoot the activities of rescuing or nursing an orphaned baby animal.

Jurong Bird Park

1. Nursing system where visitors can see birds being raised.
2. Birdshows for the public where they train the birds without losing their flying habit.
3. Game boards.

Maskana, Indonesia

Jurong Bird Park

1. Seperate group in family and country
2. Communicating kind of food birds eat from chick to adult

Bukit Timah Nature Reserve

1. Tracking and jogging area will attract people and then they can appreciate nature
2. Integrated Jungle (Ecosystem / Forest) applied at the reserve
3. Canopy trail wit trees at different heights

Mohd. Fuzi Bin Zulkifli, Malaysia
Science Centre
1. Display as education sign and material
2. There are many games for education
3. Material for drawing

Musnarizal Bin Abdul Manap, Malaysia
Science Centre
1. Their way of displaying educational materials
2. Drawing materials for sketching
3. Giving a certificate to participant who volunteers for the experiment

Jurong Bird Park
1. Separating species according to the habit, e.g. nocturnal, carnivorous, etc.
2. Using audiovisual elements to educate the public
3. Game board for young children
4. Catching audience attention with bird show to show them abilities of birds

Underwater World
1. Learned to make sure that your signage is convenient and attracts visitor to read directly
2. The message you want to give must be short and clear
3. Learned to include the conservation message and not just a show

Bukit Timah Nature Reserve
1. Conservation needs should be explained wisely
2. History can be one of the medium to spread conservation needs
3. Landscaping is important to show the natural surrounding and to bring up awareness of losing the environment.

Nguyen Thi Thu Hien, Vietnam
Science centre
1. Habitat exhibition of the country, such as mangrove, tropical, highland
2. Explanation of the development of non-human primates to the human primate
3. The "Climbing man" model to explain the animal

Underwater World
1. Touching whale changes the attitude towards the animals; feel more closer
2. Understanding dugong
3. Explain the development of dolphins

Phetsamon Soulivong, Laos

Jurong Bird Park

1. Relation between the plantation and birds is very good
2. Lecture and video on what birds eat

Lim Pak, Cambodia

Jurong Bird Park

1. Bird show with talk and dancing was a good technique
2. Conservation and research on all species of birds
3. Their system and location and good guides

Bukit Timah Nature Reserve

1. Learned way of teaching conservation of the environment
2. Step to the top of the mountain can keep soil from flowing to the low part
3. String used to label signs around the tree instead of a nail.

Saikham Bouathongthip, Laos

Science center

1. Categorise plants, trees and animals
2. Learn English and scientific names of animals
3. Know usefulness of some plants
4. Know how to care for some types of plants and animals
5. Be encouraged to educational programme for children

Underwater World

1. establish an aquarium to collect freshwater animals
2. establish biodiversity garden / small scale

Jurong Bird Park

1. Conservation of birds
2. Bird show for education

Sharmy Prastiti, Indonesia

Science center

1. Drawing the picture of the dinasaur
2. Brush material using crayon
3. Making a comparison about footprint between man and the animals
4. Making a story about dinosaur to the children

Underwater World

1. Touch pool. I want to adapt this with animals that I have in

our park
2. Put the signage at the right place, because I saw there was not a signage that put into the right place.
3. Give a conservation message more than the performance. When I go home, I have to give more conservation information at the show.

Jurong Bird Park
1. Introducing birds from the monorail so we can know where the bird comes from
2. It was good to learn how the zoo manages the birds rejected by their mother
3. Displaying egg shells for teaching people about eggs of different species.

Bukit Timah Nature Reserve
1. Putting the message on the tree without using a nail on it
2. Active interaction between the tour guide with the visitors
3. Many paths to take of different lengths and difficulty

Sun Hean, Cambodia
Jurong Bird Park
1. Logistic and time management by the lecturers
2. Simple presentation of why birds need plants and why plants need birds
3. Concept of bird show but want to incorporate more conservation messages

Yanni Puspitaninsih, Bandung Zoo, Indonesia
Science Centre
1. I want to make "animal boards" – There are big boards with many animals' pictures : when we open the animals pictures we can read some explanation about the animal
2. Animals wax-prepare the waxes and let visitors make an animal from the wax by themselves
3. Scratching animals' pictures with crayon on a raised image

Underwater World
1. Visits to schools with living animals (which are safe for the students and the animals), we give some information to the students while they see and touch the animal
2. Animal's show – some attraction from animals and we tell the visitors some information
3. Show the visitors how we care for the animals.

Jurong Bird Park
1. Explanation to visitors about the relationship between the birds and plants
2. Game boards about animals
3. Breeding centre where visitors can learn how a zoo breeds and takes care of animals.

Bukit Timah Nature Reserve
1. Visitors can learn about the animals' natural habitat
2. How to educate about ecology
3. How to make visitors have a feeling that they're close to nature

Zulkifli, Modh. Fuzi Bin, Malaysia
Jurong Bird Park
1. Collecting eggs shells for getting to know about species of birds
2. Darkness places

Personal commitments

At the end of every workshop or training, Zoo Outreach Organisation, conducts a "personal commitments" exercise just before or even during the Closing Ceremony. For this exercise participants are asked to stand and make a personal pledge or commitment, having nothing to do with their expected job or duties, to zoo education (or conservation, or whatever the topic of the workshop). This exercise was conducted at the Singapore Zoo Education Training Course and the commitments of participants reflect their enthusiasm for the things they learned and zoo education as well as their intention to carry back these things to their countrymen.

Personal Commitments of Singapore Zoo Educator Course Participants

1. Mus, Malaysia	Make printed materials and worksheets and an interpretation room
2. Tuyen, Vietnam	Build a volunteer team in her zoo
3. Chatri, Thailand	Spread this knowledge to others in the the zoo/ encourage director to restructure education in the zoo
4. Amman, Indonesia	Planning education for zoo educators in the country
5. Kuen, Malaysia	Apply teaching methodologies to education and communication skills
6. Makara, Cambodia	Share experience to zoo keepers & ministry
7. Attapon, Thailand	Education/volunteer team
8. Lito, Philippines	Skill training for entire zoo staff
9. Fuzi , Malaysia	Get more information , through brochures for children
10. Saikham, Laos	Experience to be shared with others in zoo
11. Manuel, Philippines	Apply everything
12. Sixaone, Laos	Share knowledge with Zoo Keepers
13. Lim Pak, Cambodia	Apply all techniques
14. Sharmy, Indonesia	Share with zoo keepers, staff; help director to make masterplan
15. Endang, Indonesia	Improvement of Education department
16. Litasari, Indonesia	Improve animal welfare
17. Yani, Indonesia	Share knowledge, signage development, form volunteer team
18. Phetsamon, Laos	Awareness of endangered species in Laos
19. Maskana, Indonesia	Facilitate exchange of zoo education knowledge with Zoo Keepers.
20: Hien, Vietnam	Conservation training course for educators
21. Kit, Singapore	Run the course again
22. Sanjay, India	Give adequate support for education
23. William, Singapore	Support the idea
24. Sally:	Keep in touch through ARNIZE; add topics missed out and compilation of the training course materials.

EVALUATION FORM
South-East Asian Zoo Educators' Training Workshop – 12 – 22 March 2001

Singapore Zoo, Zoo Outreach Organisation & Asian Regional Network of International Zoo Educators (ARNIZE)

Workshop content

Overall, what did you find most useful about the workshop ?

Over all, what did you find least useful about the workshop ?

What was missing in the workshop that you would have liked to have ?

How useful was this workshop compared to other workshops you have attended ?

Which type of sessions or items did you find most useful or pleasing (rate by circling the number 1 2 3 4 5 9 10 which best describes your preference : 1 is least liked and 10 is most liked)

Lectures in Singapore Zoo	1 2 3 4 5	Lectures in afternoon visits	1 2 3
Interactive sessions	1 2 3 4 5	Hands-on exercises	1 2 3
Videos	1 2 3 4 5	Participants presentations from their country	1 2 3
Visits to other facilities	1 2 3 4 5	Zoo demonstrations	1 2 3
I love this little elephant exercise	1 2 3 4 5	Participants pres (cultural story)	1 2 3
Writing exercises	1 2 3 4 5	Visits and demo at Singapore Zoo	1 2 3
Free time at night	1 2 3 4 5	Free time on weekend	1 2 3
Course materials (books)	1 2 3 4 5	Course & facility handouts (various)	1 2 3

How will you change your zoo education programme after this workshop ?

Any other comments / compliments / criticism :

Course Evaluation
Summary

1. Overall, What did you find most useful about the workshop?

(The "Everything" answers have been deleted)

-Gained knowledge on education section and activities to improve our education facility and quality.
-Meeting with Zoo educators from other facilities in S E Asia.
-Lecturers are qualified and able to communicate knowledge
-How to educate visitors, how to be a good presenter, how to create signages inorder to attract visitors attention.
-Masterplan, Public presentation, Teaching methodologies, practical hands-on, volunteers and docents, lectures in the afternoon visits.
-Signage concept, visitor management, exposure workshops, public speaking and environmental enrichment.
-The lectures were good. We learnt how to make good presentations like slide shows.
-The objective of the zoo education programme, the technique and methods of how to educate people to love animals and the environment surrounding us.
-Study material related to education.
-Learnt about signage boards, environmental and conservation education, poster and brochure preparation, learnt new ideas for treasure hunt and worksheets.
-How to implement education programmes in zoos and getting to know how to manage visitors.
-Lectures, presentations, Master plan, slide shows, zoo and bird park visit, Zoo education and conservation.
-All sessions were very useful especially on how to improve our ability about teaching people of different age groups.
-Learning about experiences and problems of other zoos, techniques and methods to teach children and students and ways to spread the conservation message effectively.

2. Overall what did you find least useful about the workshop?

(The "nothing" answers are not included)

- visiting the botanical garden (4 participants)
- slide and video show at the Jurong bird park (2 responses)
- limitation of some participants to understand accent and language.
- Fund-raising topic
- Participants presentation (cultural stories)
- Lack of information to show in participants presentations
- Visit to Discovery Centre-no focus to zoo and conservation education.
- Invertebrate lectures.
- Lectures on how to make a brochure-poster in computer
- Model or concept education and utility conservation.
- Feeding and caretaking.

3. What was missing in the workshop that you would have liked to have?

(The "nothing" responses are not included)

- more lectures and practice on methodology and teaching, - - designing (packets, labels, worksheets) animal welfare and fund raising.
- more information about zoo education and animal welfare.
- need computers to prepare reports and presentations.
- information on marine ecosystems (incomplete), brochure and poster design, education packets and designing worksheets, Zoo keeper talk and a visit to the veterinary department.
- Enclosure design and educational material designing.
- Use of computers to design and produce educational material.
- Follow-up Topic on S.W.O.T. exercise.
- More time.
- Animal practice, examination, care taking and treatment.
- more information on visitor behaviour.

4. How useful was this workshop compared to other workshops you have attended?

- (4 responses) first course so no basis of comparison; 3 responses of "no comments" or nothing
- Most topics were more useful and practical than other workshops attended.
- Most useful.
- Very useful than other workshops I have attended.
- Very useful (4 responses)
- Really useful and interesting comparatively.
- Too compact
- Very useful in terms of conservation education.
- Very interesting and good workshops.
- Very useful especially for education programmes.
- Completely different workshop and very useful for education activities. The materials supplied were adequate and most useful.
- More useful than the other workshops.

6. How will you change your zoo education programme after this workshop?

- I will suggest to the Director to strengthen the Education section, empower human resources and develop the supporting facilities.
- In so many ways.
- I will improve whatever is already being done
- I want to add and change some of our zoo education programmes
- To adopt some of the zoo education techniques I learnt
- To apply what I learnt from this course to my zoo.
- I will tell about this course to my Director and other staff.
- I will develop a masterplan for my whole zoo before doing any programmes.
- I will implement a masterplan based on plan formulated here.
- I will tell the Ministry how to develop education and conserve animals in the zoo.
- I will develop education programmes and a team.
- I will discuss with other staff and develop education programmes.
- I will use the education material got from the course to prepare good material for the

students and teachers in my zoo and gain new ideas, skills and approaches.
- I will develop a masterplan for my zoo.
- I will make everyone aware of the importance of this course.
- I will train staff and persons to educate visitors and enable them to understand the importance of animals.
- I will try to use the educational material, skills and knowledge learnt here and implement it in my zoo.
- I will try to improve the programmes in my zoo.
- I will prepare a proposal for budget.
- I will try to build up a volunteer team.

7. Any other comments/compliments/criticism?
- More practice sessions.
- Highest commendation to Sally, Kitsun and Sanjay.
- This is a "one in a million" opportunity.
- Difficulty following English – lecturers should go slow (4 comments)
- Should have more group exercise.
- The equipment is too high-tech

Individual sessions

In the third column rating scale, circle the number to express your rating of the utility of the information / exercis to your education programme, with "1" as least liked and "5" as most liked.

Topic or Activity	In charge	Rating scale
Welcome to SZG and Mission of SZG	Dr. Cheng, Sing Zoo Dir.	1 2 3 4 5
Conservation address /importance of zoos; WZCS	Bernard Harrison, WRS CEO	1 2 3 4 5
Tour of Singapore Night Safari	Kit Sun	1 2 3 4 5
SEAZA Futures Report on Zoo Ed components	Kit Sun/Suzanne Gendron,	1 2 3 4 5
ARNIZE and IZE objectives	Sally Walker	1 2 3 4 5
Singapore Zoo Education Department	May Li	1 2 3 4 5
Masterplan for Zoo Education at your zoo	Sally	1 2 3 4 5
"What is Zoo Education?"	May	1 2 3 4 5
Evolution of Zoos – history of zoos ref. SEAsia	Sally	1 2 3 4 5
SWOT Exercise	Sanjay / Sally	1 2 3 4 5
Targeting your audience – planning	May	1 2 3 4 5
Variety of teaching methodologies	John	1 2 3 4 5
Tropical crops & fragile forest	Zoo guides	1 2 3 4 5
Teaching Biodiversity -- with visit to Fragile Forest	Kit Sun and Sing zoo guide	1 2 3 4 5
Cage labels using FF as a case study	May	1 2 3 4 5
Public presentations	John	1 2 3 4 5
Keeper talk demonstration – (by lion enclosure)	Vinodh	1 2 3 4 5
Visitor Surveys exercise (working groups & repts)	Sally	1 2 3 4 5
How to be creative lecture	Sally	1 2 3 4 5
Practical hands on - Designing cage labels	Participants	1 2 3 4 5
Linking Zoo Ed to School Curriculum	John	1 2 3 4 5
Group exercise in school groups	John	1 2 3 4 5
Touch tables introduction	Kit / Sally	1 2 3 4 5
Touch tables group work exercise	participants	1 2 3 4 5
Educational packets & designing worksheets	May / John	1 2 3 4 5
IUCN Red List Criteria	Sanjay	1 2 3 4 5
Using Invertebrates and Amphibians in zoo ed	Sanjay	1 2 3 4 5
SOS Rhino Video and ACAP Video - Trade	Kit Sun	1 2 3 4 5
Volunteers & docents	Kit Sun	1 2 3 4 5
Animal welfare	Kit Sun	1 2 3 4 5
Environmental enrichment/ethics/welfare	Kit Sun	1 2 3 4 5
Visitor Behaviour	Sally	1 2 3 4 5
Fund raising from International and local sources	Sally	1 2 3 4 5

Visits to different facilities		
Singapore Night Safari	Staff	1 2 3
Discovery Centre – visit	Sharlene	1 2 3
Underwater World - Sentosa	Staff	1 2 3
Botanic Garden	Sanjay	1 2 3
Jurong Bird Park	Daisy	1 2 3
Visit to Bukit Timah Nature Reserve Nature trail	BTNR staff	1 2 3

Comments on any session

Proof of the Pudding --
Indonesian Participants Organise their Own Course

Participants of the South East Asian Zoo Educator Training Workshop held in Singapore last March 2001 were successful with a zoo education course organised by the Indonesian Zoo Association and planned and conducted by themselves. The course took place in Yogjakarta on July 23 –28th 2001, a mere three months after the Singapore Course and attended by 23 participant from 14 zoos in Java and Sumatra island. A short report with some other details is given below.

Indonesian Zoological Parks Association
The Indonesian participants of the Zoo Educator Course held in Singapore organised a course for the zoos on Indonesia, July of this year in Gembira Loka Zoo. It was officially opened by Sri Paku Alam IX Chief of Gembira Loka Foundation and also a candidate for Vice-Governor of Yogyakarta.

Participants came from : Elephant Safari, Bali; Surabaya Zoo; Madiun Zoo; Gembira Loka (Yogya Zoo); Ambarawa Zoo; Baturaden Zoo; Prigen Safari Park; Bandung Zoo; Cisarua Safari Park; Insect Park Jakarta; Ancol Ocean Center (Jakarta); Jambi Zoo; Pekan Baru (Riau) Zoo; and Bukit Tinggi (West Sumatra) Zoo.

Instructors : Marta Amnan, Endang Budi Utami, Sharmi Prastiti, Yani Puspitaningsih, Litasari and other instructors from Educational Institute, Indonesian Zoological Park Institute (IZPA), and Gembira Loka Zoo.

Course content consisted of
(1) Basic knowledge of zoo taught by the chairman of PKBSI (Mr. Lukito Daryadi, Mr. Joko Tirtodiningrat from Gembira Loka zoo, and local university);
(2) Basic knowledge conservation of biology (wild animals) taught by Mr. Martha Amnan;
(3) Methodology of teaching for public (Mr. Purwanto, from University);
(4) Signage and labeling taught by Endang Budi Utami;
(5) Preparing an informative keepers taught by Sharmy Prasthiti;
(6) Visitor behavior taught by Litasari, Endang Budi Utami and Sharmi Prasthiti;
(7) Identification, packaging and marketing program and
(8) How to become a good presenter taught by Sharmi Prasthiti;
(9) Education program in zoo taught by Endang Budi Utami, Yanni Puspitaningsih and Litasari;
(10) Relationship, volunteers and fund raising taught by Maskana and Martha Amnan

The lectures took place in the auditorium of Gembira Loka's Yogjakarta Zoo and Citra Hotel. The participants were required to give a presentation about their own zoo and also its education program. The sessions started at 8.00 AM and went on until 9.00 PM and even until 11.00 PM some days.

Individually, the participants practiced how to write sign text, having got an idea when they visited the palace and Borobudur Temple, and after doing a SWOT analysis on what were the strengths, weaknesses, opportunities and threats they faced in planning an education programme. Every person has to make their own sign text idea and they have to explain other participants and resource persons about the idea. Some assignments were given as homework.

Four working groups consisting of 4-5 persons had to make a story about visitor behavior, and also to make a master plan for a zoo that could be applicable in all of zoo, whether the Ocean

Park as Ancol Oceanotorium, an Elephant Safari Park that only has elephants and birds, an insect museum in Taman Mini Jakarta or for a park that consists of various animals like Taman Safari Indonesia I and II, Jambi zoo (little zoo and belong to local government), Pekan Baru zoo (middle zoo, belongs to one the family) or Bukittinggi zoo (also middle zoo).
The course included visits to various cultural institutions to study interpretation and its various components. When participants visited the Paku Alam (Jogjakarta's Prince) Palace and Borobodur Temple, we learn about how to become a good tour guide. The location for Paku Alam Palace is still in the town, but the Temple is located outside the town. The participants were asked to comment after visiting those places. The course facilitator had an idea for the participants to have a comparison about guiding visitors and tourists between types of facilities.

Every session was an open discussion in case the participants had their own questions. Usually there was not enough time for making presentations, because there were so many question after the lessons! Course leaders made an accreditation in every lesson and after the lesson we gave an examination test about lesson given. A final test was given after all of the material had been presented so the participants could take ideas from a whole range of materials.

The participants worked very hard at the solid schedule as they had to move fast with all the course material. In addition to lecture course leaders conducted a group discussion about the topics given. Also participants also had to make their own presentation about the topic given usually in the evening after participants prepared their own ideas in the group. Finally we gave a last test which included a questionnaire about us, the resource persons.

Many of the zoos or aquariums already have an education department, but some do not. Participants were informed about the Asian Regional Network of International Zoo Educators. All 23 participants sent their names to join the Asian Regional Network of International Zoo Educators, ARNIZE.

Participants of South East Asian Zoo Educator Course went back to their country and put together a zoo educator course of their own for all the zoos in their country, sponsored by their national zoo association, the Indonesian Zoological Parks Association

List of zoos and participants from the Indonesian Zoo Educator Course

Bandung Zoo, Indonesia
1. Mr. Rochman Suryaman, Aves Curator
2. Mr. Nuryani, Zoo Education Officer

KRKB Gembira Loka Yogjakarta
3. Mr. Sajiran
4. Mr. Hariadi
5. Mr. Sugianto

Taman Satwa Taru, Surakarta
6. Mr. Y. Hardiyanto
7. Mr. Heny Suberti

Taman Safari Indonesia, Cisarua, Bogor
8. Mr. Yulius H., Public relations; Education Program
9. Mr. Rinawat, Secretary

Gelanggang Samudra, Oceanorium - Jaya Ancol, Jakarta
10. Mr. Sunarto, Product and Program

Taman Marga Satwa, Bukittinggi
11. Mr. Ana Septiana, Animal keeper

Insectarium Taman Mini, Indonesia Indah, Jakarta
12. Mr. Maulana Cholid, Curator insect
13. Mr. Agus Hidayat

Surabaya Zoo
14. Mr. Agus Supangkat, Zoo Education Officer
15. Mr. Hanif Asori, Officer of Animals Collection

Taman Kaloka Widya
16. Mr. Dadar Kriantoro, Purwokerto

Elephant Safari Park, Bali
17. Mr. Dedi Ramlan, Park Assistant Manager

Taman Satwa Tirto Muncul
18. Mr. Agus Winarso, Education Program officer

Taman Margaatwa Kasang, Pekanbaru, Riau
19. Mr. Agustina, Staff

Jambi's Zoo, Sipinujung – Jambi
20. Mr. Achmad Djamaris
21. Mr. Adrianis Palmerah, Nutritionist & Education

More Proof of the Pudding : Back Home activities

Exerpts from ARNIZE Newsletter -- a Sample of what participants are doing after the Zoo Ed Course

Taman Mini (Bird Park) Taman Burung

We are trying to follow up on things we learned in Singapore. To implementing the course in Singapore we want to try and publish our newsletter called "Kicau Burung" (means bird singing) but there is a financial constraint. Now we will try to explore for sponsors to contribute to the publication.

In May the park plan to conduct "a short course on song bird breeding technology" in collaboration with the Ornithological Society of Indonesia. The goal is to transfer breeding technology to the public who wish to keep birds. For the kindergarten groups, we propose to hold coloring and painting competition about birds and their habitat. We try to find collaborators. The competition would be conducted on the end of October or early part of November to celebrate the National Flora and Fauna Day. *(Submitted by Endang Budi Utami , Taman Mini, Indonesia Indah, Jakarta) <birdiemi@eudoramail.com>)*

Surabaya Zoo

The Surabaya Zoo has 2 women volunteers since last Wednesday. They come from American and England and they will help us for about 8 months. Actually they are also interested to write some articles about wild animals especially the baby animals in a newspaper to help us in educating our community to concern more to the wildlife. So far we have tried to make some prohibition signs for the visitors not to throw rubbish/bags, etc into the animal enclosures but most won't respond so we have to find other means.
(Submitted by Dr. Litisari, Surabaya Zoo<litasaris@yahoo.com>)

VIETNAM

Endangered Primate Rescue Center

For EPRC we have been more active in the first half of the year 2001. We produced:
- three new sets of postcards (each set ten postcards), one with photos of several endemic species and two with drawings of all Vietnamese primate species - this are just 20 (Macaques and Lorises/Langurs/Gibbons). All sets have a short information about protection and law.
- one poster with a close up of a langur (for fund raising)
- a coloring book for children in Vietnamese - where some monkeys tell stories about their life
- a guide for visitors of EPRC prepared & to be printed soon

In preparation:
- a training course for the guides of the national park is prepared and will be held soon

Exhibition: for the "World Environment Day" an exhibition from several foreign organizations and Vietnamese institutions was organized in Zoo Hanoi. The Rescue Center showed the "primate problems" in Vietnam and called up for conservation and protection.
Nguyen Thi Thu Hien, EPRC <T.nadler@mail.hut.edu.vn>

Saigon Zoo

Our efforts to build up a volunteer team did not materialise until now; perhaps later. However, I had shared experiences that I had learned from the ARNIZE course with my staff.
In the last 2 months, we have done the program "Enjoyable Summer" for young children. This program includes tour guide, painting contest, telling story contest ... about some animals in the zoo. And, this program will be ended at the end of August. *(Submitted by Thanh Thuyen, Edu-*

cation Officer, Saigon Zoo, Vietnam)

MALAYSIA

Penang Butterfly House

Our Butterfly Farm facility is planning to reactivate the "Caterpillar Club" which will involve both family and indivi-dual. One of the activities that we are going to do is the Science Project. During the whole duration of the Science Project, lectures will be given, a few insects will be observed, a field trip organised and every participant will be assigned to take care of and observe one insect for a duration of about 2 months. The assignment is to be submitted at the end of the Project. Also, story-telling at the Children Library has started since 2 weeks ago. *(Submitted by Lee Yoke Kuen, Biological Researcher, Penang Butterfly House Sdn Bhd, Malaysia <kuennie@butterfly-insect.com>)*

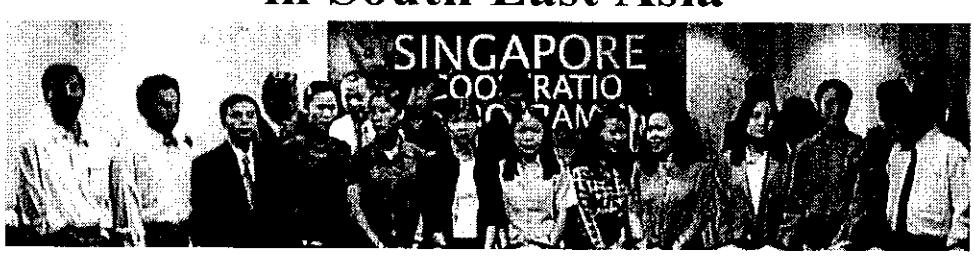
THAILAND

Khao Kheow Open Zoo is running an Education Training Course with support from EECG and Smithsonian, USA. The first course is entitled " Environment Education and Ecotourism" and takes place during July 25 th - August 4th 2001. The second course is "Teacher's (Environment) Workshop" on August 5 - 8 th at Khao Kheow Open Zoo. These courses will have 25 participant in class. They are coming from 5 zoo in Thailand under ZPO, 3 Universities and 2 NGOs. *(Submitted by Attapon Srihayrun, Khao Kheow Open Zoo, Bangpra Sriracha Chonburi, Thailand. Email : attapon67@thaimail.com)*

Part XII

Course Summary, Acknowledgements

Masterplanning Zoo Education – in South East Asia



Zoo Educator Course at
Singapore Zoo, Singapore Night Safari, Jurong Bird Park, Underwater World, Bukit Timah, Science Centre, Botanical Garden

Ministry of Foreign Affairs, Singapore MFA
Singapore Zoo Education Department
Asian Regional Network of International Zoo Educators ARNIZE
Zoo Outreach Organization ZOO

Presentation for the 10th Annual Conference of the South East Asian Zoo Association SEAZA

Masterplanning Zoo Education – in South East Asia

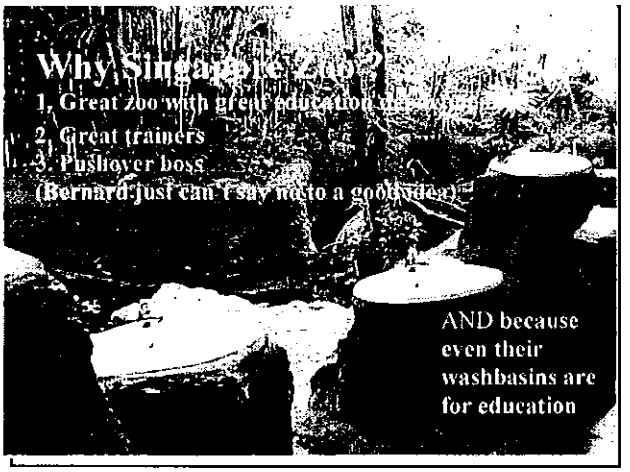
Zoo Educator Course at
Singapore Zoo, Singapore Night Safari, Jurong Bird Park, Underwater World, Bukit Timah Science Centre, Botanical Garden

Ministry of Foreign Affairs, Singapore MFA
Singapore Zoo Education Department
Asian Regional Network of International Zoo Educators ARNIZE
Zoo Outreach Organization ZOO

Why Singapore ZOO?

1. Great zoo with great education
2. Great trainers
3. Pushover boss

(Bernard: just can't say no to a good idea)



AND because even their washbasins are for education

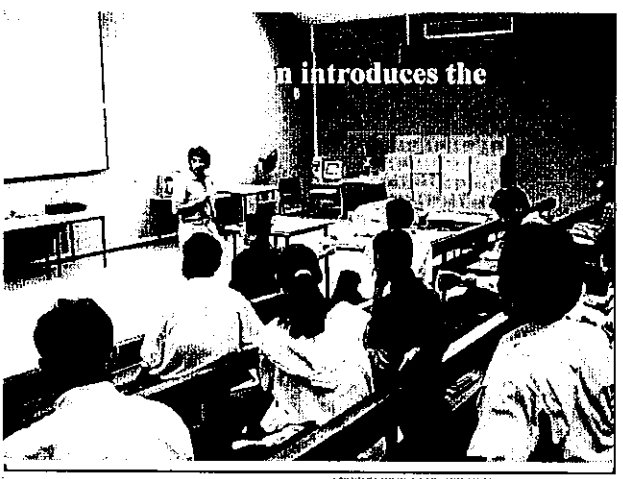
View from the "head" – what you see on the back of toilet doors at Singapore Zoo

So you can't even "s-it" without getting educated !

More than 1,400 tropical forest plants contain chemicals which are likely to fight cancer.

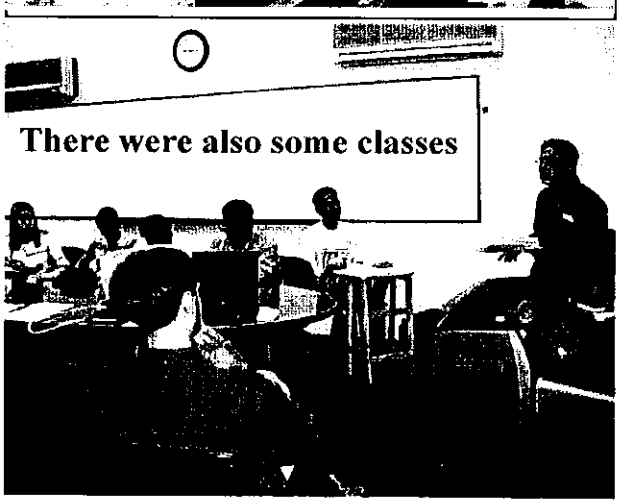
THAT'S GOOD !

Education began at a dignified inaugural ceremony at the Ministry of Foreign Affairs, sponsor for the programme



n introduces the

Followed by the highly educational "I love this little elephant" exercise ...



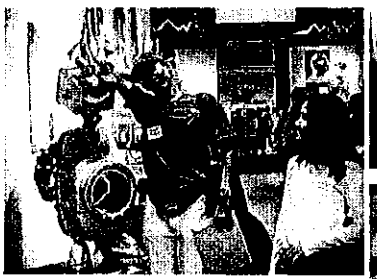
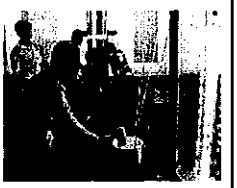
There were also some classes

Didactic sessions took place in the mornings at the Singapore Zoo

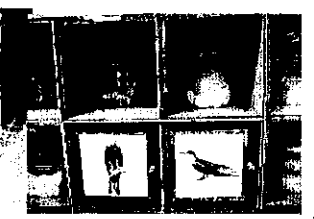
Cheung, Bernard, Kit, May, John, Sally, Sanjay volunteers and Participants themselves were resource persons

Field trips took place both in mornings at Singapore Zoo…

and in the afternoons at other educational facilities, such as the science centre …

Underwater world and others …



and the

Singapore Nature Reserve

where participants learned how to teach about rain.

Also there were workshop and hands on sessions. Participants making wayside and enclosure signage and presenting their excellent art work

and to play games

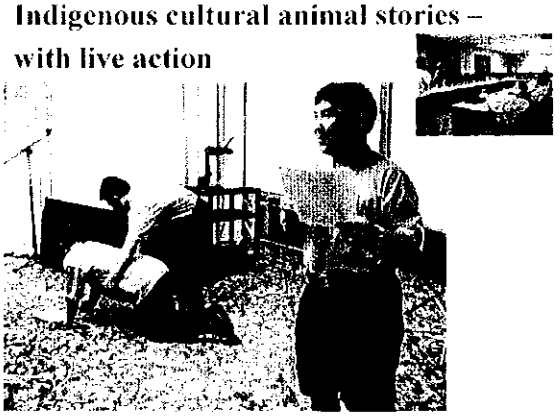
(this was so they could teach their school groups, not because of their own emotional immaturity, although it must be said, they did seem to ENJOY these games …

They learned to live presentations and demonstrations …

...to work together effectively in working groups on a project

... to make and demonstrate touch tables

Indigenous cultural animal stories – with live action



... in the mornings they listed practical uses of yesterday's field trip in a sylvan pond setting.

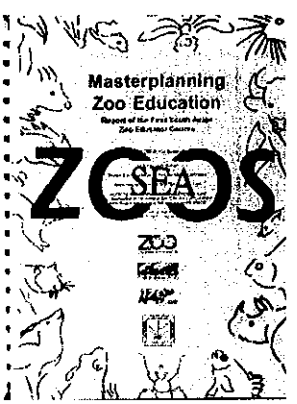
(This was also because we couldn't get into the room as Kit Sun [meaning Late One] had the key)

The important features of this course were

- indigenous training by local trainers at a variety of good animal facilities
- much of the teaching was from participants themselves who all gave presentations about their work and shared freely in interactive sessions.
- participants wrote Master Plan for Education to take home to their zoo
- participants have begun implementing their knowledge
- one country has already organised their own national level course (Indonesia)
- we had a GRRRRREAAAAATTTTT time !

The International Zoo Education Association (IZE) donated funds to ARNIZE to bring out a course Report.

Participants used the South Asia Education Workshop course report extensively in the course. Now they have their own for further education activities in SEA zoos.



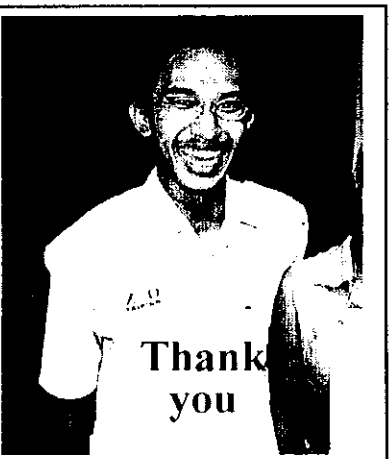
So we did and this is it.

Participants can consult this Report and remember

- What they learned
- What they forgot
- What they promised
- What they have to do!

Thanks to all sponsors and helpers

- WRS
- SZG
- SNS
- SEAZA
- MFA
- ZOO
- ARNIZE
- JBP
- UWW
- BTNR
- SSC
- SBG
- IZE



Masterplanning Zoo Education in South East Asian Zoos
South East Asian Zoo Educator Training Workshop
Credits : Collaborating Institutions and Individuals

Institutions

Ministry of Foreign Affairs, Singapore
South East Asian Zoo Association
Singapore Zoological Gardens
Night Safari, Singapore
Jurong Bird Park, Singapore
Singapore Science Centre
Underwater World Singapore
Bukit Timah Nature Reserve, Singapore
Singapore Botanical Gardens
Zoo Outreach Organisation
Asian Regional Network of International Zoo Educators
International Zoo Education Association

Individuals

Vimalam Marimuthu, Assistant Technical Cooperation Officer, MFA, Singapore
Carol Chua, Assistant Technical Cooperation Officer, MFA, Singapore
Ng Yuin Lyn, Technical Cooperation Officer, MFA, Singapore
Bernard Harrison, Chief Executive, Wildlife Reserves Singapore
Dr. Cheng Wen-Haur, Executive Director, Singapore Zoological Gardens
Dr. Wong Hon Mun, Executive Director, Jurong BirdPark Singapore
Sally Walker, Founder/Secretary, Zoo Outreach Organisation/ ARNIZE
Daisy Ling, Director Corporate Services, Wildlife Reserves Singapore
Tan Kit Sun, Curator (Conservation) Wildlife Reserves Singapore
Lok May Kuen, Curator (Education), Wildlife Reserves Singapore
Sanjay Molur, Sr. Programme Officer, Zoo Outreach Organisation,
Tay Kwang Liang, Landscape Architect, Jurong Bird Park Singapore
William Yeo, Ministry of Foreign Affairs, Singapore
Khin May Nyunt, Curator (birds), Jurong Bird Park Singapore
Dolly Seow, Asst Curator (Education), Singapore Zoological Gardens
John Yeo, Asst Curator (Education), Singapore Zoological Gardens
Emily Lim, Asst Curator (Horticulture), Jurong BirdPark Singapore
Sherrie Heng, Education Officer, Jurong BirdPark Singapore
Tang May May, Resource Officer, Jurong BirdPark Singapore
Foong Yuet Foong, Sr Graphic Designer, Singapore Zoological Gardens
Sharlene Anthony, Sr Scientific Officer, Singapore Science Centre
Karen Chen, Guest Relations Supervisor, Underwater World Singapore

ZOO OUTREACH ORGANISATION
Asia