

HEC_x

GETTING ALONG WITH ELEPHANTS HUMAN ELEPHANT CO-EXISTENCE



Teaching Guide Indonesia



Photo credit: FFI-SECP

HEGx

GETTING ALONG WITH ELEPHANTS

HUMAN-ELEPHANT CO-EXISTENCE

Indonesia

Teaching Guide

Written by
B.A. Daniel and Sally Walker

Country Chapter
Harmita Desmerry
& Fauna & Flora International-Sumatran Elephant Conservation Programme Team (eds)

Technical support
R. Marimuthu

Artwork
Shajee Chelad

Publication assistance
Z.O.O. staff

This Manual has been made possible with the contribution of
US Fish and Wildlife Service - Asian Elephant Conservation Fund, USA

Produced by
Zoo Outreach Organisation Trust, Coimbatore, India
November, 2009





Published by : Zoo Outreach Organisation Trust, Coimbatore, India.

Copyright : © Zoo Outreach Organisation Trust

This publication can be reproduced for educational and non-commercial purposes without prior permission (in writing) from the copyright holder provided the source is fully acknowledged.

ISBN : 978-81-88722-27-3

Publication No : OP 35. Getting along with elephants HECx (Indonesia) (2009).

Zoo Outreach Organisation Trust
PB 1683, Peelamedu, Coimbatore 641004, Tamil Nadu, India
Ph: +91 422 2561087; Fax: +91 422 2563269
Email: zooreach@zooreach.org; Web: www.zooreach.org

The maps reproduced in this book are neither purported to be correct nor authentic.

This Manual has been made possible with the contribution of US Fish and Wildlife Service - Asian Elephant Conservation Fund, USA.

Other funding partners : Universities Federation for Animal Welfare, Columbus Zoo, and Koln Zoo.

Contributors of Country Chapter

*Harmita Desmerry
Pindi Patana
Wahdi Azmi
Achmad Siddik Thoha
Diding M. Ichsan
Edy Sunardi
Halimatussa'diah and
Aswin Bangun*



Preface

Welcome to a new way of teaching and learning about a most worthwhile topic in Asian elephant-bearing countries today. In this Teachers Guide, we have combined two themes : Human-Elephant Conflict and Human-Elephant Coexistence in order to satisfy our major objectives, e.g. 1. To empower educators to confront the issue of HEC and a partial "solution" HECx (Human-Elephant Co-eXistence) and 2. to demonstrate innovative teaching and learning techniques designed to change human attitudes and behaviour for the better.

Many of these teaching techniques can be extrapolated to any subject by a creative teacher. The teaching techniques are also varied in order to target different educational, economic, and social levels of students. The techniques include evaluation tools; historical, cultural and current matter through activities rather than lectures; a variety of intellectual skills taught through small working group activity; and philosophical and emotional approaches to bring about attitudinal and behavioural change through role playing and drama.

So many people are working on HEC and have failed to find a "solution". After our research, we had an epiphany, that is, *there IS no solution!* Whoa! NO SOLUTION? That is pretty grim. So why are we here? Well, it seemed to us that people involved in HEC appeared to be surprised when some action that worked like a charm when first attempted, failed miserably in a few days or weeks (this happens because elephants are very smart). Also it seemed that people involved in ground level HEC emphasized reactive and/or mechanistic methods, e.g., tools, devices, strategies, constructions, money (compensation), etc. These methods do not solve much and also dont provide long term protection to the humans and elephants which get killed and injured on an almost daily basis as a result of conflict. In the process, the attitudes and behaviour of the local people who suffer most from elephant conflict did not change in any way that brought about improvement, but only in ways (such as becoming vindictive and reactive) that brought about more death and injury, in particular to the elephants but also even to themselves.

Also we noticed in studying other HEC teaching materials for children that there was a tendency to address HEC by teaching only how wonderful elephants are. None of the programmes we could find actually confronted confrontation and conflict, perhaps thinking it improper to do so to children! Therefore we decided to take the emphasis off mechanistic solutions for conflict and put it on coexistence. In so doing, we accepted that there was no permanent or all-encompassing solution to HEC due to its complexity and variety but that our approach would be through an age-old and imperfect method, coexistence, or, if you will, "*informed coexistence*"!

Coexistence is not a new method of living with elephants. People have been doing so for centuries which you will read about in this Manual, when there was no efficient communication and organization, consciousness or even government as we know it now to provide tracking teams, compensation, and other relief. As all rural persons know, however, even government agencies cant do everything at all times and be everywhere

when crucially required. It is impossible. Yet, over the centuries and decades of the growth and evolution of democratic government, perhaps people have come to rely too much on government to come to their rescue. Government can definitely chase some elephants away, shoot psychotic rogues, proper advice and pay compensation but they cant bring a human breadwinner back to life, or restore a permanently damaged body or mind.

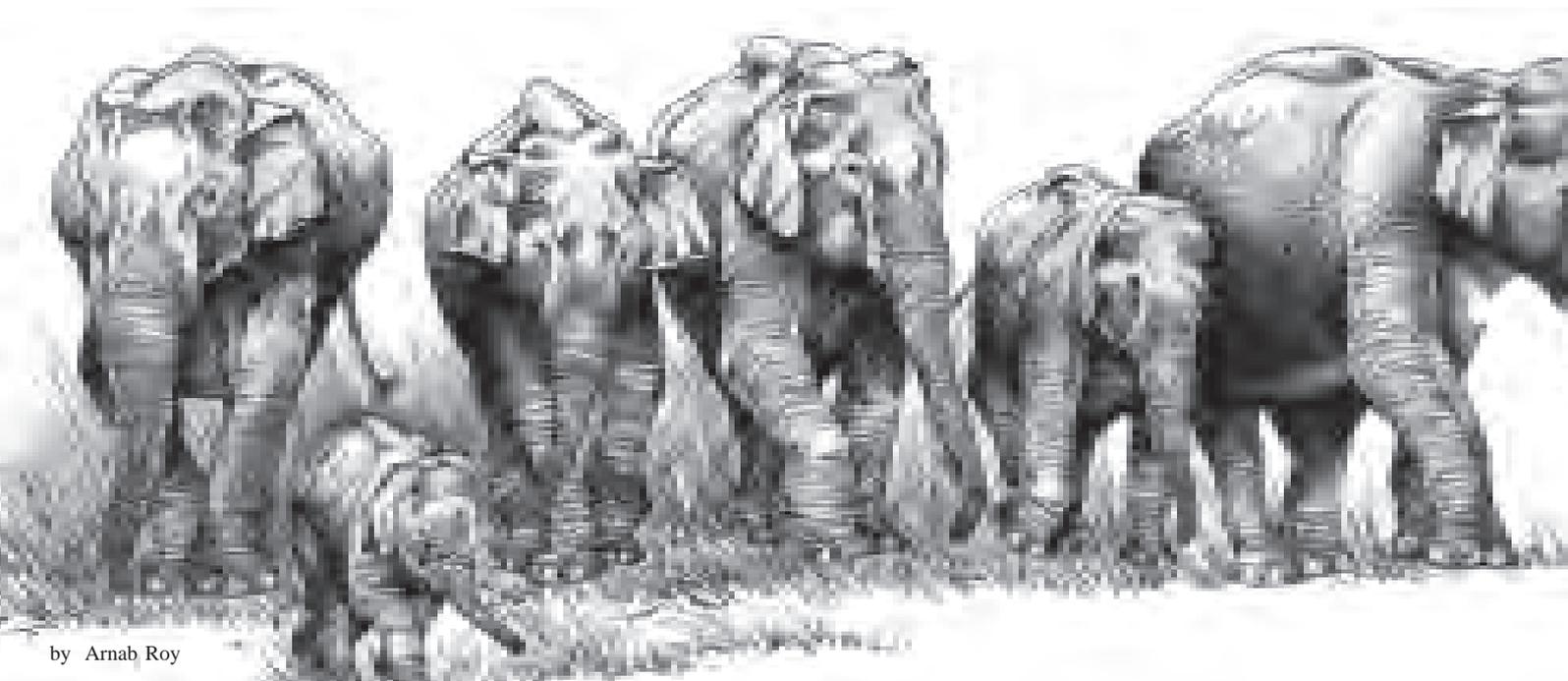
Therefore, our approach is "first and foremost" that individuals and families take responsibility for themselves, learn ways to avoid confrontation and promote self-protection, become willing to exchange some old habits and beliefs for survival and thus reduce the incidence of injury and death due to HEC.

At the same time they may also learn other techniques which may help them both "Get Along with Elephants" and salvage property, crops, etc., but our primary purpose is mitigation...reduction of incidence of death and injury, both to humans and animals. This for the simple reason that death is immutable and injury can affect life unbearably.

During and after the workshop you are encouraged to think about these teaching tools, not just for HEC/HECx and elephants, but for other species and issues as well. You are welcome to use these ideas freely to improve your teaching if you are an experienced teacher or to learn to teach if you are a novice.

It is our pleasure to bring you this Guide and programme.

Sally Walker and Sanjay Molur
Mg.Trustee & Exec.Director



by Arnab Roy

GETTING ALONG WITH ELEPHANTS

CONTENTS

Teaching guide - How best you can use this?	vi
PART I - ASSESS YOUR AUDIENCE	1
Assessment tool for educators	3
Elephant facts	16
Mini dramas	19
PART II - INDONESIA COUNTRY CHAPTER	25
General information about forests in Indonesia and important elephant habitats	27
Elephant distribution in Indonesia	27
Wild elephant populations in Indonesia	27
Protected areas in Sumatra having elephants	29
Habitat loss and cause	30
Elephant Conservation Initiatives in Indonesia	30
Notable contributors in elephant conservation	33
Acts related to elephant conservation in Indonesia	33
Domestication of elephants in Indonesia	34
Elephants in art, mythology, culture and festival	35
PART III - LEARNING TO LIVE WITH GIANTS	39
Management of human-elephant conflict an example from West Bengal	40
Learning to live with giants - HECx	52
Elephant etiquette and philosophy for survival of man and animal - Elle-do's & Elle-don'ts	70
PART IV - KNOW YOUR ELEPHANT	74
Elephant characteristics	77
Maps: Former and current Asian elephant ranges	81
Illustrated history of Asian elephants	86
Asian elephants in Asian culture	97
Asian elephants and Asian perspectives	107
Forgotten pests: understanding peoples' tolerance level towards problem elephants	114
Debate: Human-elephant conflict mitigation and community participation	116
PART V - UNDERSTANDING SPECIES PROBLEM & RESOLUTION	123
Species problems and solutions	125
Protect resources and save elephants	127
Conference on protection & management of HEC affected areas in Sumatra	130
Tips for planning an education programme	133
How to use <i>Ele-Kit</i> packet	133
How to use elephant finger puppet kit	135
APPENDIX	
IUCN data on Asian Elephant	130
Certificate	141
Pledge card	143



GETTING ALONG WITH ELEPHANTS

Teaching guide - how best you can use this

This teaching guide introduces the issue of human-elephant conflict and teaches ways to co-exist with elephants. Can elephants and humans live together? Since time immemorial man lived peacefully with elephants. Due to increase in human populations and advanced agricultural habitats we are competing with elephants for food, water and shelter. Until recently elephants had been treated as objects of art, culture, worship, strength and fear.

Now the Asian elephants are highly threatened. Habitat loss, lack of fodder in the forest and scarcity of water are some of the main cause of human-elephant conflict.

Getting along with Elephants Teaching Guide can be used as a comprehensive volume to run a course depending on your group and the time availability. The complicated scientific facts can be delivered through indoor or outdoor activities. This will help you to conduct your programme in a very interesting and make your audience understand the concept in a playful method. Guidelines are given to plan your programme. A guideline for the proper utilization of the education packet has been given at the end of this book. Activities from this guide and the Ele-Kit packet can be mixed and matched. Whether you have half a day, a full week, or an entire academic year, this programme is designed to help you teach your audience about elephants, human-elephant conflict and to promote human-elephant coexistence and conservation.



GETTING ALONG WITH ELEPHANTS

Part I Assess Your Audience



*ASSESSMENT TOOL FOR EDUCATORS
ELEPHANT FACTS
MINI DRAMAS*

GETTING ALONG WITH ELEPHANTS

ASSESS YOUR AUDIENCE

ASSESSMENT TOOL FOR EDUCATORS

Prologue

As educators, we need to know whether what we teach is effective. Depending on our goals, we should have a means of measuring not only acquisition of facts about the subject, but also comprehension, feelings and effect on behaviour.



Assessment tool 1. Brain map

Brain map or concept map is an assessment tool that can be used either with literate or non-literate people of all ages. They are very effective evaluation tools, with an exercise both before and after the teaching session or programme. The content of pre and post programme concept maps prepared by the students or the audience are compared and evaluated. It takes about 20 minutes for each session, one pre-programme and one post-programme.

How it works?

Brain maps test the brain's ability to relate different words and concepts to a central theme. A brain map is a self assessment tool that demonstrates the associations people have with a specified theme (in this case elephant) and even the relationships between different associations. Brain map assessment tools are effective because they are quick and easy to administer and can be used with both literate and non-literate groups. If your audience is literate ask them to use words to make the concept map and if they are non-literate ask them to use illustrations. (See examples).



Although this is simple, it is not a familiar activity, so it is necessary to use a well-known and easy theme, such as "school" or "friend" or "politics". Demonstrate the activity by doing one as a group on the blackboard. If they do not respond immediately you can ask questions which elicit associated words for the demonstrator map.

GETTING ALONG WITH ELEPHANTS

Some questions are ...

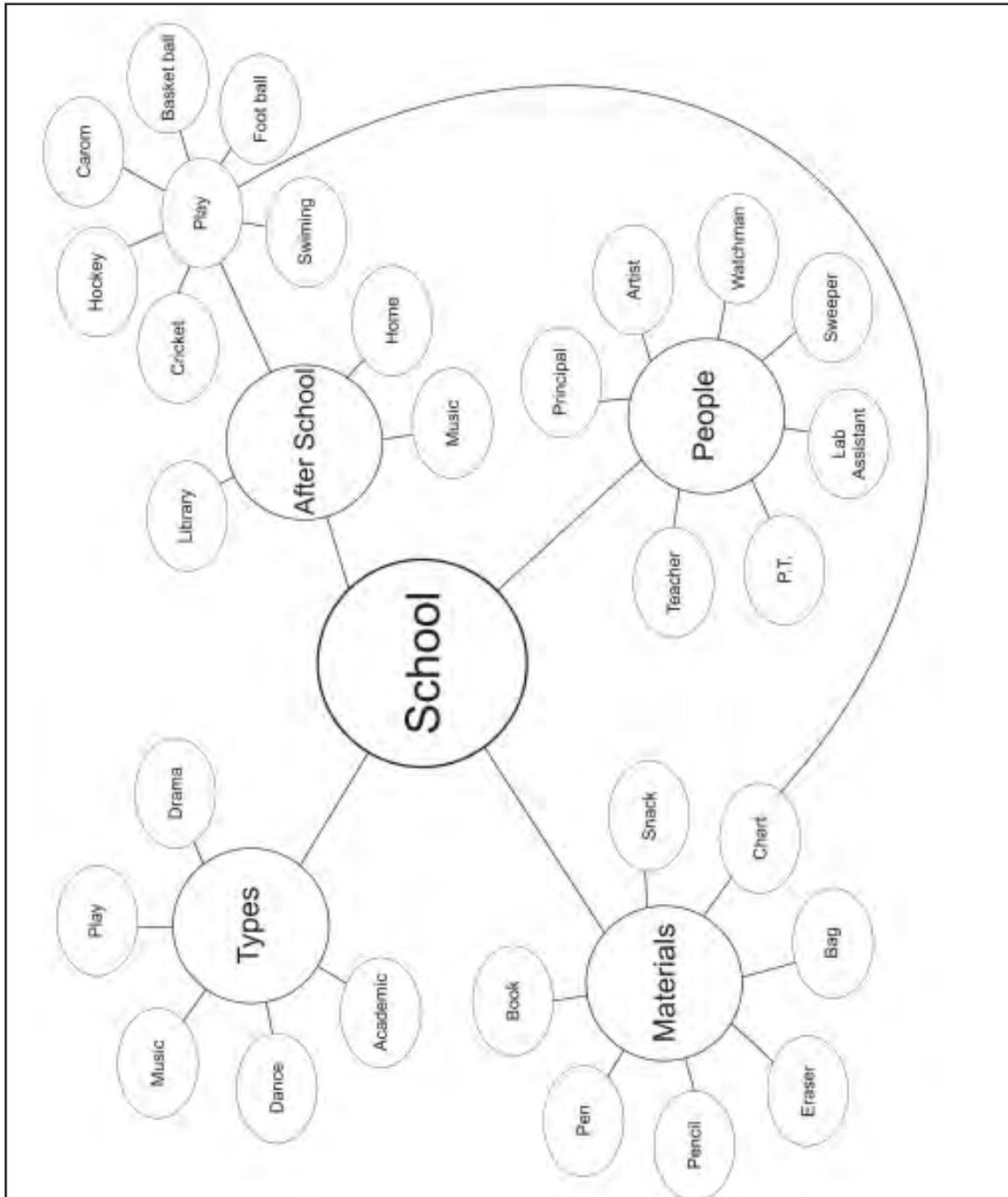
What are some examples of schools?

What kind of people do you find in school?

What materials do people take to school?

What do people do after school hours?

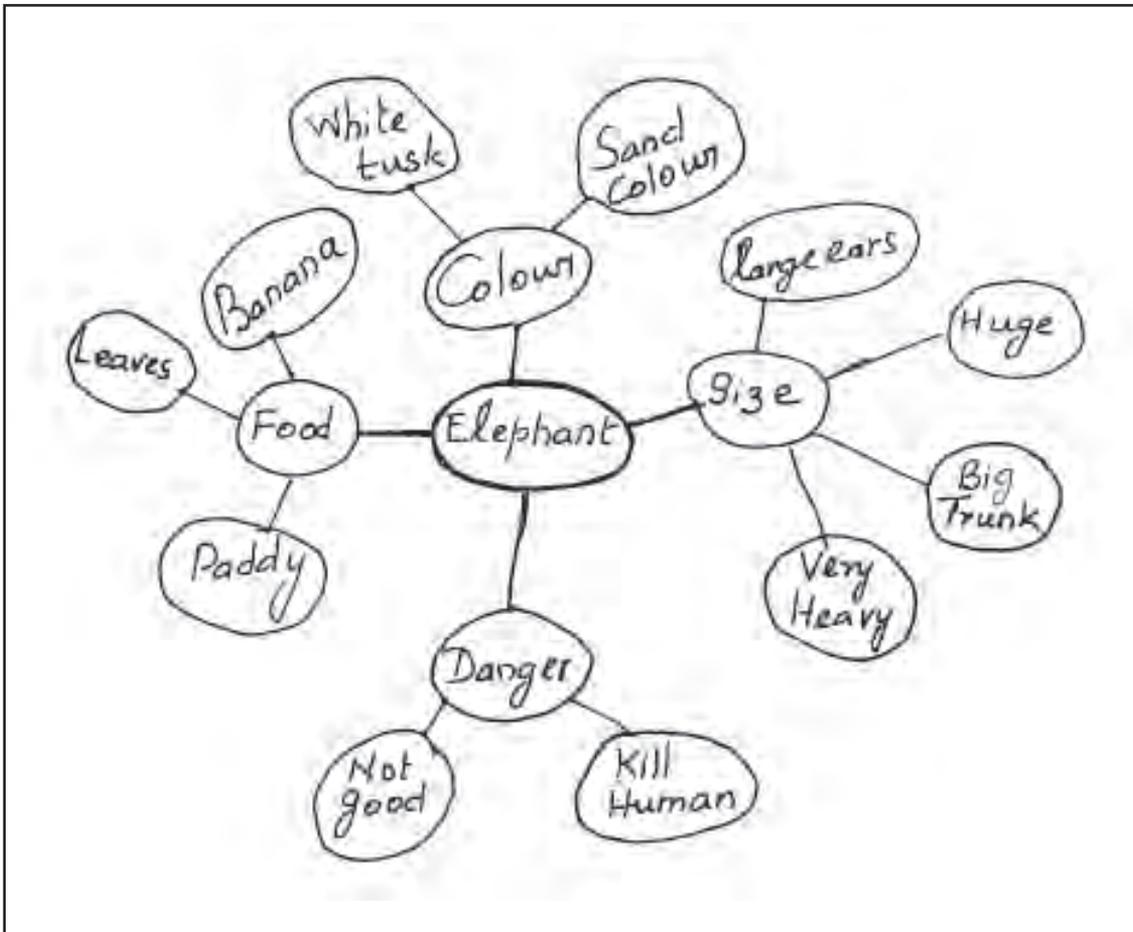
Sample Brain map - subject - "School"



GETTING ALONG WITH ELEPHANTS

Most members of your audience will understand how to make the brain map now so you can give them the task of making a brain map for elephants. This is an individual activity and so ask each participant to make his own brain map. Retain these "maps". Ask them to write their names and date on the brain map that they prepared.

Sample Brain map - subject - "Elephant": Before the programme



Since you are using this exercise as an evaluation tool you must conduct it as the first activity before any information has been passed on about elephants. This exercise should be repeated for the second time after the learning activities are over just before closing session.

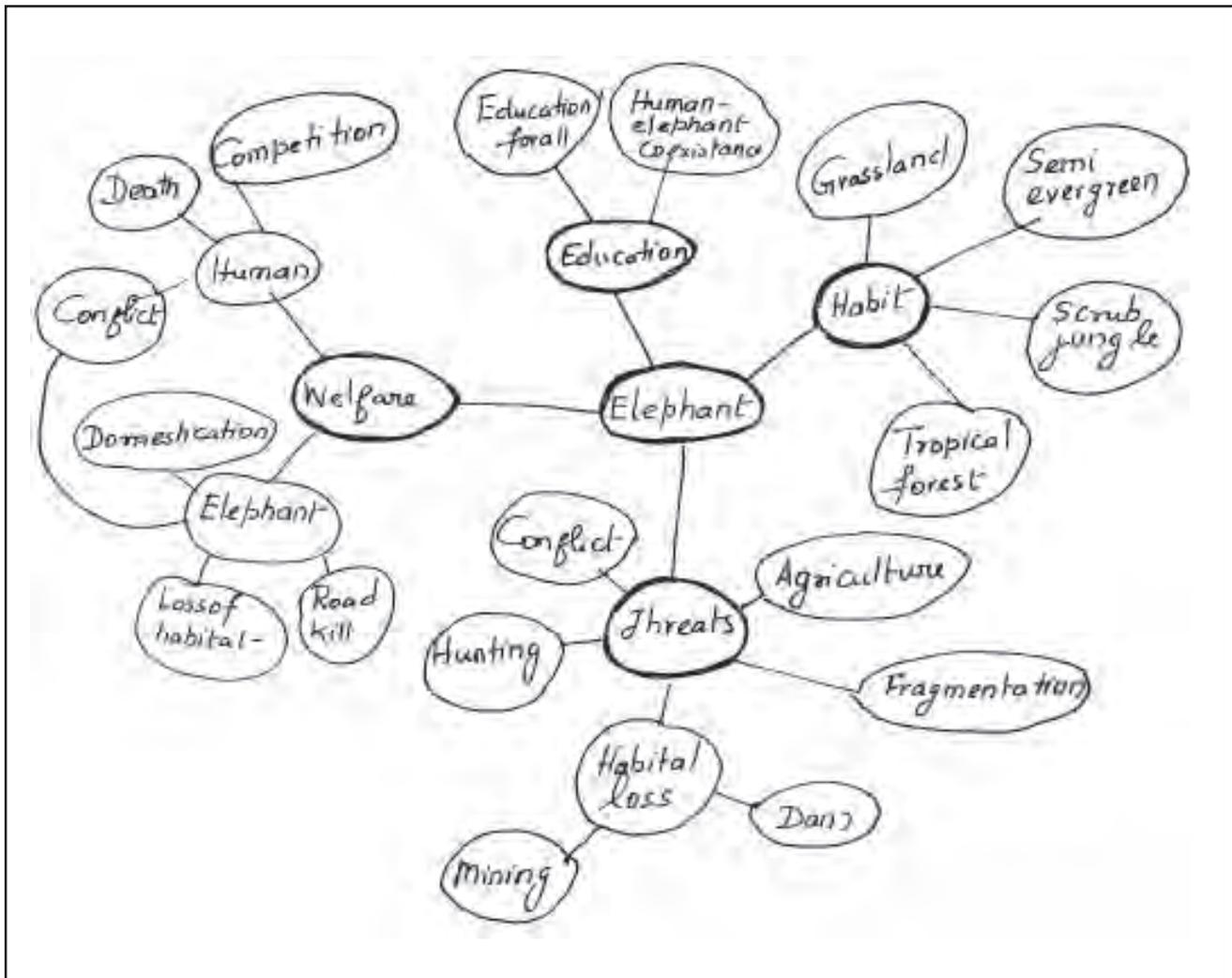
After the completion of the second brain map, you can bring out the first brain map and show your audience the difference in how much they knew and how they felt before and after the course. The number of concepts and sub-concepts that they listed and their associations distinctly illustrates that their knowledge-base has expanded and their attitudes have changed. You can also assign marks in the following way and evaluate:

GETTING ALONG WITH ELEPHANTS

give 1 point each concept and 2 points each for sub-concepts. Further addition of concepts under each sub concept will get 3 points each. Add the total and evaluate. Marks should be assigned only if the data or the information listed is correct or relevant to the subject.

The participants will have the satisfaction of seeing how much they learned and you will have "evidence" that your teaching programme was a success. If you have xerox or other copying facilities, you can give the participants a copy of their maps to take back to their place for personal or professional use.

Sample Brain map - subject - "Elephant": After the programme



GETTING ALONG WITH ELEPHANTS



Assessment tool 2. Attitude Assessment

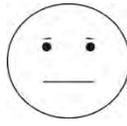
Attitude assessment is an assessment tool that can be used with all ages of literate and non-literate persons and groups. It requires about 20 minutes and this exercise should be done before and after a programme.

How it works?

Peoples' attitudes vary from individual to individual when they hear some news. The expressions can be generalized into three categories: joy, sadness and indifference, or neutral. Illustrations are used to represent joy, sadness, and indifference.



Joy



Neutral



Sad

This tool can be used in two ways. Distribute answer sheets with rows of three faces: one happy, one sad, and one neutral. Read out the statements given below. Ask your group to mark or circle the face which reflects how they react to each of the announcements which you read out. If they are glad to hear this news, they should circle the smiling face. If they are sad or angry, they should mark the frowning face. And if they don't have any particular feeling, they can mark the neutral face which is the one with a straight line for a mouth.

After the second session of this exercise, after comparing the two pre- and post-workshops questionnaires, you have a good idea of how your workshop changed attitudes of illiterate people with quantifiable data.

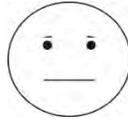
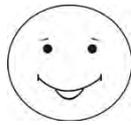
Another way to do this exercise is to paste all three facial expressions on the wall with gaps in between so that your audience can move between one face to other and form groups. After you read out the question ask them to go and stand at any one of the facial expressions of their choice. Ask one or two people from each group to tell why they feel so. Ask someone to tabulate the total number for each group. Repeat this exercise after the end of all sessions and compare with that of the pre- programme assessment.



GETTING ALONG WITH ELEPHANTS

Attitudinal Survey Statements

1) Imagine an elephant which is the biggest land mammal. How do you feel about it?



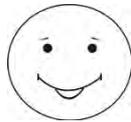
2) Elephants have close association with human beings for centuries and they are culturally linked with humans. How does that make you feel?



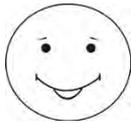
3) Tusker elephants are killed to collect their tusks. How do you feel about this?



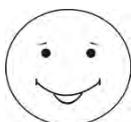
4) Imagine a herd of elephants in the wild with their frisky calves playing around. How does it make you feel?



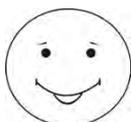
5) Humans have taken forests that Elephants used for food, water and shelter. What do you think about that?



6) Elephants visit villages and eat villagers' crops? How do you feel about this?

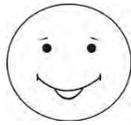


7) Sometimes trains kill elephants crossing the tracks. How do you feel about that?

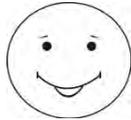


GETTING ALONG WITH ELEPHANTS

8) Elephants drank water from a pond close to a village and a villager was hurt while trying to drive them away. How do you feel about that?



9) Elephants in your country are disappearing. How does it make you feel?



10) Elephants restrict your movement to and from school, work or water sources. How does it make you feel?



11) There are acts you can do (and not do) to help you avoid elephant danger. How does that make you feel?



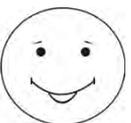
12) Some people want to kill elephants for ivory or since it damage their property. How do you feel?



13) Elephants no more exist in the forest near your village. How does it make you feel?



14) We find some way, by some means, for both the elephants and man to live harmoniously. How that situation would make you feel?



GETTING ALONG WITH ELEPHANTS



Assessment tool 3. Content survey - pictorial

Content survey pictorial is an assessment tool useful to use with adult illiterate groups and children. A maximum of 15 minutes is required to do this exercise.

How it works?

A series of statements or questions are read out loud and your audience should choose an answer from among four pictorial choices. Before doing this exercise give a sample exercise so that it will be easy for them to do it correctly. Give sufficient time between statements and allow them to think for a while. Read the statement exactly as printed and do not interpret. The audience must then make their own selections of each response that they feel is most appropriate. More than one answer could be correct for certain statements.

This exercise should be done before and after you teach them about the elephants.

Sample practice survey

Questions:

A) Fill in the circle under the picture of a tree



B) Fill in the circle under the picture of an animal that can fly



C) Fill in the circle under the picture that shows something you can see in the sky at night



GETTING ALONG WITH ELEPHANTS

Elephant survey

Questions:

A) Fill in the circle under the picture of an Asian elephant



B) Fill in the circle under the picture of continent where Asian Elephant live in the wild



C) Fill in the circle under the picture of the preferred habitat of Asian elephants.



D) Fill in the circle under the picture of the preferred food of elephants. You may fill in more than one.



E) Fill in the circle under the picture of the animal body part for which the most elephants are killed.



F) Fill in the circle under the picture who is contributing more to human animal conflict



GETTING ALONG WITH ELEPHANTS

Answer Key

Practice Survey

A - Image 2

B - Image 4

C - Image 3

Elephant Survey

A - Image 3

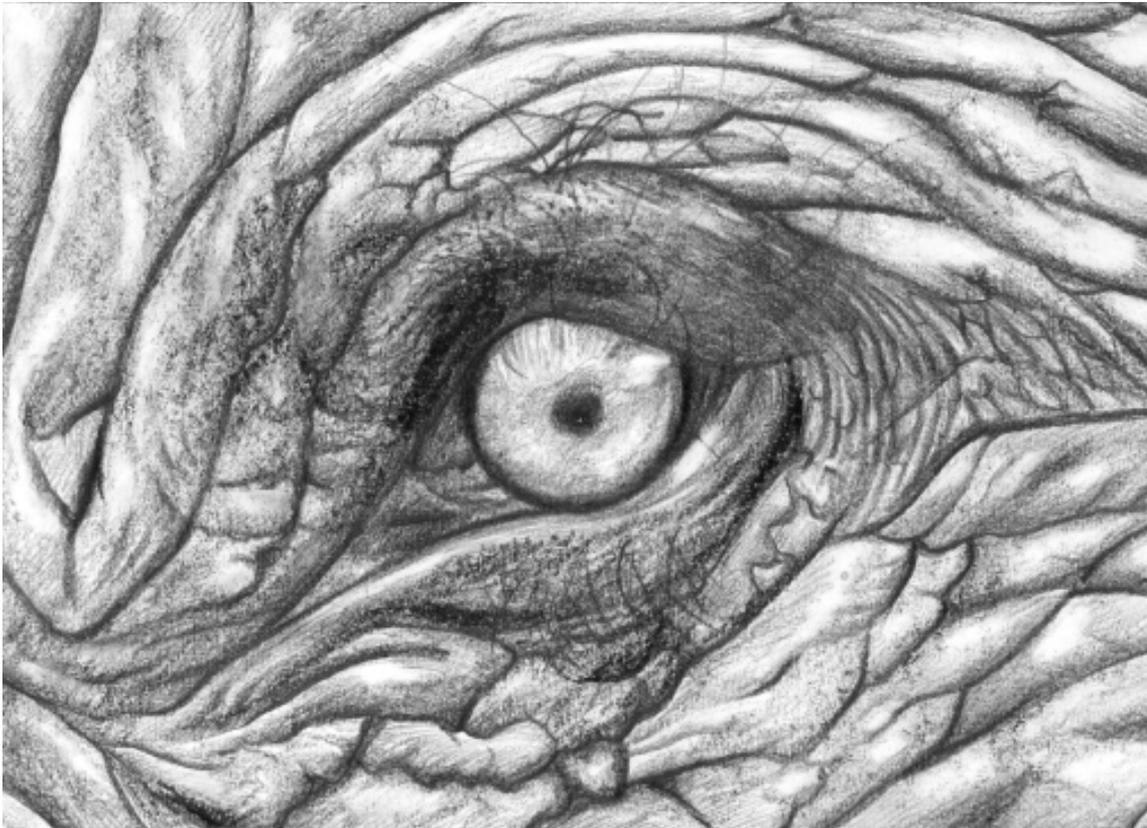
B - Image 3

C - Image 4

D - All

E - 1,2 & 3

F - Image 1



GETTING ALONG WITH ELEPHANTS



Assessment tool 4. Content survey - written

Written content survey assessment tool can be used only with literate adults. A minimum of 10 minutes is required to do this exercise. As done in any assessment this should also be done before and after a programme or training.

How it works?

A set of multiple choice questions is given to the audience and they should be instructed to fill in the circle corresponding to the best response for each question or statement. Collect the filled in questionnaires and tally the number of correct responses. Compare the pre-unit and post-unit scores to assess changes in content knowledge.

Content Survey Questions

Before

After

1. What is the correct scientific name for Asian elephant?

-
-
-

Elephas maximus
Loxodonta africana
Loxodonta cyclotis

-
-
-

2. On which continent do Asian elephants live in the wild?

-
-
-
-

Africa
Asia
Europe
North America

-
-
-
-

3. How many wild Asian elephants are alive today in Asia?

-
-
-
-

About 1,00,000
Between 35,000 and 49,500
Between 23,000 and 28,000
Less than 10,000

-
-
-
-

GETTING ALONG WITH ELEPHANTS

4. What is the average body weight of an Asian elephant?

- | | | |
|-----------------------|---------------|-----------------------|
| <input type="radio"/> | 9 tons | <input type="radio"/> |
| <input type="radio"/> | 2 tons | <input type="radio"/> |
| <input type="radio"/> | 3-7 tons | <input type="radio"/> |
| <input type="radio"/> | Above 10 tons | <input type="radio"/> |

5. The opinions people have about elephants in different parts of a country are

- | | | |
|-----------------------|---|-----------------------|
| <input type="radio"/> | Essentially same | <input type="radio"/> |
| <input type="radio"/> | Vary from place to place | <input type="radio"/> |
| <input type="radio"/> | Of no importance to elephant conservation | <input type="radio"/> |

6. All over the world, elephants have been important symbols in:

- | | | |
|-----------------------|------------------|-----------------------|
| <input type="radio"/> | Art | <input type="radio"/> |
| <input type="radio"/> | Literature | <input type="radio"/> |
| <input type="radio"/> | Advertising | <input type="radio"/> |
| <input type="radio"/> | All of the above | <input type="radio"/> |

7. The main causes for the recent decline of elephants in Asia are (choose more than one answer)

- | | | |
|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | Habitat loss | <input type="radio"/> |
| <input type="radio"/> | Poaching for ivory | <input type="radio"/> |
| <input type="radio"/> | Habitat fragmentation | <input type="radio"/> |
| <input type="radio"/> | None of the above | <input type="radio"/> |

8. The highest population of Asian elephant is found in

- | | | |
|-----------------------|------------|-----------------------|
| <input type="radio"/> | Bangladesh | <input type="radio"/> |
| <input type="radio"/> | Sri Lanka | <input type="radio"/> |
| <input type="radio"/> | India | <input type="radio"/> |
| <input type="radio"/> | Indonesia | <input type="radio"/> |



GETTING ALONG WITH ELEPHANTS

9. The fundamental cause for human elephant conflict is due to

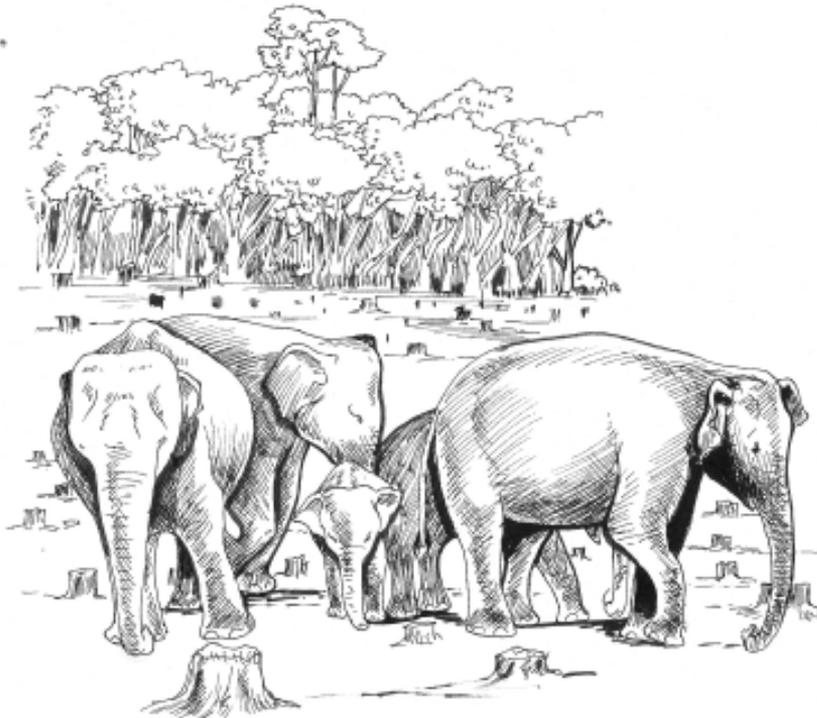
- | | | |
|-----------------------|--------------------------------------|-----------------------|
| <input type="radio"/> | Human intervention | <input type="radio"/> |
| <input type="radio"/> | Loss of habitat | <input type="radio"/> |
| <input type="radio"/> | Scarcity of food/water for elephants | <input type="radio"/> |
| <input type="radio"/> | All of above | <input type="radio"/> |

10. Name the subspecies of Asian elephant

- | | | |
|-----------------------|-----------------------------------|-----------------------|
| <input type="radio"/> | <i>Elephas maximus maximus</i> | <input type="radio"/> |
| <input type="radio"/> | <i>Elephas maximus indicus</i> | <input type="radio"/> |
| <input type="radio"/> | <i>Elephas maximus sumatranus</i> | <input type="radio"/> |
| <input type="radio"/> | All of the above | <input type="radio"/> |

11. Which of the following is important to Asian elephant conservation?

- | | | |
|-----------------------|----------------------------|-----------------------|
| <input type="radio"/> | Public education/awareness | <input type="radio"/> |
| <input type="radio"/> | Scientific research | <input type="radio"/> |
| <input type="radio"/> | Laws protecting elephants | <input type="radio"/> |
| <input type="radio"/> | All of the above | <input type="radio"/> |



GETTING ALONG WITH ELEPHANTS



ELEPHANT FACTS

Kingdom: Animalia
Phylum: Chordata
Class: Mammalia
Order: Proboscidea
Family: Elephantidae
Scientific Name: *Elephas maximus* (Asian elephant, Indian elephant)
Loxodonta africana (African savanna elephant)
Loxodonta cyclotis (African forest elephant)

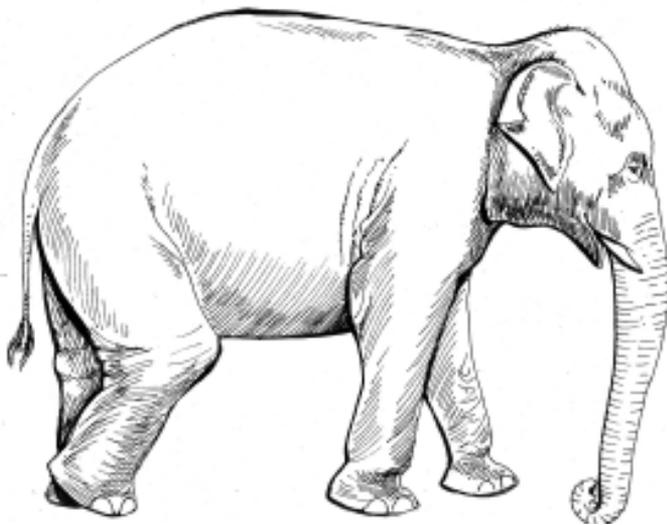
Local names

Aceh: *Po Meurah, Po Beuransyah*
Hindi: *hathi* (male); *hathni* (female)
Tapanuli Selatan: *Datuk Godang*

Bahasa Indonesia/Malay: *gajah*

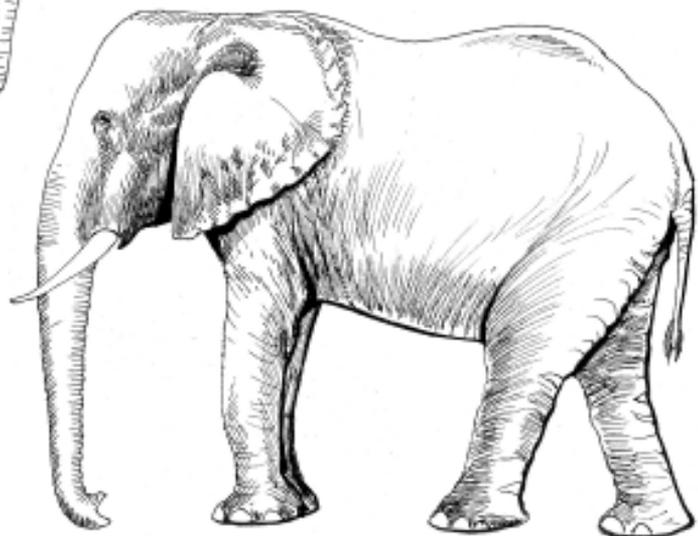
Nepali: *jangalihathi*

English: Asian elephant, Indian elephant



Asian elephant

African elephant



GETTING ALONG WITH ELEPHANTS

Subspecies of Asian elephant

<i>Elephas maximus maximus</i>	Sri Lankan elephant
<i>Elephas maximus indicus</i>	Indian elephant
<i>Elephas maximus sumatranus</i>	Sumatran elephant



Learn about the Asian and African elephants

What make Asian and African elephants look different?

Details

Asian elephant

Head

Asian elephants have two domes

Ears

Ears of Asian elephants are small and rectangular

Trunk

Asian elephant has one finger like projection at the tip of trunk.

The trunk can be used for a variety of tasks such as shifting a 600 kg log to picking up a coin.

Skin

Skin of Asian elephant is lightly wrinkled with sparse hair over entire body

Tusks

Male Asian elephants have large tusks; females do not have tusks. Some females have "tushes" which seldom extend beyond the upper lip (*tushes: Small short tusks with no pulp inside, typical for female Asian elephants*). It can grow from 1.5 - 1.8 meters.

Foot

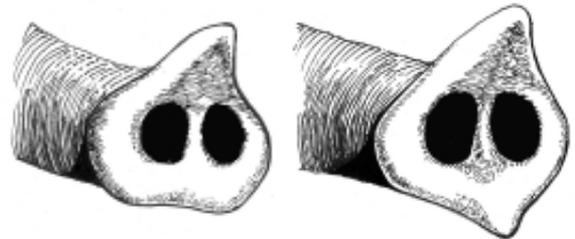
Asian elephants have five toenails on each front foot and four on each rear foot

Height

7-11 feet

Tallest point

Top of the head



Details

African elephant

Head

African elephants have one rounded dome

Ears

Ears of African elephants are large and it extends above the level of neck; shaped like continent of Africa

Trunk

African elephant has two finger-like projection at the tip of its trunk; trunk is highly wrinkled and flexible

Skin

Skin of African elephant is deeply wrinkled with sparse hair over entire body

Tusks

Both male and female African elephants have tusks; male tusks are larger and heavier

GETTING ALONG WITH ELEPHANTS

Foot	African elephants have four toenails on each front foot and three to four toenails on each rear foot
Height	8-14 feet
Tallest point	Top of the shoulders

Some more facts about Asian elephants

Habitat	Tropical evergreen forest, semi-evergreen forest, moist deciduous forest, dry deciduous forest, grassland, dry thorn forest, and scrublands in addition to cultivated and secondary forests
Food	Generalist feeder; feed on a variety of plant species; they are grazers and browsers. Large amounts of tree bark, roots, leaves and small stems and grasses are also eaten. Cultivated crops such as bananas, rice, maize and sugarcane are favoured foods. Adults eat approximately 150 kg net weight per day.
Drinking	Drink over 100 liters of water at one time; 225 liters in a day.
Life span	30-40 (44-47 years in well managed zoos; exception 71 years)
Pregnancy	659 days +/- 30 days
Litter size	One calf
Maturity	Male 9 years; sexual activity 14-15 years female 9 years
Calf weight	80-100 kg
Inter-birth interval	3-5 years



Variation within Asian elephant

Elephas maximus maximus, the Sri Lankan elephant is the largest and darkest subspecies. It has white patches on their ears, face, trunk and belly.

Elephas maximus sumatranus, the Sumatran elephant is the smallest of all three subspecies.

Elephas maximus indicus, the Indian elephant has a mix of both the characteristics of the other two subspecies.



GETTING ALONG WITH ELEPHANTS



MINI DRAMAS



These dramas are designed to introduce aspects of human-elephant conflict (HEC) and conservation issues in a way that is fun and memorable, and that allows the audience to know about the elephants and the situations they face in the wild. These mini-dramas can be fun for all people from small children through adult, as long as the drama leader is able to motivate them to become involved. If you feel that the adults you are working with would not enjoy participating in these dramas, prepare a group of children to perform them for the adult audience. Parents may also be encouraged to participate if their children are involved.

The dramas are designed so that no special props or costumes are necessary. However, costumes and props will make the dramas more enjoyable and meaningful for the performers and their audience. You have been provided with a drama kit that has colourful masks of different characters. These masks can be reproduced and coloured so that many of the performers can wear them. Performers playing other roles can make their own masks.

Four drama scripts are included. Each drama should be performed by a minimum of six persons, so if you have 30 you may wish to use all four scripts. Break the group up into four smaller groups of equal size. Ask one person in each group to volunteer to be the director.

Explain that each group will rehearse its drama and must keep the subject a secret from the other groups and the audience. In each drama, all of the roles are in **bold** types the first time they are mentioned. For example, in the HEC drama participants will play the following parts: **elephants, deer, primates, construction engineer, wood cutter** etc. Depending on the number of people in the group, a performer may need to play more than one role. Make sure the participants understand that the dramas will be **performed without speaking**; only animal sounds, tools and natural sounds like wind are allowed. After the groups have rehearsed sufficiently, have each group perform for the audience. When each drama is finished, the audience must try to explain what event is being dramatized, and what roles are being played.

GETTING ALONG WITH ELEPHANTS

After all the dramas have been performed the following activities can be done:

- Hold a discussion about the issues that have been presented.
- Ask participants and audience members to make a list of questions stimulated by the dramas. Use a flip chart or black board to list the questions.
- Ask them to propose other elephant issues that could be the subject of the dramas.
- If you will be working with participants over a sustained period of time, you may wish to ask participants to work together to write their own dramas.

Human-elephant conflict - background information for drama

When elephants and human beings have unpleasant encounters it is called human-elephant conflict (HEC).

The most common human-elephant conflict (HEC) areas are places where people and elephants live in close proximity, particularly along the boundaries of Protected Areas or National Parks. Elephants enter the farms and raid the agricultural crops such as rice, sugarcane, maize, palms and banana. In the process they damage human dwellings and occasionally cause injuries to humans and in certain cases death. In many places, as a retaliating act, elephants are also killed by human beings. Thus human-elephant conflict can take its toll both on human lives and property as well as elephant populations.

Human-elephant conflict is a result of habitat loss and fragmentation. Having been forced into areas now inhabited by humans they are also forced to find food where it exists ... if it happens to be in agricultural lands, kitchen gardens, etc., then human beings retaliate with methods that either frighten, injure or kill elephants. The elephants hurt or kill their share of humans also, with a reported 300 human fatalities per year in India.



GETTING ALONG WITH ELEPHANTS

Once widely-spread elephant populations are now restricted to small pockets and their distribution is highly restricted. Rapid deforestation and fragmentation has resulted in isolated elephant populations which have limited resources. Therefore, elephants sometimes raid crops when there is insufficient food in the remaining forests. The most common crops like paddy and sugarcane are also grasses selected for their nutritional value and therefore much more attractive for the elephants than the wild plants in the forest. They are forced to taste these crops since they need to cross these fields to get to other forests. They are migratory animals and they have traditional migratory routes. While migrating, they take advantage of seasonally available cultivated crops. We are concerned about both human and animal welfare. Human-elephant conflict will lead to further decline in the elephant population and hence the issue of HEC is vital for Asian elephant conservation.



Drama 1. Human-elephant conflict

On a sunny day in the morning, **villagers** enter forest which is a home for animals like **elephants, deers, birds, monkeys** etc., to collect fire wood and other forest produce. Elephants use that place to browse and graze since that has lots of elephant fodder. They visit the place very often since it has a water body. Months later an industrialist with his business team visits the wooded area and decides that it is a good place to start his paper industry. The contractor clears the trees and land for construction of the factory that requires a big building. After a few months elephants visit the area since it is the migratory path and observe something unusual ... a structure on the path. They demolish the concrete structure. On the same night the watchman is trampled by the elephants. The industrialist, after consultation with a conservationist decides to stop constructing the factory. He plants trees and restores the forest. The elephants, birds, deer, sambar and langurs return back to their original home. The local village people pledge to protect the forest and the wild animals.



GETTING ALONG WITH ELEPHANTS



Drama 2. Poacher and the elephant

A notorious wild animal trader (**poacher**) and his team were involved in the wild animal body parts business, particularly **elephant** products. The **team** killed hundreds of **tusk**ers and expanded their business network. The team leader became a challenge for the law enforcers. He had a **school going son** who was proud of his brave father. One day the boy took part in one of the elephant conservation education programme in his village. He learnt that elephants have the right to live. He realised the mistakes done by his father. After a while he approached his father and requested him to stop killing elephants. He won the heart of his father and his entire team. The entire team started supporting animal conservation with the help of the educator and earned money as wildlife guides.



Drama 3. Why does my village attract elephants?

In a village **elephant** visitation was very frequent in a particular season. Every year they damaged many ration shops and liquor shops particularly during the night time. It would eat cane jaggery very often and in the process it would disturb the **villagers**. The nearby villages were not affected by elephants. All the villagers gathered and requested a **researcher** to find out what is the problem with their village. They changed the liquor shop into bookshop and changed the storage pattern in the ration shop. The elephants stopped visiting and the damage stopped.



GETTING ALONG WITH ELEPHANTS



Drama 4. Rescuing elephants - avoid dangers

A mother and baby elephant, during a night walk fell into an open unused well. The next day villagers noticed the elephants and the whole village gathered talking loudly. The elephants were scared since it was new to them. Much before the government **rescue team** arrived, the **villagers** out of sympathy and curiosity, began to rescue the trapped elephants. Somehow they managed to take the elephant out. They were about to run into the nearby forest but the **trampled mother elephant** got panicked and turned around suddenly looking for its baby and in the process two men were stamped to death. The animals ran away into the nearby forest. The rescue team advised the villagers not to rescue elephants by themselves.

Create your own Drama: Instructions

Using the guidelines below, work with your group to write and perform wildlife dramas.

Steps:

1. Choose a wildlife topic based on a current conflict or issue that is important to your group. Try to pick a very specific issue, as you will have limited presentation time. What is your topic? (Facilitator may want to hold a brainstorming session first, and then write the chosen topics on a board).
2. List the people, plants, and animals to be involved in this issue. Who are characters in your drama?
3. Decide where your drama will take place. What is the setting?
4. What is the main message of your drama?
5. Pick what events you want to act out - your story line - keeping it simple to be able to present within a five to ten minute time frame. What are the main events in your drama?
6. You do not need to write a script; rather think of the kinds of conversations your characters would have. What are the main topics of dialogue?
7. Assign roles and rehearse. As you practice, keep in mind the message you are trying to communicate.
8. Make props and costumes - be creative! Using scrap materials and natural materials is a great idea. Make sure you have already practiced so that you do not take all the rehearsal time to make your props and costumes.
9. Present your drama! Define the stage area and audience area. Make sure to be an attentive audience!
10. Discuss the dramas: messages.

GETTING ALONG WITH ELEPHANTS

Part II

Indonesia Country Chapter



*GENERAL INFORMATION ABOUT FORESTS IN INDONESIA AND
IMPORTANT ELEPHANT HABITATS*

ELEPHANT DISTRIBUTION IN INDONESIA

WILD ELEPHANT POPULATIONS IN INDONESIA

PROTECTED AREAS IN SUMATRA HAVING ELEPHANTS

HABITAT LOSS AND CAUSE

ELEPHANT CONSERVATION INITIATIVES IN INDONESIA

NOTABLE CONTRIBUTORS IN ELEPHANT CONSERVATION

ACTS RELATED TO ELEPHANT CONSERVATION IN INDONESIA

DOMESTICATION OF ELEPHANTS IN INDONESIA

ELEPHANTS IN ART, MYTHOLOGY, CULTURE AND FESTIVAL

GETTING ALONG WITH ELEPHANTS



GETTING ALONG WITH ELEPHANTS

GENERAL INFORMATION ABOUT FORESTS IN INDONESIA AND IMPORTANT ELEPHANT HABITATS

Indonesia is an archipelago of about 17,508 islands. It is home to some of the most splendid tropical forests in the world. It has seven major bio-geographic regions and an extraordinary diversity of habitat types. The major forest types range from evergreen lowland dipterocarp forests in Sumatra and Kalimantan to seasonal monsoon forests and savanna grasslands in Nusa Tenggara and non-dipterocarp lowland forests and alpine areas in Irian Jaya (sometimes referred to as Papua). Indonesia also contains the most extensive mangrove forests in the world, estimated at 4.25 million hectares in the early 1990s. Being the 4th most populous country in the world, the total population is around 237 million.

The total land area of Indonesia is 1,919,440 km². Indonesia harbours high degree of biodiversity that will include 11% of world's plant species, 10% of world's mammal species, and 16% of world's bird species. The country is a producer of hardwood logs, sawn wood, plywood and pulp for papermaking. It also grows agricultural plantation crops such as tea, coffee, rubber and oil palm for local consumption and for export.

ELEPHANT DISTRIBUTION IN INDONESIA

Elephant in Indonesia are only found in Sumatra and East Kalimantan. Though it has been reported that Asia has three subspecies of Asian elephants including the Sumatran elephant population (*Elephas maximus sumatranus*), recent studies consider the Borneo elephant population as a separate subspecies and it is named as *Elephas maximus borneensis*. The Kalimantan elephant populations are found in East Kalimantan. Based on GIS analysis, 85% of Sumatran elephant distribution situated outside the conservation area, consists of 67% production forest and conversion, 12% protected forest, and 5.6% outside forest area.

WILD ELEPHANT POPULATIONS IN INDONESIA

Sumatran elephant (*Elephas maximus sumatranus*)

The total land area of Sumatra is 524,100 sq km. Out of this the range area of Sumatran elephant is more than 100,000 sq km. In 1992 the total population was estimated to be 3000-5000. Later in the year 2003 the estimated number of elephants in Sumatra ranged from 2,400-3,400. However, recent survey in 2007 reports 2400-2800 elephants in Sumatra (Department of Forestry, 2007). All these elephants in Sumatran exist in the following Provinces namely Nanggroe Aceh Darussalam, North Sumatra, Riau, Jambi, Bengkulu, South Sumatra and Lampung. Elephants numbers in

GETTING ALONG WITH ELEPHANTS

northern Sumatra, though still viable are declining as forest habitat disappears and becomes fragmented. These declines in elephant numbers are an indicator of wider loss of biodiversity.

Borneo elephant (*Elephas maximus borneensis*)

The Borneo elephants could be found only in adjacent parts of East Kalimantan with Sabah (Malaysia) in Kecamatan Sebuku, Kabupaten Nunukan (BKSDA Kalimantan Timur & WWF Indonesia, 2001). The elephants of Borneo were believed to be feral descendants of elephants introduced in the 14th-19th centuries, however, recent genetic evidence suggests they are indigenous to the island. The total number of estimated Borneo elephants range from 60-100.

It is estimated that the population number of Sumatran elephant has been decreased by 35% within 15 years. If this trend continues and in the absence of any successful conservation attempt the Sumatran and Kalimantan elephants will become extinct in the next 3 decades.

Elephant habitats in Indonesia (Sumatra and Kalimantan)

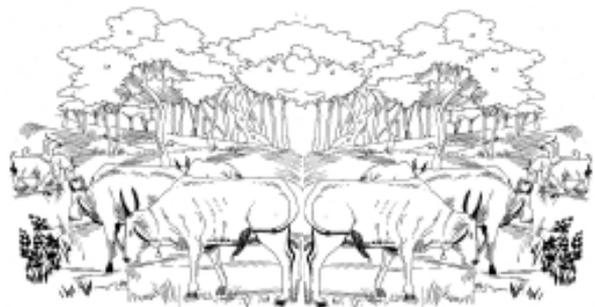
Sumatran and Kalimantan elephant habitat is a tropical forest or sub-tropical forest. The ecological environment is lowland forest covering hilly area down to the river. Due to the wide home range, elephant uses more than one type of habitat. Some of the elephant habitats are:

Swamp grassland forests: swamps primary or secondary forest swamp dominated by *Gluta renghas*, *Campenosperma auriculata*, *C. macrophylla*, *Alstonia species.*, and *Eugenia species.*

Peat moss swamp forest: Major vegetation of this habitats are *Gonystilus bancanus*, *Dyera costulata*, *Licuala spinosa*, *Shorea spp.*, *Alstonia spp.*, and *Eugenia spp.*

Lowland forest: The type of forest that is on a height of 0-750 m above the sea water. The dominant types of vegetation is the family *Dipterocarpaceae*.

Lower mountain rain forest: The type of forest that is on a height of 750-1500 m above the sea level. The dominant types of vegetations are *Altingia excelsa*, and species belonging to species *Dipterocarpus*, *Shorea*, *Quercus*, and *Castanopsis*.



GETTING ALONG WITH ELEPHANTS

PROTECTED AREAS IN SUMATRA HAVING ELEPHANTS

Table : The proportion of Sumatran elephant distribution in some forest area

Status of forest	Width of forest area in hectare	Percentage %
Conversion forest	386,829	9.39
Limited production forest	1,648,654	40.03
Conservation forest	619,988	15.05
Production forest	709,145	17.22
Protected forest	494,088	12.0
Unlimited state forest (hutan Negara tidak terbatas)	15,916	0.39
Aquatic area	2,108	0.05
Other area	234,460	5.69
No data	7,678	0.19

Source: Overlay of TGHK map and elephant & population, Department of Forestry

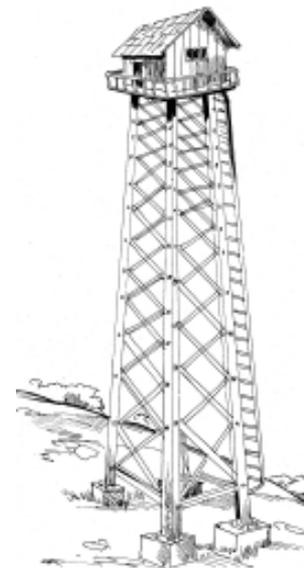


Table : Sumatran Elephant distribution in forest area per province

Province	Wildlife sanctuary & Ecotourism Forest	Protected Forest	Production and conversion Forest	Agri-cultural Forest ha	TOTAL in hectare	%
Aceh	90,357	246,274	883,289	32,651	1,252,571	30.75
North Sumatra	40,691		2,087	0	43,499	
Riau	12,910	48,692	950,193	9,750	1,021,546	1.07
Jambi	10,021	2,280	157,352	14,222	183,875	25.08
Bengkulu	6,234	6,617	62,831	3,175	78,857	4.51
South Sumatra	40,016	112,328	666,026	131,711	950,081	1.94
Lampung	419,744	76,869	7,857	38,267	542,738	23.33
TOTAL	619,974	493,060	2,730,356	229,776	4,073,166	13.32
%	15.22	12.11	67.03	5.64	100.00	100.00

Source: Overlay of elephant distribution and TGHK Map

GETTING ALONG WITH ELEPHANTS

HABITAT LOSS AND CAUSE

The forest loss in 12 years starting from 1985 to 1997 has been estimated as 1 million hectare. Scientists, considering the same rate of loss, estimate that the loss of forest in Indonesia between years 1997 to 2001 could be 5 million hectare (Department of Forestry, 2007). It has been predicted that Indonesia is losing about 2 million hectare of forest every year through legal and illegal logging, clearance for plantation and agricultural estates and fire.

In general, the decrease of elephant population in Indonesia are caused by habitat lost, habitat fragmentation, decrease of habitat quality due to forest conversion and the utility of forest resources for humans life development such as plantation of oil palm and rubber plantation, forest industry, human-elephant conflict, and poaching. The main threats to Sumatras elephants are forest loss, illegal hunting, and the elephant capture operations that result from human-elephant conflict.

ELEPHANT CONSERVATION INITIATIVES IN INDONESIA

Elephant Conservation Center (ECC): ex-situ conservation

Indonesia has two types of elephant projects in practice namely "On-site conservation" (*in-situ*) and "Off-site conservation" (*ex-situ*) project. Fauna and Flora International -SECP under Conservation Response Unit program, make a link between *in-situ* and *ex-situ* elephant projects.

Directorate General of Forest Protection and Nature Conservation (*Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam*) in Indonesia started the policy of capturing the wild elephants in Sumatra due to the serious increase of human-elephant conflict in 1980s. As much as 520 captive elephants began to be managed in 6 Elephant Training Centers (ETC) in Sumatra such as Aceh, North Sumatra, Riau, Bengkulu, South Sumatra, and Lampung. All of these ETC were managed by the Government.

However, based upon the evaluation and problems aroused in those ETCs, the concept of the management of ETC was improved by the Government. This concept was regarded as not sustainable, and could affect the conservation of elephant in its habitat. Besides, each ETC needs huge budget and good management. In 1990 after a workshop about Sumatran Elephant, the government issued a moratorium for capturing elephants. They also received fund and cooperation from NGOs to help elephant conservation.

GETTING ALONG WITH ELEPHANTS

Elephant Training Centre was converted into Elephant Conservation Centre ECC with more innovative approach where domesticated elephants were utilized to help their own habitat. Elephants were employed for mitigation of human-elephant conflict by driving wild elephant back to the forest, patrolling and monitoring. The Government took initiatives to register most of the captive elephant by using microchip (around 174 individual or 36% has been registered). Elephants are also used to assist the ecology research, conservation activities, conservation education and ecotourism.

Based on latest data in National Conservation Strategy and Action Plan of Sumatran elephant and Kalimantan elephant 2007-2017, now more than 500 elephants are managed in 6 Elephant Conservation Centres.

Fauna and Flora International - Sumatran Elephant Conservation Programme FFI-SECP: Conservation Response Unit CRU

Fauna and Flora International FFI and its partners in Nanggroe Aceh Darussalam, North Sumatra and Bengkulu provinces have developed a model for conserving the elephant, referred to as Conservation Response Units (CRU). The CRU concept is founded on the understanding that landscape conservation can only be achieved when diverse conservation strategies are employed. *Ex situ* and *in situ* approaches are not mutually exclusive; no single method of conservation is optimal for all situations; and no single method can succeed alone.

The Conservation Response Unit CRU model provides a strong link between two conservation approaches. CRUs make use of neglected captive elephants and their mahouts for field-based conservation interventions, and achieve positive outcomes for both elephants and people. By making this link, CRUs help ensure that elephants are seen as an important and positive resource. Local communities, decision-makers and other stakeholders recognize their contribution and focus greater attention on protecting Sumatran elephants in the wild.

Outcome

The CRU approach has received attention and praise from national and international conservation organizations and has provided a route for *ex-situ* conservation bodies, such as the zoo community, to engage in field conservation.

Conservation Response Units began with the establishment of small field teams composed of captive elephants and their mahouts, forest rangers and an FFI Field Officer in Lhokseumawe and Saree, Aceh in 1998.

GETTING ALONG WITH ELEPHANTS

Now CRU concept has been adopted in some area; Seblat, Bengkulu, Tangkahan, North Sumatra and Nanggroe Aceh Darussalam provinces.

Especially in Tangkahan, the rate of forest crime and access to the Gunung Leuser National Park has come to zero.

Now in Aceh one CRU sites just already built in Aceh Jaya, Pidie, Aceh Barat and some posts are still developing.

During the period 2006 to 2011, SECP aims to build on its operational experience with CRUs to support efforts to reduce the root causes of Sumatran elephant declines.

WWF-Flying Squad

Flying Squad is a patrol team consists of domesticated elephants and mahouts. First trial was done by WWF Indonesia since 26 April 2004, in Desa Lubuk Kembang Bunga Kecamatan Ukui, Kabupaten Pelalawan-Riau with 4 elephants and 8 mahouts.

This team is trained to drive the wild elephants which enter the community land or plantation back to the forest. The team conducts patrols two times a week by riding on elephant back around Tesson Nilo National Park. They identify the presence of wild elephants in order to anticipate the potential damage that could be happened.



GETTING ALONG WITH ELEPHANTS

Wildlife Conservation Society WCS - Wildlife Crimes Unit

Wildlife Conservation Society (WCS) has been working in elephant conservation in Lampung province since late 1999, in cooperation with local farmers and the Indonesian authorities to implement human-elephant conflict mitigation strategy in Lampung. Some activities conducted by this organization are as follows: Developing and implementing survey and monitoring techniques to provide baseline data for the design of elephant management plans; Gathering data on human-elephant conflict in and around Bukit Barisan Selatan National Park and Way Kambas National Park. The focus is on the extent and distribution of crop damage.

NOTABLE CONTRIBUTORS IN ELEPHANT CONSERVATION

Many people have contributed for the conservation of elephants in Indonesia. Some of the contributors for elephant conservation in Indonesia are:

Tonny Suhartono, Directorate General of PHKA, Department of Forestry, Indonesia.

Herry Djoko Susilo, Directorate General of PHKA, Department of Forestry, Indonesia.

Widodo Ramono, Former DG, Deputy Chair of Asian Elephant Specialist Group.

Wahdi Azmi, Programme Manager of Fauna & Flora International-Sumatran Elephant Conservation Programme, Aceh, North Sumatra, Bengkulu.

Christopher Stremme, Veterinary Society for Sumatran Wildlife Conservation, Indonesia.

Donny Gunaryadi, Wildlife Conservation Society-Indonesia Programme.

Elisabet M. Purastuti, Yayasan World Wild Fund for Nature, Indonesia.

Nurchalis Fadhli, Yayasan World Wild Fund for Nature, Indonesia.

Arnold F. Sitompul, Conservation Science Initiative, Indonesia.

ACTS RELATED TO ELEPHANT CONSERVATION IN INDONESIA

Strategy and Action Plan of the Conservation of Sumatran elephant and Kalimantan elephant 2007-2017, Department of Forestry, 2007.

The requirements for supporting infrastructure and land for industry, agriculture, plantation, mining, housing, etc for the development in Indonesia is very huge in accordance with the high population growth. However, the need for the land is taken from the existing lowland forest, which resulted in the quick loss of forest area. In addition, a variety of crimes against forests was also occurred. A direct impact of all this is the reduction of large mammals habitat, including Sumatran elephants. Inevitably,

GETTING ALONG WITH ELEPHANTS

human-wildlife conflict, as well as human-elephant conflict were happened in the settlement areas which used to be a forest before.

In a rapidly declining forest of Indonesia, there are rich biodiversity and various kinds of wildlife that have significant ecological, economical and social values, not only for Indonesia but also for the world. By saving Sumatran elephants and their habitats, it means that we also save the rain forest and its contents at the same time.

Recognizing this, the Government developed Sumatran elephant management policy. Begins with driving wild elephants entered the settlement in 1983, then reviewing the conservation policy in 1995 which recommended the utility of captive elephants for logging and ecotourism. Then in 2000, the government conducted a workshop to review the status of elephant populations and distribution of Sumatra. Because of increasing human-elephant conflict in the last 7 years since 2000, in the year 2007 the government set a Strategy and Action Plan for Elephant Conservation Indonesia for ten years (2007-2017).

The Vision of this strategy is to achieve "Humans live in harmony with the elephant" (Strategy and Action Plan for Elephant Conservation in Indonesia for 2007-2017, page 2). While the goals are; 1) to evaluate the population, distribution and habitat of elephants to obtain their status, 2) as a guide for development actors in relation to elephant conservation in Indonesia, 3) as a guide for conservation activists in order to make more focused efforts to save the elephant populations and habitats in Indonesia.

With the vision and goals, it is targeted that population of elephants and their habitat can be recovered and conserved by in ecological, genetic and geographical ways. Besides, central and local governments which have the elephant habitat could use this strategy to design and set the spatial planning and regional development.

DOMESTICATION OF ELEPHANTS IN INDONESIA

Wild elephants in Indonesia were captured for domestication centuries ago, particularly in northern Sumatra elephants were domesticated for use in court and for ceremonies. In 1265 AD, King Malikus Saleh had 300 fully decorated and armed elephants in his armed forces. During the time of Sultan Iskandar Muda (1608-1636) he had about 900 elephants in his armed force. When the Sultan attacked the King of Deli in North Sumatra he used 100 elephant troops, transported there by ship. In their attack on Acehese fighters, the Fourth Division of the Marechaussee Corps of the Dutch army used elephants to carry weapons and equipment through places that could not be

GETTING ALONG WITH ELEPHANTS

accessed by vehicles. During the colonial period, elephants were also used to clear the forests for agriculture. At the end of Dutch colonial rule, the tradition of domesticating elephants in Sumatra declined and finally ended in the late nineteenth century.

Directorate General of Forest Protection and Nature Conservation (*Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam*) in Indonesia started the policy of capturing the wild elephants in Sumatra due to the serious increase of human-elephant conflict in 1980s. As much as 520 captive elephants began to be managed in 6 Elephant Training Centers (ETC) in Sumatra such as Aceh, North Sumatra, Riau, Bengkulu, South Sumatra, and Lampung.

ELEPHANTS IN MYTHOLOGY, ART, CULTURE AND FESTIVAL

Elephants, in many parts of the world are worshipped as Lord, particularly in Asian mythology. It is believed in Hindu myth of creation that during a decisive fight between Gods (Deva) and Demon (Asura), the oceans were churned out to extract the elixir of life-Amrit, that could make all immortal. The other thing emerged was *navratnas* (nine jewels) one of which was elephant. Hence elephants are considered precious and need to be preserved like a jewel. The greatest carriage chosen for God of all Gods (Indra) was "Airavat" or white elephant. It was regal in dimension and had 10 tusks instead of 2.

Lord Ganesha in Hindu mythology is with "Gajanana" (Face like elephant) and a composite divine body. One line of thought explains that Goddess Parvati was taking a bath keeping a little boy on the guard. This boy was created by Parvati herself. The obedient boy refused Lord Shiva to enter into Parvati's place. A war was waged between the boy and Shiva's followers. Finally the boy's head was severed and hearing this Parvati got angry. Then Lord Vishnu, the protector tried to pacify the woman and Shiva sent his emissaries to find out the first sleeping figure with its head directed towards north. An elephant was found and its head was attached on the little boy. There are other versions of this folklore.



In Buddhism, Queen Mayabati (Buddha's mother) dreamed of a white elephant before giving birth to her son. Then came the prophet of peace Lord Buddha. The Jataka stories of Buddhism refer to the tradition of *Hastimangala* (The Elephant festival).

GETTING ALONG WITH ELEPHANTS

History

Early men had idea of elephants as depicted in cave walls. Majestic elephants remained a symbol of royal grandeur. When Alexander the great invaded India he found the King Porus with his trusted elephant. Glories of the king were depicted on the coins of that period. We find the decorated throne of the king on an elephants back. The Elephant was the better choice as a carriage for its gait, height, and nature of movement. Maurya king Chandragupta had 9000 elephants. Kautilya described the management of elephants in his 'Arthshashtra that gives a vivid impression of man elephant association in India. Asoka the great ruler had also the reputation of protecting natural objects. The official emblem of India was chosen in his period.

Elephant in Indonesia

In North Sumatra (Tangkahan) there is an honour to the elephant and forest. In Karo tradition, people should pray before entering the forest.

It is believe that elephant has the same feeling with human, so that they do not want to be annoyed by us.

Hundred years ago, people could not mention 'gajah named, because there is believe that they will come to the village & destroy it if people called their name. Alternatively the called elephant with 'Nini Galang or 'Datuk which means Grand Ma/Grand Pa... or old respective person. It is done as a respect to the elephant (but this time this believe has gone, people commonly called elephant with 'gajah).

People could not say a bad word to the elephant, because it is believe that it will come to the person who said it and destroy his/her house.

In Aceh there is a believe that elephant is a powerful creature. People used to called with honorable names such as; Po Meurah, Po Beuransyah, Teuku Rayeuk which means the honorable big creatures.

King Sultan Iskandar Muda (in power 1607-1636) in Aceh once had very strong elephant troops and a tradition of taming the elephant to be utilized in daily life.

In some parts of Asia some games are named after elephant. Such games are Elephant race, Elephant polo, elephant foot ball in Nepal.

GETTING ALONG WITH ELEPHANTS

Numerous religious and non-religious festivals are associated with elephants in India. It is notable that South Indian states have their traditional practices of using elephants. Jaipur has a long colourful association with elephants. Huge male elephants are chosen for their size and beauty of trunk, tusks, tail and ears. Every year, Rajasthan tourism celebrates the elephant festival during spring with impressive processions of well-decorated elephants. Sonpur festival in Bihar, India is a commercial event where in full moon of *Kartika* elephants are sold along with many other animals in a large fair. People from many parts of the country come to purchase according to their requirements. Elephants are special attraction in this fair.

Legend of the White Elephant

This story is a legend of a white elephant that became the pride of the people of Aceh, in the reign of Sultan Iskandar Muda, the kingdom of Aceh Darussalam.

This white elephant was the incarnation of the Linges King eldest son named Bener Meuriah, who was forced to flee into the jungle due to slander against the king. He meditated in the forest to beg him transformed into a white elephant so that he could bring himself and welcomed back by his family.

After the change, Bener Meuriah tried to give a sign to his biological brother named Sengeda.

On one night, Sengeda dreaming about a white elephant rampage and ransacked the Linge Kingdom. In the same dream, he met his teacher Sengeda named Reje, then the teacher taught him how to tame the elephants without hurting it.

The next day the disturbance happening in the Linge Kingdom. A white elephant rampage at the royal plaza. Starting from the gate of the kingdom, the people tried to restrain the movement of the elephant by throwing and shouting at the white elephant. The king immediately ordered the royal guards summoned all the physicians and the magic to tame the elephant. But all the weapons and power of magical science could not subdue this white elephant.

Sengeda finally intervened. By riding a black elephant and accompanied by his teachers and his dormitory mates, Sengeda ordered people of Linge to stop attacking a white elephant. He also asked the people to beat the sounds, both musical and sound of grain/ rice mortar. They keep making the sounds until it can soothe the white elephant. Then, thirty young men were ordered to sit around a white elephant, clapping his hands with a regular rhythm and praise the good Meuriah Beners attitudes.

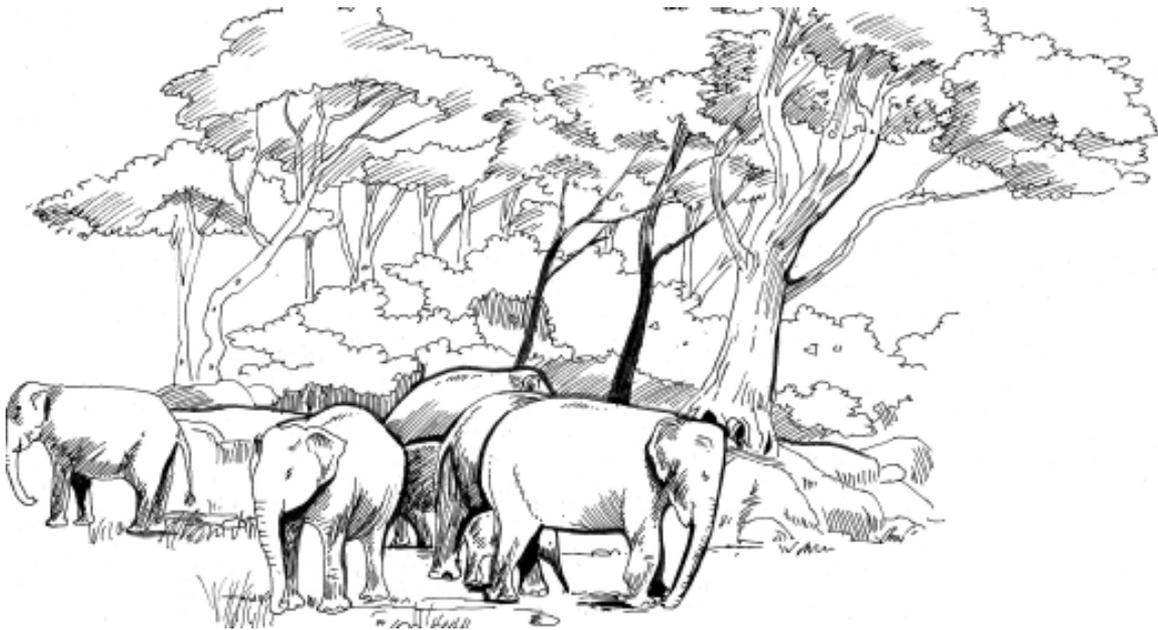
GETTING ALONG WITH ELEPHANTS

Sengeda dance moves slowly, slowed and white elephant got up and started moving along Sengeda movement. Dance rhythms turned into a bit fast and happy rhythm and song, then faster (this became known as the Redep Dance, nowadays).

While dancing, Sengeda and white elephant headed to the royal palace where the King Linge and Empress had stood at the door to greet them. Before the King and Queen, the white elephant right down like a child who honors their parents. There was a touching meeting between Bener Mariah in the form of a white elephant with his family. Sengeda told the king, that the white elephant is actually the incarnation of his brother, Bener Meuriah who want to return to his family.

News of the sacred white elephant spread to the kingdom of Aceh Darussalam. King of Aceh is very interested and asked the King Linge to give a white elephant to the kingdom. Although heavily, eventually King Linge handed the white elephant to the King of Aceh. And since then the white elephant was maintained as a lovely pet in the Kingdom of Aceh Darussalam.

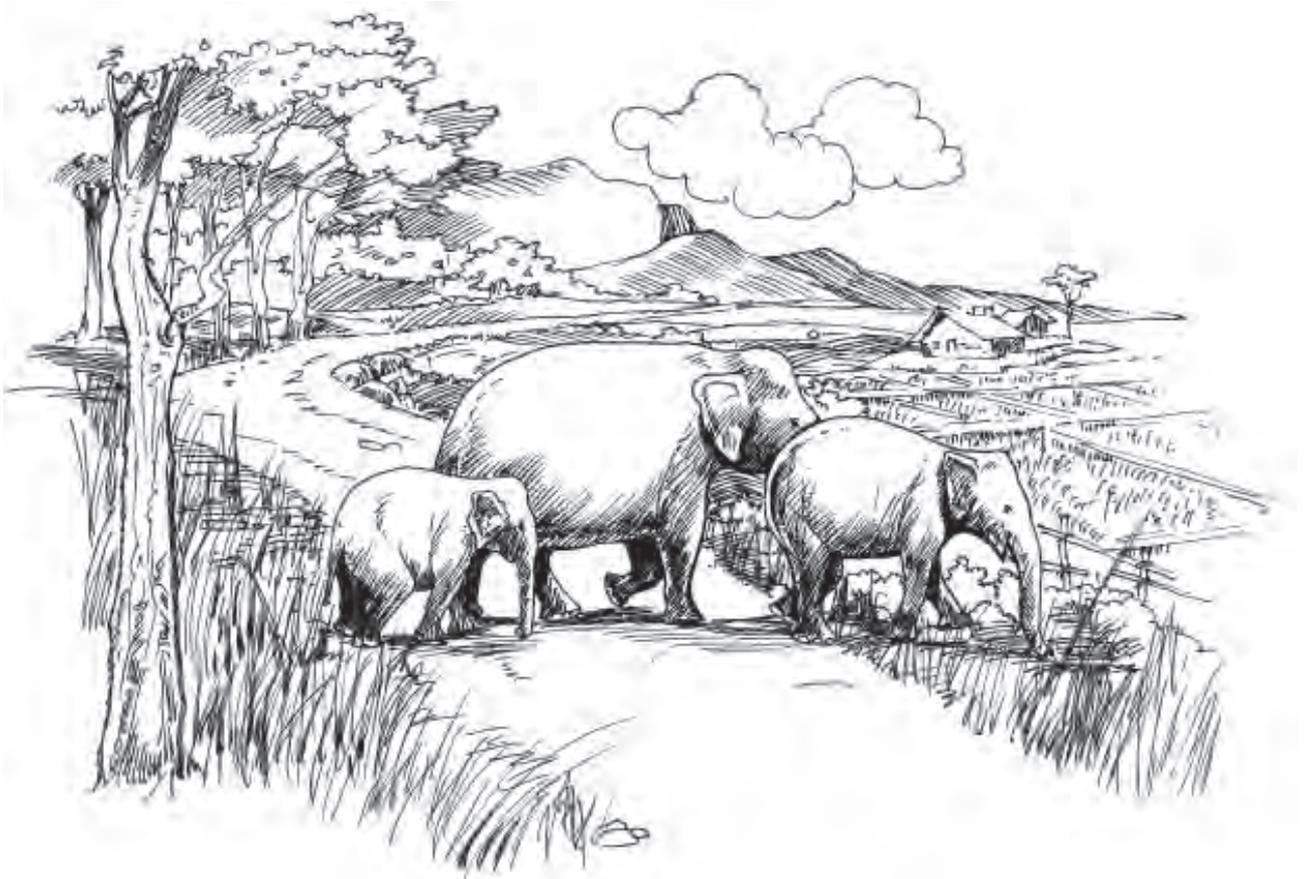
(Adapted from the story "Legend of the White Elephant" by Iwan Setiawan Gayo)



GETTING ALONG WITH ELEPHANTS

Part III

Learning to Live with Giants



*MANAGEMENT OF HUMAN-ELEPHANT CONFLICT - AN EXAMPLE
FROM WEST BENGAL*

LEARNING TO LIVE WITH GIANTS HECX

*ELEPHANT ETIQUETTE & PHILOSOPHY FOR SURVIVAL OF
MAN & ANIMAL - ELLE-DO'S & ELLE-DON'TS*

GETTING ALONG WITH ELEPHANTS

STATE SPECIFIC MANAGEMENT OF HUMAN-ELEPHANT CONFLICT IN WEST BENGAL*

S.S. Bist, P.C.C.F. (Wildlife) & CWLW (W.B.)

Generally speaking, the Asian elephant (*Elephas maximus*) is a shy animal and loves to lead a private life in the forests avoiding contacts with human-beings. But its need for a huge quantity of food and a large living space sometimes brings it into conflict with the human-beings. In fact, cases of crop damage and occasional man-killing by wild elephants have been recorded since time immemorial in all elephant-bearing areas. West Bengal has been no exception. The Gazetteer of Darjeeling (O'Malley, 1907) records the gravity of the problem caused by elephants about a hundred year back by noting that : "For the last few years, the Terai has had a melancholy record of persons killed, crops destroyed and villages ruined by them (elephants). Indeed, the depredations of these animals in this part of the district have become so serious a menace to life and property that there is a danger of much of the land being thrown out of cultivation and relapsing into jungle." The people have also been retaliating by killing or injuring elephants. Increase in human population accompanied by large scale shrinkage of forest cover has led to an unprecedented increase in the incidents of human-elephant conflict in recent times.

The Asian elephant is an endangered species and occupies a place of priority in the conservation efforts being made by the Government and other agencies in India. Obviously, such efforts cannot succeed without public support. But public cooperation cannot be obtained in all such areas where elephants have become a threat to the life and property of people. Therefore, resolution of the human-elephant conflict has become a priority item in the management of wildlife in India. In West Bengal, in particular, control of elephant depredation has become an important issue since the mid-1970s (Bist, 1997).

Zone of conflict

The traditional elephant-bearing areas in West Bengal are mainly located in the northern part (i.e. the civil districts of Darjeeling and Jalpaiguri) which forms the western limit of the north-east Indian population of the Asian elephant. They occupy a geographical area over 6900 sq km with a forest cover of about 2200 sq km (Bist, 1994). 370-400 elephants were recorded in this region during the enumeration carried out by the Forest Department in 2007. This is about 1.5 % of the total elephant population in India. However, these elephants have been responsible for killing 441 people during the last ten years giving an average of about 1.15 casualties per elephant, probably the highest rate anywhere in Asia where elephants exist. The tea gardens in the North Bengal plains are the worst affected areas in terms of loss of human life and house damage by

* Revised and updated version of 'Elephant-human conflict in West Bengal' [ENVIS: Vol.1(1), March 1998, Wildlife Institute of India, Dehradun].

GETTING ALONG WITH ELEPHANTS

elephants. As far as the southern part of West Bengal is concerned, resident herds of elephants were non-existent in the early 1950s when the forests were taken over by the Forest Department. A few unattached males, moving either singly or in small groups (known as *maljuria* in the north-east India), moved around in the forests of Purulia and parts of Paschim Midnapore and Bankura districts. One or two herds of elephants from Dalma sanctuary in Bihar (now Jharkhand) also used to visit the adjoining forests in the southern West Bengal during the winters, causing some crop damage and killing one or two persons every year. It was in November 1987 that the migrating herd consisting of about 40 elephants crossed the river Kangsabati and moved eastward for the first time in the living memory. The herd caused the death of 11 persons. The elephant herds have since been regularly crossing the Kangsabati and spending more and more time within West Bengal. In some years, they even managed to enter Burdwan and Hoogli districts. Their range now extends over an area of 11,000 sq km holding a forest cover about 1850 sq km (Pandey *et. al.*, 1994). In addition to the migratory herds, about 30-40 elephants reside almost throughout the year in Paschim Midnapur, Bankura and Purulia districts of South Bengal. They are found to be responsible for most cases of human-killings and house-damages.

Two Elephant Reserves have been set up in West Bengal under Project Elephant. The Eastern Dooars Elephant Reserve (977.5 sq km) was established in Jalpaiguri district on 28.8.2002. Mayurjharna Elephant Reserve (414 sq km), spread over Paschim Medinipur, Bankura and Purulia districts, was notified on 24.10.2002.

Extent of conflict

The impact of conflict is visible on both, the people as well as elephants. People suffer on account of elephant depredation by way of death or injury, damage to crops and houses and occasionally some loss of livestock. During the year 2007-08, elephants were involved in the death of 68 persons (51 in North Bengal and 17 in South Bengal), injury to 210 persons (171 in North Bengal and 39 in South Bengal), destruction of 4083 huts (2397 in North Bengal and 1686 in South Bengal) and damage to 3200 ha of crop-land (1545 ha in North Bengal and 1655 ha in South Bengal). As mentioned earlier, West Bengal possesses only about 1.5% of the elephants in India, but it contributes over 20% of the human-casualties caused by elephants in the country. Government of West Bengal spends over Rs. 3 Crores every year on elephant-control measures and payment of ex-gratia relief, which comes to about Rs 75,000 per elephant the highest in the country! The tea gardens in North Bengal also suffer great economic losses on account of damage to labour houses and reduced production due to labour problems fomented by elephant depredation.

GETTING ALONG WITH ELEPHANTS

Human-deaths caused by elephants in West Bengal

Year	North Bengal	South Bengal	Total
1998-1999	41	4	45
1999-2000	38	8	46
2000-2001	30	17	47
2001-2002	32	36	68
2002-2003	54	20	74
2003-2004	51	16	67
2004-2005	45	27	72
2005-2006	60	25	85
2006-2007	44	20	64
2007-2008	51	17	68

Elephants too suffer a lot on account of conflict with people. They are harassed, chased and disturbed constantly whenever they go. As a result, the elephants are seen to be changing their movement paths frequently and have been visiting new places where they were not reported in the past (Bist, 1994). A large number of elephants bear marks of injury caused by villagers and tea garden labourers. Cases of poisoning and electrocution of elephants are also not uncommon. In some cases, irate villagers have even cleared entire patches of forest in their neighbourhood to deprive elephants of shelter. Barua (1995) has cited an increase in the diurnal activities of the elephants, marked aggressiveness in their behaviour and a significant rise in the cases of abandoned elephant calves in North Bengal as an evidence of elephants being under tremendous stress. Cases of wild elephants dying of cattle-borne diseases (e.g. Anthrax) have been recorded in West Bengal from time to time.

Causes of conflict

It is not possible to point out a single factor responsible for human-elephant conflict in West Bengal. Often the problem is caused by a combination of factors. Some of the major factors are discussed below.

1. *Changes in habitat*

In North Bengal, the destruction of habitat by extension of agricultural land and tea gardens has been identified as the prime reason for elephants straying out of forests and causing depredation (Fawcus, 1943; Lahiri Choudhury, 1975 and Dey, 1991). Forests have also been destroyed for making roads, railways, irrigation projects, army cantonments, refugee colonies, mines and factories. As a result, elephant bearing forests have shrunk and become fragmented. Elephant is a long ranging animal and cannot remain confined to a particular forest for long. In small fragmented forests it comes into contact with human-beings more frequently than in large compact forests, thereby increasing the chances of conflict.

GETTING ALONG WITH ELEPHANTS

In South Bengal, ironically, it is the improvement in the forest cover in the 1980s, as a result of better protection with the help of local forest protection committees, which is believed to be attracting elephant herds from relatively degraded forests of Dalma in Jharkhand. As stated earlier, some good forests in South Bengal have been cleared by villagers desperate to deny shelter to the elephants near their villages (Pandey *et.al.*, 1994).

2. *Grazing*

Cattle grazing in forests is a serious problem in the West Bengal forests which not only deprives the elephants and other wild herbivores of their legitimate fodder but also results in the spread of many diseases among them. Fodder scarcity forces the elephants to spend less time in a forest than they would otherwise do and makes them more inclined towards raiding agricultural lands.

3. *Defective forestry practices*

Some of the practices followed by the Forest Department in the past, such as clear felling of large forest tracts, conversion of natural forests into plantations of teak, eucalyptus and other non-fodder species, large scale extraction of bamboo and canes, and establishment of forest villages have resulted in degradation of many forest areas. An example of such an imprudent practice was reported by a respected forest officer, Sh. A.C. Gupta (1958), in respect of forests of Kalimpong: "The Khumani forests, which hold a salt lick in Rongo compartment No. 1 on the left bank of the Nuxal khola, has been for generations past a rendezvous for herbivorous animals from adjoining Bhutan, the foothill forests of Kalimpong and the farthest end of the Tondu forests. Up to the outbreak of the World War-II, the sanctity of the salt lick was respected.... The war proved to be the undoing of many things and the preservation of wildlife was one among these. Throwing the basic principles of management of forests and of wildlife to the winds, the most accessible parts of forests were heavily exploited and large clearings were made all over for labour-force establishments.... The importance of salt lick at Nuxal khola ...was completely overlooked. Extensive clear felling were made in Khumani block along the game paths, a large clear felling was made fairly close to the salt lick and a forest village established therein ...It seems strange that in the working plan for the management of Kalimpong forests no provision was even made for the exclusion of forest strips along the permanent game paths leading to the salt lick to serve as corridors".

4. *Over-exposure to human-beings*

Movement by people in most of the forests in West Bengal has increased tremendously. Every day people enter forests for grazing their cattle or collecting fodder, firewood and various non-timber forest products. In North Bengal, there are about 100 forest villages comprising over 6000 families, cultivating over 3000 ha of land inside forests in the elephant zone. Thus, people are coming in contact with elephants more frequently than in the past. Such an over-exposure makes elephants lose their inherent fear of human-beings and makes them desperate.

GETTING ALONG WITH ELEPHANTS

5. *Lure of agricultural crops*

An elephant is a huge animal requiring 250-300 kg of fodder every day. In forests, it may spend 16-20 hours daily to gather its food. In agricultural land, however, it gets substantial quantity of nutritious food over a smaller area with minimal effort. Once an elephant has had a taste of agricultural crops, it will prefer to raid agricultural fields, more so if there is a scarcity of fodder in the forests. The paddy, which is the principal agricultural crop in West Bengal, is quite a favourite with the elephants. With better availability of quality seeds and irrigation facilities in recent years, farmers in West Bengal have been growing two or more crops of paddy in a year and the elephants have also been spending more time in the agricultural fields now than in the past.

6. *Other reasons*

6.1 *Abnormal sex ratio*: It has been suggested by some experts {e.g. Dey, 1991} that the male-female ratio among adult wild elephants in North Bengal (which was reported to be 1:0.75 during the 1992 census) is somewhat abnormal whereas the ideal sex-ratio should be 1:3 or at least 1:2. In other words, adult bulls outnumber adult cows, which has led to more competition among the bulls and resulted in a higher number of solitaries and *maljurias* {male groups}. Records suggest that most of the cases of human death and injuries are caused by these solitaries and *maljurias*. However, this remains a disputed issue in view of the fact that capturing of a large number of bulls in the past (e.g. 114 out of the 210 elephants captured in North Bengal from 1957-58 to 1980-81 were bulls) and killing of about 32 'rogue elephants' (all bulls, mostly solitaries) since 1973 has not helped to ease the conflict situation in any way (Barua, 1995). The present adult bull-cow ratio in North Bengal is reported to be 1:1.34.

6.2 *Illegal arms*: It is not uncommon for the villagers and tea garden labourers (mostly tribal) in North Bengal to injure elephants using arrows, fireballs or country-made guns. The problem has become acute with the proliferation of illegal arms in the countryside during militant movements in the region in the recent past. Injured elephants are believed to have a tendency to turn into rogues.

6.3 *Country liquor*: It is believed by many that country liquor prepared illicitly in villages and tea gardens adjoining forests in West Bengal attracts wild elephants, although records do not suggest this to be a major reason. Nevertheless, a substantial number of people killed or injured by elephants are those who are intoxicated and cannot take care of themselves when confronted by an elephant.

Management of conflict

As stated earlier, human-elephant conflict has greatly influenced the wildlife management scenario in West Bengal. In fact, many studies, interesting experiments, ideas and management initiatives in West Bengal since the 1970s have been motivated by the ever worsening problem of elephant depredation in the state as will be clear from the following description.

GETTING ALONG WITH ELEPHANTS

1. *Studies and inquiries*

Dr. D.K. Lahiri Choudhury (1975 and 1980) conducted his studies on the wild elephants in North Bengal and made many recommendations for short term and long term solutions to the conflict problem. The Government of West Bengal also set up inquiry committees comprising senior forest officers and experts in 1986 (for North Bengal) and 1994 (for North as well as South Bengal) to suggest measures for controlling depredation by elephants. Parbati Barua (1995) made a detailed study of the problem in the Western Dooars. The Wildlife Institute of India carried out a study (1995-97) on the elephants in West Bengal and made several recommendations to deal with the problem. It was during this study that wild elephants were radio collared in West Bengal for the first time. This was followed by a study of elephants in Buxa Tiger Reserve and adjoining areas in North Bengal by the Centre for Ecological Sciences, Indian Institute of Science, Bangalore, under the guidance of Dr. R. Sukumar during 2000-2003.

2. *Experiment with repellents*

2.1. Use of tear gas, etc.: Dr. D.K. Lahiri Choudhury carried out experiments on domestic elephants as well as freshly captured elephants, in June-July 1975 in Jalpaiguri, to find out the efficacy of Amyl alcohol, liquid ammonia and teargas shells in scaring away elephants. The experiments could not be carried out on wild marauding elephants. It was found that the gas would be effective only when fired in favourable wind direction and could not be used in rains (Palit, 1975).

2.2. Use of tiger urine: Experiments with tiger urine and tape-recorded tiger calls as a deterrent against wild elephants were carried out in the early 1980s. It was reported that the elephants were alarmed and reacted defensively when confronted with both the tiger scent and call simultaneously and less so when only one of these was used (Chowdhury & Roy, 1982). However, there were practical difficulties in applying these methods in the field. The reaction of the wild elephants to the tiger urine was also observed to be quite aggressive on many occasions.

2.3. Chili-tobacco repellent: Dr. R. Sukumar and his colleagues from Asian Nature Conservation Foundation, Bangalore, have experimented with chili-tobacco based repellent for protecting crops in Buxa Tiger Reserve during 2006-07. The results indicate that chili fences have the potential to reduce intrusions by elephants but have to be used judiciously to obtain the best results. They have recommended more rigorous testing of the repellent.

3. *Elimination of rogue elephants*

Wild elephants indulging in wanton killing of human-beings are proclaimed 'rogues' and liquidated as soon as possible under the provisions of the Wildlife (Protection) Act, 1972. About 35 'rogue' elephants (all bulls) have been killed in North Bengal since 1973-23 of them killed just during the nine years span of 1973-82. There are records of elephants having been killed in self defence! In 1976, the Prime Minister's secretariat expressed concern over the way the elephants were being shot dead in North Bengal and the Government of West Bengal advised the concerned forest officers to ensure that the

GETTING ALONG WITH ELEPHANTS

declaration of rogues was kept down to minimum (Anon., 1976). Since 1992, rogue elephants have mostly been killed using lethal doses of chemicals after immobilization and verification of their identity. Correct identification of rogue elephants and their timely elimination, however, continues to remain a problem (Barua, 1995).

4. *Wildlife squads and Hulla Parties*

In 1977, two special wildlife squads were set up in North Bengal to help people deal with elephant depredation. Subsequently, three more squads have been set up. During peak periods of depredation, forest staff from nearby Divisions are also mobilized and temporary squads are set up. The tea garden labourers and the villagers are also encouraged to form voluntary squads. These squads are provided with arms, crackers, searchlights, vehicles and wireless sets. In South Bengal, specially equipped driving parties, locally known as 'Hoola' parties, have emerged on the scene as a local innovation to drive the elephant herds. 'Hoola' is a 3-4 metre long pole of iron or sal wood. On sighting an elephant group, the tip of the 'Hoola' is ignited and persons holding the 'Hoolas', charge at the animals. Hoola parties from South Bengal have been invited to Jharkhand, Chattisgarh, Maharashtra and Andhra Pradesh to help the local forest officers in scaring away marauding elephants. The squads, however, provide only temporary relief to the people, and often, simply drive the elephants from one problem area to another (Barua, 1995). Same remark holds good for the Hulla parties.

5. *Power fencing*

A battery operated, energised fence was installed in North Bengal for the first time in 1982 for controlling wild elephants. Energised fence was also introduced in South Bengal during 1987-88. In the subsequent years, more than 1000 km long energized fences were erected, but most of these fences have either become defunct or have been damaged by the miscreants. At present only about 260 km. long fences exist in West Bengal (mostly in North Bengal) to control and prevent the wild elephants from straying out of forests. The energised fences have their shortcomings and limitations which have been pointed out in the case of North Bengal (Barua, 1995) as well as South Bengal (Pandey et. al., 1994).

6. *Ex-gratia relief*

The Government of West Bengal started a scheme in 1979 for payment of ex-gratia relief to the victims of elephant depredation. In the beginning, ex-gratia relief was paid only in cases of death or injury to human-beings and crop damage. Since 1986, relief is also being paid for damage to livestock. In 1996, the scope of such relief was further extended to cover cases of house damage as well. During 2007-08, Forest Department paid Rs.1.41 Crore by way of ex-gratia relief to the victims of elephant depredation: Rs.57.43 lakh in North Bengal and Rs.83.48 lakh in South Bengal. The corresponding expenditure during the year 1987-88 was only Rs.13.09 lakh (Rs. 6.89 lakh for North Bengal and Rs. 6.20 lakh for South Bengal). The existing rates for payment of ex-gratia relief are given in the table below:

GETTING ALONG WITH ELEPHANTS

Rates of ex-gratia relief for elephant depredation in West Bengal (As on 1.9.2008)

Type of damage	Rate of ex-gratia relief
Human death	Rs. 1 lakh per person
Permanent disability	Rs. 50,000 per person
Loss of limbs	Rs. 7,500 + Free Treatment
Simple injury	Free Treatment
Crop damage	Actual loss but not exceeding Rs. 7500 per ha
House damage	<u>Kuchha House</u> Rs. 1,500 per hut (complete damage) Rs. 750 per hut (partial damage) <u>Semi-Permanent House (GI Sheet / Tali-Roof)</u> Rs. 5,000 per house <u>Permanent House (RCC Roof)</u> Rs. 10,000 per house

7. Capture operations

Capturing of wild elephants by *Khedda* or *Mela Shikar* has been done in North Bengal almost regularly since independence till 1980 on the explicit plea of containing elephant depredation. During 1971-81, 117 elephants, forming over 40 % of their population, were captured in North Bengal. However, there was no positive outcome of this and the problem worsened in the 1980s (Dey, 1991). It can, therefore, be inferred that it was not the over-population of elephants but some other factors like habitat loss and biotic interference, which were responsible for elephant depredation (Barua, 1995). Regular capturing of elephants has largely stopped as a result of inclusion of the elephant in Schedule-I of the Wildlife (Protection) Act, 1972. But in 1990s, an 'Operation Elephant Capture' was launched in South Bengal with special permission from the Government of India, and seven wild elephants were captured between August 1995 and November 1996. The effect of capturing on the visiting elephant population in South Bengal was reported to be quite encouraging (Ghosh, 1997). But the relief was obviously temporary and three more elephants had to be captured during 2001-02. Elephants have been captured either by the traditional *Mela Shikar* using trained elephants (*kunkis*) or by the modern method of chemical immobilization. One big handicap of elephant capturing in West Bengal is that problem elephants are mostly adult animals and the Forest Department lacks the capacity to train big elephants.

8. Chase without capture

Consequent upon legal restrictions on elephant capturing, the *Mela Shikar* technique was modified from 'chase and capture' to 'chase without capture'. Trained elephants (*kunkis*) were pressed into service in November 1980 and August 1981 to chase away elephant herds in Kurseong Division (Lahiri Choudhury and Bardhan Roy, 1982). Departmental and hired elephants are since being used in the northern as well as southern parts of West Bengal against wild elephants with varying degrees of success.

GETTING ALONG WITH ELEPHANTS

9. *Elephant corridor*

In the late 1980s, the Government of India and the Government of West Bengal in consultation with the Royal Government of Bhutan mooted a proposal to set up a corridor linking Buxa Tiger Reserve with the Mahananda Wildlife Sanctuary so as to provide a free and uninterrupted movement to wild elephants. The proposed corridor, 1 km wide and about 150 km long, covered forests as well as many villages and tea gardens situated close to the Indo-Bhutan border. It was proposed to acquire the non-forest land by payment of compensation and develop the same through afforestation. But no progress has since been made regarding implementation of the proposal. In fact, in the existing socio-political scenario in West Bengal, acquisition of such a big tract of land by evicting a large population of villagers and labourers does not appear feasible. Attempts are, however, being made to identify, protect and improve the existing corridors.

10. *Translocation*

In July 1988, an experiment was carried out to translocate a problem elephant in North Bengal. The said elephant was tranquilized and captured in the forests of Bagdogra Range in Kurseong Division and released in the core area of Buxa Tiger Reserve, about 250 km away. But the elephant travelled all the way back and was found dead two months later (September 1988) in the Panighata forests close to where it was captured. This put a question mark on the efficacy of translocation of problem elephants in West Bengal (Barua, 1995). Some more attempts with translocation have been made in the recent years. Two wild tuskers, which had strayed into Bagerhat district of Bangladesh in May 2004, were tranquilized and brought back to West Bengal. A rogue elephant was also translocated from Nayagram in Paschim Midnapore district to Mahananda Sanctuary in North Bengal in January 2006.

11. *Habitat improvement*

Efforts are being made to protect and improve elephant habitats in the state. The Forest Conservation Act, 1980 prohibits any exploitation of natural forests. Forest Department has been planting bamboo and other fodder species favoured by elephants in protected areas and also in the Elephant Reserves to improve the quality of forests and to induce elephants to spend more time inside forests. About 3000 ha of such plantations has been raised till 2007-08. Also, the canopy in the monoculture teak plantations in North Bengal is regularly opened to allow ground vegetation and other miscellaneous species to grow. Water conservation works have been undertaken in and outside the protected areas and Elephant Reserves. These initiatives have shown encouraging results particularly in Mahananda and Jaldapara Wildlife Sanctuaries where the elephants now spend much more time than in the past (Bist, 1994). But much of the impact of such development works is lost due to biotic interference in the form of cattle grazing, illegal collection of fodder and firewood and unregulated fire (Barua, 1995).



GETTING ALONG WITH ELEPHANTS

12. *Ecodevelopment*

Ecodevelopment works are being carried out in villages on the fringes of protected areas with the objective of reducing people's dependency on forests, thereby bringing down the biotic pressure on the forests. Ecodevelopment works also aim at improving the relation of the forest staff with the local people and ensuring people's participation in the protection of forests and wildlife. Under the World Bank-supported West Bengal Forestry Project (1992-97), eco-development works were also extended to forests outside the protected areas. In Elephant Reserves, eco-development works are carried out with financial support from Project Elephant. By and large, these initiatives have been effective at least in bringing down pressure on forest officials, if not in eliminating human-elephant conflict.

13. *Joint Forestry Management (JFM)*

Since the late 1980s, the Government of West Bengal has been formally involving the people of the villages on the fringes of the forests in the protection of forests on a "care and share" basis. The people are encouraged to form Forest Protection Committees (FPCs) and help the forest staff in protecting forests and wildlife. The members of these committees, in turn, get priority employment in all forestry related works, besides deriving certain benefits in cash or kind from the forests protected by them. In June 1996, the JFM concept was extended to the protected areas through the formation of Ecodevelopment Committees (EDCs) by the local people. At present, 4011 FPCs comprising 5,58,000 members and providing protection to 5,49,000 ha of forests have been functioning in West Bengal. About 103 EDCs (20,500 members) are also operational in the protected areas of West Bengal. As far as elephant conservation is concerned, the JFM concept has been quite successful in South Bengal in rejuvenating degraded forests, as is evidenced by the fact that visiting elephant herds spend a longer time here than they did in the past. Also, at many places, FPC/EDC members provide active support to the forest staff in dealing with wild elephants.

STRATEGY FOR CONFLICT RESOLUTION

More improvisation

From the foregoing discussion it is obvious that the measures adopted in West Bengal for dealing with elephant-human conflict are both short-term and long-term. The short-term measures aim at providing immediate relief to the people against depredation by wild elephants. The long-term measures seek to remove the factors responsible for the conflict and create ideal living conditions for elephants within forests. The measures adopted are innovative as well as traditional. However, elephants exhibit remarkable intelligence in detecting the limitations of various techniques devised to contain them and adapt themselves accordingly. What, therefore, is required is continuous improvisation in the various methods keeping in mind the psychology and physical capabilities of the elephants. Short-term and long-term measures should go hand in hand to tackle the problem effectively.

GETTING ALONG WITH ELEPHANTS

Living in harmony with elephants

Another important aspect in the management of human-elephant conflict is to enable the people residing in the elephant zones to live in harmony with the elephants. Experience in West Bengal suggests that elephant depredation can be greatly reduced by taking certain precautions and adopting preventive measures (Bist, 1996). Some such examples are given below:

1. Observations reveal that wild elephants are in general shy of electric lights. Moreover, people can protect themselves better under electric light than otherwise. For the tea gardens in North Bengal, which account for 60-70% of total human casualties due to elephants every year, electrification of labour habitations is of utmost importance.
2. It is observed that houses built on pillars are less susceptible to damage by elephants and provide more security than houses built at ground level. Thus, properly designed houses, particularly in the tea gardens, can greatly reduce the extent of damage to life and property by elephants.
3. It has been observed that houses with white-washed or brightly painted walls are more prone to damage by elephants than those with green, ochre or earth coloured walls
4. The houses should also not have tall hedges around them which could prevent sighting an approaching elephant. Also, people should be advised against growing bamboo, banana, jackfruit and similar plants very close to their houses as these may attract elephants
5. In areas where crop damage by elephants is a regular feature, the farmers may be encouraged to grow alternative crops such as jute, potato, oilseeds, etc. which are not favoured by elephants.
6. People must be cautioned against injuring elephants wantonly.
7. People should not move outdoors after dusk in intoxicated condition and should also be warned against preparing and storing country liquor openly in their houses.

Intensive publicity among the people and suitable training must form part and parcel of a conflict management programme. Some of these suggested initiatives have already been taken in West Bengal, but much more needs to be done in days to come.

References:

Anon (1976). Deputy Secretary, Government of West Bengal, Department of Forest's Letter; No. 5033(3)/11B-52/74 Dated 15.6.76 to Conservator of Forests Northern Circle, Darjeeling and others.

Anon (1997). State report on West Bengal Forest 1996-97; Planning and Statistical Cell, Office of Principal Chief Conservator of Forests, West Bengal, Calcutta.

Barua, P. (1995). Managing a problem elephant population; In "A Week with Elephants", *Proceedings of the international seminar on the conservation of Asian elephant, June 1993*; JC Daniel and Hemant S Datye (Eds), Bombay Natural History Society and Oxford University Press.

Bist, S.S. (1994). Management of problem population of elephants in the northern part of West Bengal; Report submitted to Chief Wildlife Warden of West Bengal, Mimeo 41p.

GETTING ALONG WITH ELEPHANTS

- Bist, S.S. (1997).** 50 years of wildlife management in West Bengal: *Banobithi* (October, 1997), Calcutta.
- Bist, S.S. (1996).** Man-elephant conflict: Causes and control measures; *Zoos' Print*, XI: 6.
- Chowdhury M. and I. Roy (1982).** Some observations on the use of tiger scent (urine) and tiger calls as repellent to elephants; *Mimeo*, 7p.
- Dey, S.C. (1991).** Depredation by wildlife in fringe areas in North Bengal with special reference to elephant damage; *The Indian Forester*, 117 : 10.
- Fawcus, L.R. (1943).** Report of the game and game fishes preservation committee on the existing species of game in Bengal; *Bengal Government Secretariat, Calcutta*.
- Ghoh, A. (1997).** Impact of capture on the migratory herds of elephants in South West Bengal; In, *Agenda notes for the XIX meeting of the State Wildlife Advisory Board, West Bengal, Calcutta*.
- Gupta, A.C. (1958).** Gorumara game sanctuary; *Journal of the Bengal Natural History Society*; 29; 4.
- Lahiri Choudhury D.K. (1975).** Elephant movement and depredation in Jalpaiguri division and part of Madarihat range of Cooch Bihar division in June-July 1975; *Report to the West Bengal government in November 1975, Mimeo*, 60p.
- Lahiri Choudhury D.K. (1980).** Status and distribution of elephants (*Elephas maximus*) in north-east India (August 1980); In, "The status of the Asian elephant in the Indian sub-continent", *IUCN/SSC Report; JC Daniel (Ed.); Bombay Natural History Society, Bombay*.
- Lahiri Choudhury D.K. and B.K. Bardhan Roy (1982).** Anchored mela type chase without capture operation in North Bengal: An exercise in anti-elephant depredation method; *Mimeo*; 11 p.
- O'Malley, L.S.S. (1907).** Bengal District Gazetteers - Darjeeling; *Logos Press, New Delhi (Reprint 1985)*.
- Palit, S. (1975).** DFO Jalpaiguri Division Memo No. 7225/26-3 dated 3.9.75 to Conservator of Forests, Northern Circle, West Bengal, Darjeeling.
- Pande, N.K., U. Dasgupta, D.K. Lahiri Choudhury and S. Roy (1994).** Management of elephants in the south-western part of West Bengal; *A report submitted to Government of India: Mimeo*, 17p.

(article published by the Wildlife Institute of India, Dehradun, in its ENVIS bulletin in 1998, for inclusion in the compendium that was brought out for the National Seminar on HEC organised at Kolkata on 26-27 October, 2008).

GETTING ALONG WITH ELEPHANTS

LEARNING TO LIVE WITH GIANTS - HECX

In this book, you might have learned some things about elephants. Many of them you probably knew, because people in South Asia have all grown up with elephants in one way or another. *When did the life of a South Asian NOT include elephants?*

Elephants are part and parcel of childhood - many childrens' favourite animal. According to the survey conducted during this project the results showed that 18% of Bangladeshi children expressed elephants as their favourite animal while 24% of the Nepali children liked elephants. In Sumatra the survey showed that only 8% of Sumatra children expressed elephants as their favourite animal. Most South Asian children meet elephants wherever they live, because elephants live in cities as well as the forest, although they are captive, coming from zoos, temples, circus, elephant camps and nature parks, and even on the roads sometimes if they are being walked from their stable to the vet or just taken out for an outing by their Mahout. Temple mahouts in India take their elephants out for collecting alms for the temple.

Elephants are also in the lives of children through books and stories, toy figurines and soft stuffed toys. Some children grow up with elephant ivory statues or elephant foot umbrella stands or trash bins. They are embroidered on sari's and shawls and bedcovers, door curtains, graces calendars, posters, statuettes, and carvings. In their daily life Hindus worship elephant as God, Lord Ganesh.

Today elephants are much in the news because of their declining numbers on the one hand, but they are perhaps much **more** in the news because of their loss of habitat and reaction to the same by searching for food and water in or near human habitations, laying waste houses, fields of crops, stored crops and edible products, and even human beings who are in the way or who offend in some manner.

Not a completely new problem

Even many centuries ago when elephants had plenty of space for roaming and sufficient food and water, they periodically came into conflict with human beings.

The Gajasastra, ancient Indian elephant lore, has records of serious conflict between elephants and agricultural communities as early as the 5th or 6th century B.C. (Nalini Sadhale & Y.L. Nene, On Elephants in Manasollasa, *Asian Agri-History* Vol. 8, No. 1, 2004 (5-25).

The Gajasastra also describes the qualities of an elephant which varied from animal to animal, just as in human beings. In those days there were some elephants, just as we have

GETTING ALONG WITH ELEPHANTS

occasionally today. A "habitual killer" of human beings, and swift and strong was considered to be born with "demonic essence". They were not to be captured and used for any purpose, even killing of persons in war, as they could not be controlled. (Nalini Sadhale & Y.L. Nene, On Elephants in Manasollasa, Reproduced from *Asian Agri-History* Vol. 8, No. 1, 2004 (5-25).

In our time, these are called "rogue" elephants and are often killed themselves. In those days elephants had the run of forests so did not have the problems of elephants today, who are being deprived of food, water and habitat and are often driven to bad acts by hunger, thirst, frustration, or fear of losing their calf. Yet, it seems there were still elephants that raided agricultural fields even in those days. "As years went by, the elephant population continued to grow in the jungle. They began to encroach the nearby villages and terrify the human inhabitants." (K. C. Panicker, *Mahout Training Manual*, Zoo Outreach Organisation, 1997).

Getting along with Elephants

How to "get along" with elephants? That is one *elephantine* question.

How to *teach* people in elephant conflict areas how to get along with elephants. That is another *elephantine* question.

If you are from a conflict area and have experienced the fear and loss which conflict brings, then you surely would be in a better position as a teacher to relate to people living with elephants, because you can put yourself in their place. If not, you may want to be careful about what you say.

"Getting along with Elephants" is another way of saying "co-exist" or "peacefully coexist", what we refer to as HECx as opposed to HEC, "coexistence" as opposed to "conflict". Whatever you call it, the relationship between man and elephant in an increasing number of rural and forest areas is one of the most vexing and elusive problems in wildlife conservation and of human and elephant welfare today and even some decades earlier. The major reason it is so frustrating is its complexity and uniqueness across continents, countries, states, provinces, districts and even localities.

A small example of this uniqueness was demonstrated to our ZOO team very early on when two of our researchers did a simple one-day survey of three localities or village areas, spoke informally with villagers, and recorded their comments. These areas were within a 30 km radius of one another and Coimbatore. The attitudes of the villagers toward the elephants visiting their village varied widely, ranging from hostility wherein

GETTING ALONG WITH ELEPHANTS

the elephants were only a nuisance in one village, to affection, worship and acceptance with variations in coping mechanisms in two other villages. A summary of the survey is given as a Case study on page 66.

Elephants were here first

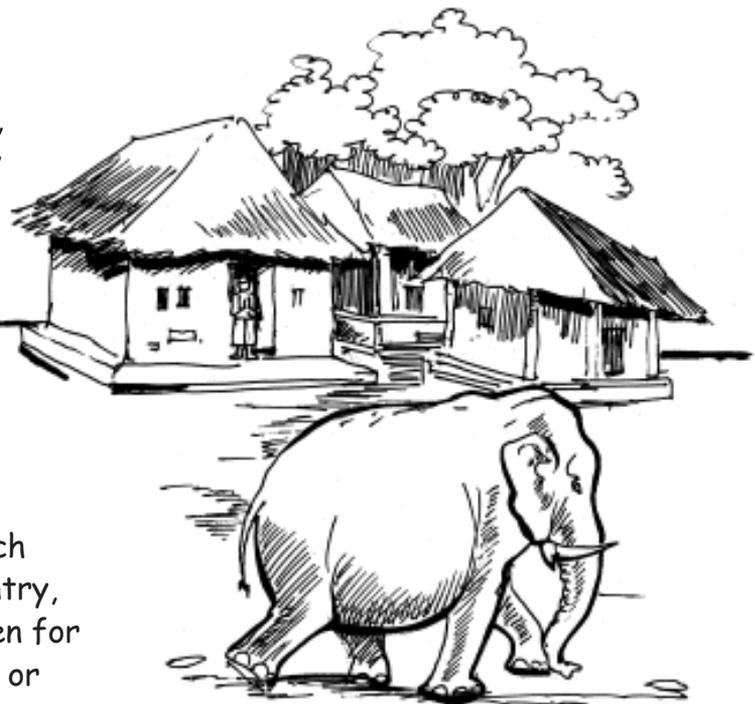
Elephants have been on this earth for many millennia in one form or another. They have been used and abused for war, for work, for worship. They have been used for sport, whether for relatively harmless "elephant polo" or for (very harmful) sports hunting. Mankind has utilized their skin for making pouches and boots, their legs for making umbrella stands, their beautiful ivory tusks for jewelry, object d'art and worship items in the elephants own image (Lord Ganesha), and their tail hairs for lucky charms of rings, bracelets, amulets, etc. The uses of a dead elephant are as many as that of a live elephant, and thousands (perhaps hundreds of thousands) of people have made their living on either the living animals or the products of non-living elephants.

At one time it was feared that elephants might be "shot out" . . . poached and culled to extinction. Today, even though the number of elephants is declining in some countries, the amount of space or habitat required for elephants is declining faster. This is the reason elephants and human beings conflict so frequently today.

Human-elephant conflict is not new in the current decades; there have been tussles between elephants and human beings before, but not in such numbers as now. Today it is a burning issue.

In trying to assemble this manual we spoke with many individuals (experts, enthusiasts and afflicted), read many books, articles and press releases, interviewed people from different countries & villages. In the end, regarding HEC, the only statements we can make with confidence are :

1. The human-elephant conflict issue is very complex
2. There is no "ultimate" solution which would work for every continent, country, district, village or locality. . . not even for every population (elephant or human) or



GETTING ALONG WITH ELEPHANTS

even individual elephants or different situations. No single action can be claimed to be "**the way**" or even a right action in a different situation. (See Case Study on page: 66)

3. Unless we have experienced the fear, frustration and loss caused by marauding elephants, we cannot truly understand it ... no matter how much we know.

4. HEC is not going away.

Government solutions

Government has been and is trying many things to cope with the problem and protect its citizens, both human and animal. NGOs also have helped and are trying to help in a variety of ways. All such help must be welcome and there is no doubt that there is great sympathy both for the elephants as well as those who are in their path and are killed, injured or deprived of loved ones, livelihood or property, as a result. However, the forest or wildlife department, the NGOs, or whatever group is trying can never cover all possible things that can go wrong. HEC, like Life itself, is **unmanageable** at least some of the time by any human individual or institution.

Life is unmanageable

Despite the good intentions of all, whatever has been put in place for protection, can collapse on occasions when it is most needed. For example, when an elephant attacks . . .

- There may be no time to call for help from the forest or wildlife departments.
- Cell phone batteries may die or cell phones break or get lost.
- The department may be busy with another village or their vehicles may be under repair
- Equipment may break.
- Roads may be closed, bridges destroyed, etc.

Therefore, in the end, in a sudden and unexpected confrontation with an elephant or groups of elephants, *it is only the individual or group of individuals being confronted who can save themselves*. Communities, villages, families, individuals, adults and children as well must not rely totally on any outside agency or staff. Each individual must learn to take responsibility for himself. Each community must learn how to live with the situation as it is, not as how they wish it was.

In order to do this, one must develop a flexible attitude and learn to think in new ways. One has to also establish priorities. For example, what is more important, a sugar cane crop or one's life? Is it worth breaking an arm or leg to save a hut or house? If you live you can plant and build again. However difficult that may be, it is preferable to death. Those of us who will be teaching the children of villagers may be shy and feel bad to say certain things. It is easy to ask such questions sitting in a city or locality with no

GETTING ALONG WITH ELEPHANTS

elephants threatening our livelihood or with a job that does not demand our living near elephants. We may feel afraid that the people we are teaching might challenge us ... "what do you know!" or "do you live in a hut in an elephant area?" or "have you lost your husband, or father, or wife or mother or child to an elephant?" or "have you ever been paralyzed by the terror of an elephant coming into your village or to your house?", etc.

Surely none of us who teach or want to help in some other way want to be supercilious or condescending or appear unsympathetic. However, the basic truth for people living in conflict localities is "... *without your life and without use of your limbs or other parts of your body, you cannot support your family or yourself.*" *Protect your safety and that of your family*".



Often we all get habituated to a certain way of life or routine in carrying out our daily tasks or in enjoying our lives. Equally often, we get so habituated to it that we can't easily imagine doing things differently. Also we become sort of blind to other ways of thinking.

Take the case of the rural village women who washed their clothes in the nearby river at a certain time each day. A small herd of elephants started coming to the river at about that time. The women had close calls with the elephants but still did not want to change their timing. It was their way since time immemorial to wash clothes in the soft rays of the sun. It was like a deadly game of chance to continue. This is "blinkered" thinking. Although changing your timings is an irritant, it is not a tragedy such as encountering elephants would be.

Or the case of the man eating a coconut in the vicinity of an elephant. The elephant reaches out to take the coconut and the man fights for his right to the coconut. Wise up ... don't get hurt by an elephant for the sake of a principle. They outweigh you! I won! I got the Coconut

GETTING ALONG WITH ELEPHANTS

There are an abundance of reports and stories about human-elephant conflict as well as instances of human-elephant coexistence. We have included a variety of such stories below which illustrate different ways of handling or reacting to elephant issues. We have posed some questions underneath each one which will help you think of using such stories to teach kids to behave more responsibly with elephants. Perhaps adults of today are stuck in their old ways, but children can be molded to think differently.

If you have other (and perhaps better) stories, please write them on a piece of paper and give them to us. For now, here are some true stories as "food for thought." In the next section, there are some "do's" and "don'ts" which we have collected from printed reports. If you have heard of more of these or experienced them please give them to us for our next printing of this Guide. The questions are ideas for you to use to draw your class or participants into a discussion.

True Life News stories from South Asian press

1. Tunnel to flee jumbos. Source: The Telegraph 07 October 2008

This story is about Maneshwari Burman, a 65 year old woman who saved herself, her grandsons and a friend from certain death with her resourcefulness. Maneshwari lived in a tin hut which was surrounded on 3 sides by marauding elephants when she awoke to the sound of trumpeting elephants gorging on her paddy a few yards away. She was frightened but made a plan. She and her grandson Arjun began digging a tunnel in their mud floor while Pradip, another grandson, kept watching the elephants. They started with a khunti or sharp spatula to break the ground and scooped out the soil with brass bowls, creating a small tunnel large enough to crawl through to the outside wall. They crawled through, then waited and watched carefully for some time before making a run for a neighbors house 200 metres away. The neighbors were shocked to see them alive. The herd of 40 elephants had strayed into the area from Dhumki forest and had created much havoc nearby before surrounding Maneshwaris house. A forest team arrived and pushed the herd back into the forest. The RFO was all praise for Maneshwari and for her bravado and quick thinking, which saved four human lives.

Questions: *If your tin house was surrounded by elephants would you a) make a run for it?, b) crawl under the covers and cry ?, c) think of a plan, like Maneshwari and get into action ?*

Lesson: *Use your brain to save yourself.*

GETTING ALONG WITH ELEPHANTS

2. Women do penance for elephants death (India). Newindpress.com. February 9 2008

Some elephants were killed in a train accident near Madukkarai in January 2008 and pregnant women in nearby villages began doing penance on the advice of a local godman who approached them stating that the death of an elephant nearby was a bad omen. He told them they should mix a variety of grass in a pot of water and offer it to Lord Vinayaka, and light lamps Ponoothu Malai Amman in homes. "We have strong belief in. So we followed what he told us," one of the women said.

Questions: Do you think the women who did the penance were foolish? Do you think it hurt anything!

Lesson: Follow your faith for mental comfort.

3. Homage paid to elephants (India), Chennai Online, February 11, 2008 Coimbatore

In a similar story, villagers of Karumbapalayam paid a 'traditional homage,' to the three elephants, including a pregnant one, killed by an oncoming train. Around 100 residents, mostly women, brought flowers, incense and milk to perform pooja at the site where the elephant carcasses were burnt. A priest performed a one hour pooja with the women pouring milk on the site. Forest officials attended the ritual normally done for human beings on the 7th day of death.

The owner of the site will donate land for a temple in memory of the elephants. The assembled persons took a pledge to protect forests and wildlife, guided by the forest officers.

Questions: Do you see any good in the fact that the 100 residents conducted a pooja for the killed elephants? Do you see any harm? Do you think it was kind of the forest officers to attend this ritual? Would you take a pledge to protect forests and wildlife?

Lesson: Follow your faith and don't judge others faith.



GETTING ALONG WITH ELEPHANTS

4. Elephant kills Sri Lankan villager in poignant misunderstanding. ... from a variety of versions

On 3 October 2008 in a Sri Lankan village, an elephant and her calf had fallen into a jungle well. Villagers called the wildlife department and police but proceeded with the rescue themselves. First they pulled out the calf which was much excited but safe. Then they proceeded to pull the mother out. The mother had become extremely upset when her calf left her side and went berserk when she was taken out. The villagers had no equipment or expertise in protecting themselves and one of them was trampled to death. When the wildlife officials arrived, some of the villagers were angry with them for not coming sooner. Others were angry for not keeping elephants in the forest; one of this group actually assaulted a policeman. Later a government official commented that local people are not supposed to rescue elephants in such situations and if the villagers could have waited for the wildlife department whose team was located some distance from the site, then that life might have been saved.

Questions: *What do you think of the villagers who rescued the mother elephant and calf? How about the mother elephant? Do you think she should have been "grateful". Do animals have reactions like "gratitude"?*

Lesson: *This death might have been avoided by waiting for the experts and their equipment.*

5. Elephant kills Salboni villager (India), Times of India, 4 September 2008

A 52-year-old resident of Poradiha village in Salboni was killed by an elephant this week. He and two others had gone to Poradiha jungles in the morning to collect leaves, and were confronted by a herd of elephants. Two of the men ran to safety but the 52 year old man could not get away due to his infirmity. He was hurled high in the air by one of the tuskers. Later he passed away due to his injuries at Primary Health Centre.

Questions: *Would you go into a forest if you could not run? Do you think the other men also took a risk by going into the jungle?*

Lesson: *Don't go into the forest if you are infirm, or at all if there are elephants.*

6. Elephant and calf rescued from irrigation well, The Hindu, Staff reporter

An elephant and its calf were rescued from irrigation well at Satuli village recently. They fell into the well at night while their herd searched for paddy in agricultural fields. The rest of the herd moved into nearby jungle. Forest officials rushed to the aid of the elephants but even they did not have any mechanical device to lift the animals out of the well. They filled the well with water and also created a slope on one side to enable the animals climb out. The calf could be rescued twice but returned to the well as its mother was inside and unable to get out on her own. Foresters pushed from behind

GETTING ALONG WITH ELEPHANTS

and helped her get out, with the calf following. After coming out of the well, the elephants ran into the nearby jungle to escape from the watching crowd which had gathered at the spot. Foresters were relieved that no incident occurred as the animals were shocked over their ordeal. In any case the foresters wanted them to become part of their original herd again.

Questions: *What is the difference between this rescue and the earlier one? Do you think you could get into a well with an elephant and push from behind? Why wouldn't the calf stay out of the well?*

Lesson: *Wait for the forest or wildlife department.*

7. Tusker elopes with circus elephant (India), Debajyoti Chakraborty, Times of India, 30 August 2007

A huge tusker, straight out of the jungle, raided a circus in Kumarbazar area of Raiganj in the early hours, selected a female elephant, Savitri, among the circus herd of four and urged her to come with him to a site by a pond in Raiganj. In the meantime, a second female elephant, Gayatri, who was "very attached" to the one that ran away with the tusker grieved for her friend so much that she stopped eating and could not perform. The circus manager was distraught with the loss of his Rs. 4 lakh elephant but also because he could not run his elephant show. Circus officials demanded the return of Savitri but jungle elephants do not move about in daytime and captive elephants are afraid to move at night, making timing of a raid difficult. Both animals were in heat and thus easily aggravated so forest officials decided to leave them alone for some time to avoid conflict and possible injuries to both man and animal. The circus manager may be well-compensated by a baby elephant to draw crowds in 2 years...if Savitri can be made to leave her mate, that is.



Questions: *Are you surprised to read about a wild male elephant invading a circus and persuading a captive female to run away with him. What does this remind you of? ... a Hindi movie perhaps? Is this also Human Animal Conflict? Why?*

Lesson: *Elephants are much like human beings.*

8. Tribal persons worship elephants for protection, Telugu Portal, Nov 7, 2006, Ranchi, (IANS)

Human efforts have failed to prevent elephant depredations so tribal people in Jharkhand have instead turned to praying to the animals for protection, they say. Methods attempted by the forest department and others could not foil the animals which

GETTING ALONG WITH ELEPHANTS

regularly venture into villages, destroy crops and sometimes kill human beings. Tribals in several parts of the state have started worshipping the elephants to appease them, villagers say. Elephant images are made and nature is invoked to protect villagers. "We have started praying to elephants. Elephants were always revered in our society but in recent times the destruction they caused made us look at them as our enemy," said one. Another said "We are taking to prayers to calm them down. Only friendship with the elephants can end the confrontation."

Questions: *Do you think this method will work to calm the elephants? If not, why not? Can you think of other situations that have been aided by prayer and worship?*

Lesson: *Don't rely solely either on official or alternative solutions. Pray, but with eyes open.*

9. Elephants checkmate Jharkhand's tribal hunters. New Kerala, May 1, 2007, Ranchi

This year, Jharkhand elephants did what the forest officials could not do in the past - chase away tribals who came to hunt and kill wild animals in Dalma sanctuary. To celebrate the ongoing 'Visu Shikar' festival, 400 tribal people of the Dalma Buru Sendra Sammittee (DBSS) had gathered at the wildlife sanctuary for hunting and killing when a herd of elephants saw them and chased them away.

Questions: *Do you think people should hunt and kill wild animals for a festival? Are you glad the elephants chased the hunters away?*

Lesson: *Look for some good in everything in life.*

10. Elephants entertain people, Statesman News Service, December 19, 2006, Dhenkanal

Thousands of officials, students and local people gathered to watch the "dust bath" of eighteen elephants including two tuskers near Shyamcharanpur in the municipality area. The sight captivated the audience from 6 am to 6 pm. As evening approached the crowd was beyond the control of the forest officials and affected traffic on the way to Shyamcharanpur. The elephants strayed into the municipality areas from Saptasajya and Megha hills in search of food.

Questions: *Is this conflict or coexistence? or both, depending on your point of view!*

Lesson: *Human beings fascination with animal behaviour can be a way toward coexistence.*

11. Death by elephant again in north Bengal, MeriNews, July 29, 2008

For the fourth time in a week a man was trampled to death by an elephant near the Buxa Tiger Reserve in north Bengal. The 65-year-old man was returning home late. As he walked alone through the forest adjoining Kartick Tea Estate he was attacked and killed.

GETTING ALONG WITH ELEPHANTS

Over the last eight days, three other tea workers have been killed in three separate incidents but under similar circumstances. Huts and shops in the area too have come under pachyderm attacks.

Questions: *What mistake did all these men make? Do you walk alone at night in elephant areas?*

Lesson: *Avoid walking through elephant forest at night.*

12. More casualties in man-elephant conflict, The Statesman, July 23, 2008, Siliguri The man-elephant conflict continues in north Bengal with five human casualties in the last 15 days. Late in the evening a marauding tusker trampled a man to death at Kalchini block in the Dooars. The lone tusker forayed into the village from the adjacent Damanpur forest and crushed to death a 27 year old man who was walking along the village trail. The tusker went on to decimate three huts before returning to the Damanpur forest. With this, the number of human casualties caused by wild elephants in north Bengal has shot up to five in just the last 15 days with four people killed in the Dooars.



At least nine wild elephants too have died unnatural deaths in north Bengal in the past 45 days by way of electrocution, poisoning and train accident.

Questions: *Is it a good way to avenge human deaths by killing elephants? Do you think it is the elephants fault when people get in their way?*

Lesson: *So many deaths so close together in the same area suggests that residents should be more careful.*

13. Smelly camels help keep elephants away, Reuters, June 26, 2008, Ranchi (Reuters Life!)

Indian villagers have recruited camels to protect their farmlands and homes from marauding elephants, saying the beasts' stink was enough to keep the pachyderms at bay. Officials said on Thursday that villagers in Jharkhand state had earlier this month hired two camels for 2,000 rupees (\$46) a month each and were using them for patrolling. "The elephants do not roam where camels are found," said Jugesh Oraon, a local village leader. More than 400 people have been trampled to death in the last seven years in Jharkhand by elephants, which have also destroyed crops and homes, officials said. Villagers in the past have used chillies and fire crackers to keep elephants away.

Questions: *Do you think the elephants will get used to the camel smell? Do you think that if camels and chillis were alternated periodically it would help? Can you think of*

GETTING ALONG WITH ELEPHANTS

anything else elephants do not like that might keep them away from villages?

Lesson: *Try anything that might work without harming the animal.*

14. Elephants raid flood victims relief camps, The Hindu, June 26, 2008

Elephants displaced by the floods and left starving circled relief camps in schools in West Midnapore, drawn by the smell of molasses. Malati, 38, a widow, had waded 200m through waist-deep water with her two sons to the school at Deulbar village. Malati Majhi, who had been having a disturbed sleep at the thought of the crumbling home that she left behind, woke up during the night and saw the trunk of an elephant in the feeble light of a kerosene lamp. It was sniffing around for something through a smashed window of the school building relief camp. She then saw a dark large shape outside and screamed, waking about 450 flood victims who realised a herd of four had surrounded the school and were trying to make their way in.

Questions: *Why is this story so touching? Do you think it is sad that both humans and elephants are victims of something bigger than man or elephant - floods!*

Lesson: *Even in crisis remember to hide or disguise smelly foodstuffs loved by elephants.*

15. Using tiger urine, camels to ward off elephants, The Times of India, 10 Jun 2008

Spraying tiger urine and keeping camels as pets are some of the novel methods adopted by villagers in Jharkhand to keep away marauding elephants that destroy crops and kill people when in a fit of rage. Villagers in Bero block of Ranchi brought two camels to ward off the elephants last week. "Ever since the arrival of the camels, the elephants have been keeping away. The camels are like angels for us. We no longer fear for our lives and our crops are also safe," said a resident of Purnapani village. Another villager said: "We let the camels roam around the village. The elephants dislike the smell of the camels and leave us alone." For the past three months, villagers in Silli block of Ranchi have been spraying tiger urine, which they get from the zoological park here, in and around the hamlets to keep the elephants at bay.

Questions: *Can you think of some other ways to discourage elephants? What else are elephants afraid of?*

Lesson: *No method is too bizarre if it works !*

16. Train hits no longer take toll on elephants, The Times of India, 10 Jun 2008

In the last six years, no case of elephant deaths due to train-hit has been reported from Rajaji National Park in Uttarakhand, thanks to joint effort by the state Forest Department and the Railways. The railway patrol unit set up in 2002 has been monitoring movement of jumbos on the railway tracks in the Park, home to a large

GETTING ALONG WITH ELEPHANTS

population of Asian elephants, said the park Director and Conservator of Forest. After the death of 20 elephants due to train hits since the park was set up in 1986, not a single elephant has been killed. The task of the patrolling unit, comprising officials from forest department is to keep round-the-clock watch on both sides of the 18 km railway track passing through the park spread over 820.40sq. km.

Questions: *What do you think of no elephant deaths in 6 years? What does this show about the government agencies?*

Lesson: *There is no excuse for elephants to be killed on railroad tracks; if Uttarakhand can do it, why not all other states.*

17. Tamil Nadu gets 315 acres for elephant corridor, Thaindian.com, April 9, 2008

Elephants in Tamil Nadu will have exclusive right of passage in the elephant corridors which the Government of Tamil Nadu is in the process of developing elephant corridors, Forest officials informed state assembly. As much as 315 acres of land is being acquired for this purpose. The focus of the forest department would be to ensure that there were no encroachments on the traditional paths elephants take to move in the Western Ghats forests. The forests form a 600-km long spine along the Tamil Nadu-Kerala border. Elephant herds also move freely into Karnataka and Kerala forests that are congruent.

Questions: *How will a corridor help the HEC problem? Do you think it is worth 315 acres to save the lives of both elephants and human beings?*

Lesson: *This is a scientific solution, using research applied to a practical problem and may just work.*

18. A simple string that keeps elephants away, The Assam Tribune, March 12, 2008

A humble string has been able to play a role in halting the onslaught of the biggest of land animals. In parts of Nagaon district, strategically deployed strings in the path of wild elephants have resulted in reducing human elephant conflict to an unexpected degree. The promoter of the idea came up with it after examining quite a few other means to prevent elephant depredation. "It was the most cost-effective and the least time consuming methods I could think of...in an area where funds are especially scarce to come by," said the promoter. The string, commonly known as parachute yarn, is strung at a height of around eight feet in the anticipated route of wild elephants. Once the elephant - an adult is more than eight feet in height - brushes against the string, the hair on its head gets entwined in it. With a feeling that the elephant particularly detests, the animal halts, and then retreats with the herd on its heels.

Questions: *Can you imagine a string stopping an elephant? Do you know what it feels*

GETTING ALONG WITH ELEPHANTS

like to have a stone in your shoe? What other simple methods can you think of with the same principle.

Lesson: Complicated solutions are not necessarily the most effective.

19. Army wields chilli weapon instead of Kalashnikovs (A type of submachine gun made in Russia). Pullock Dutta, The Telegraph, January 9, 2007.

The army is fighting its "largest" adversary yet with a weapon "hotter" than the AK-47. Constantly harassed by wild elephants, the army is planting the worlds hottest chilli in its camp adjoining the Gibbon Wildlife Sanctuary in Mariani to ward off straying herds. "Everything else has failed. We are hoping that the Naga chillies will do the trick," a senior army officer said. Elephants are known to detest the smell of these chilis and the army hopes they will stay away once the plants grow. To add to the sting, the army intends to smear chilly paste on the fence around the camp.

Questions: Can you imagine an animal causing grief to an Army! In some other countries the elephants just simply be shot. Are you glad to live in a region where there is such respect for wildlife?

Lesson: Elephants are a challenge even for a national army.

20. When angry African bees buzz, elephants run, Oct. 9 (Xinhuanet)

Scientists had reason to think elephant were frightened of bees. They wondered if strategically placed beehives might reduce deadly confrontations between man and beast by serving as low-tech deterrents. Using bees to reduce elephant crop-raiding and tree destruction, could also to enhance local income through the sale of honey, thus addressing two problems at once. It had been noted that in Kenya elephants damaged acacia trees with empty or active beehives much less than trees without hives. Zimbabwe researcher noticed elephants forging new trails in order to avoid beehives. In order to confirm whether bees could drive away elephant herds, a team of researchers digitally recorded the buzz of agitated African bees. They recorded bee sounds from a wild hive after intentionally disturbing the bees to get a genuine angry sound. Then researchers played back clips of this buzzing using wireless speakers hidden inside fake plastic tree trunks to elephant families resting under trees. Of the 17 families tested, 16 fled within 80 seconds of hearing the bee sound, and half responded within just 10 seconds. It was learned that whole herds of elephants moved away together from the sound, instead of just one or two indicating that it may be very useful indeed. The scientists wrote up the experiment in October 9 issue of the journal Current Biology.

Questions: Do you think this is a creative idea? Do you think it will work in India. If not, why not?

Lesson: There are many paths to HECx ... Human Elephant Coexistence.

GETTING ALONG WITH ELEPHANTS

CASE STUDY: VISIT TO HEC AREAS IN AND AROUND COIMBATORE DISTRICT

An exploratory visit by Dr. B.A. Daniel and R. Marimuthu to three different nearby HEC localities in Coimbatore District of Tamil Nadu, India revealed a very wide variation in attitudes, experience and mitigation methods. The areas were Varapalayam, Thoomanoor/Sembukarai and Aalanthurai. Although this visit was not intended as a genuine survey, it is still very much indicative of the need to take care NOT to lump together HEC or HECx instances, individuals (neither people or animals), or localities. A summary of the Report, highlighting this variety in HEC / HECx may give an inkling of how far we are or ever will be from a model solution.

Area 1. Varapalayam

The village Varapalayam comes under Periyannayanpalayam forest range and has a population of about 2000 persons, with the primary occupation, agriculture. There is a temple called Ponnuthamman at which as many as 20,000 people gather and celebrate the harvest and other festivals. The temple has a permanent water source which attracts elephants, particularly during dry months until Monsoon showers. About 28 elephants are roaming in a hilly area about 2 km away from the Temple.

The Varapalayam village has experienced elephant visits for the past two years and this year in particular the visits have increased with daily visitation also in several adjoining villages. The villages around Varapalayam have fertile cultivable land owned by the villagers and some of the lands are electric fenced. Only big land owners who can afford to put fencing can protect their crops which are maize, samai, sugarcane and ragi.

The villagers experiencing this situation for the past two years were interviewed, informally. As a whole they are sympathetic towards the elephants, especially as a living creature which needs food and water for its survival. A villager named Selvakumar said, *"... we understand the sufferings of human beings to fill one foot long stomach, and so we could understand and accept the problems of the elephants which has a huge stomach."*

According to villagers, elephants are entering this area mainly for water and in the process of entry they damage and also eat some crops. The government is giving compensation of 10-15 thousand rupees per *patta* land but the scheme may be being misused by large landowners.

GETTING ALONG WITH ELEPHANTS

Mitigating efforts by the villagers:

In Varapalayam, villagers initially used to shout at the elephants in groups to drive them away, then began using crackers. Currently the elephants do not react either to crackers or shouting, nor torches (flashlights).

So far no death of a human being has been reported from these villages but there is a farmer who had his land taken away by the government due to the death of a tusker due to electrocution. There is no time frame for the elephant's visitation.

Area 2. Thoomanoor and Sembukari

Thoomanoor and Sembukarai are two small tribal settlements with a population of 477 people in 134 families. The huts at Thoomanoor are clustered but the huts at Sembukari are scattered. Each family owns their own land of about 10 to 12 acres to cultivate. Their main occupations are agriculture and cattle rearing. Their family size is very small.

Interviews with these villagers about elephant visits indicate that they do not take it as a serious issue. They said that elephants are lured to their huts by their pet dogs. Their dogs bark when the elephants pass their settlement areas. The elephants become irritated by the barking sound and get angry and charge the dogs. The dogs run to the settlement for shelter and thus the elephants enter their area.

Some beliefs/behaviour towards elephants by the settlement people:

1. The tribal people believe that the elephants can understand their language. It is believed that abusive words against elephants should not be used. Even if we use abusive words at low voice it can be heard by the elephants and they may harm people. So they do not use any abusive words toward the elephants.

2. They believe that the elephants do not harm them and one of the observers explained how one lady responded to an elephant's visit. Once an elephant visited the settlement area and stood in front of a small hut where an old lady was resting inside. She could just see the elephant's trunk and legs inside the hut. When she realized the presence of an elephant in front of her hut she took a thin stick and gently touched the trunk and told the elephant without fear "Poo samy, Poo samy..." (Poo = go; Samy - God or title to call an elderly person with respect) repeatedly. The observer said that after a few minutes the elephant left the hut without disturbing it.

3. Another old lady who was around 80 years was interviewed. She confidently told that elephants in no way disturb them. According to her, elephants are considered as Gods

GETTING ALONG WITH ELEPHANTS

and they are allowed to eat that which the villagers cultivate. The leftover crops can be taken by them. She explained one interesting event that happened at her hut. Once a mother elephant with its baby visited her hut. The hut which is very small has a very narrow entry. The baby elephant which was standing next to its mother suddenly tried to enter the hut which was barely big enough for its body. Noticing this, the mother elephant suddenly pulled away the calf using her trunk and prevented it from entering, which would have destroyed the hut! The mischievous calf tried repeatedly but the mother did not allow it to enter the hut. While this was happening the lady was just watching from the side of the hut. She was so happy to praise the good manners of the mother elephant and explained the whole incidence with much enthusiasm.

She said that they are seeing elephants at their vicinity only for the past 15 years. She does not remember seeing elephants around their living area during her childhood. Another family told us "we used to see the elephants at a distance of about 500 mts and they do not harm us. When we see them at a distance we worship the elephants."

4. The settlement reports two human deaths caused by elephants. The first death was about 10 years ago where a lady was killed in the forest while she was collecting some produce. The incidence took place in the forested area and they do not know the reason for the death. The second incidence took place at the Sembukarai settlement about 5 years ago. A lady who was sitting in the hut saw elephants eating the crops and so she ran towards them shouting aloud to drive them away. The elephants did not expect this, they charged and killed her on the spot.

Coexistence with the animals:

The settlement people on experiencing their crops being eaten by the elephants have now changed their crops and now mostly beans are cultivated. They used to cultivate maize, *ragi*, *samai* etc.

Area 3. Aalanthurai

We went to another village **Valayan Kuttai, Alanthurai**. We interviewed the villagers and met the Deputy President of the Town Panchayat. We learned that the elephants are visiting their village only for the past four years. On the day of our visit many elephants paid a visit to the village. A total of 30-35 elephants visit their land everyday throughout the year. The villagers consider this as a nuisance since they damage all the crops. Crops like sugarcane, maize, paddy, *ragi* and groundnut are cultivated in this area.

Since the villagers are small farmers they take a loan or borrow money from some other source to cultivate. The elephants damage all the crops in a day or two. This leads to

GETTING ALONG WITH ELEPHANTS

frustration among the people. They said that two subsequent crop damage in a year will lead to poverty of the family. The villagers send their children for education and some of their children are settled in cities. If this problem continues for a long time they may sell out the land and settle in city. They feel that fencing entire forest area can prevent the entry of elephants.

Behavioural changes among the villagers:

The people who live in this area used to move freely even during midnight by foot. Nowadays, due to prevalence of elephants in the cultivated lands they have almost stopped coming out of their houses at night. Since the crops on both the sides of the road are tall, the presence of elephants inside the cultivated land cannot be noticed, but so far no human death has been reported from this area.

Mitigating measures:

A few years ago people used torch lights to drive the elephants then later used fire lamps. The elephants are used to these things and they do not bother. Now crackers are used to drive the elephants. The small farmers cannot spend 100 Rupees daily to keep off the elephants from their land and in any case, the elephants are accustomed this kind of noise and it is not so effective. The forest department has allotted guards to keep off the elephants from the cultivable land.

Beliefs:

The villagers believe that the elephant population has increased, and this trend is the cause for the entry of elephants into human habitations.



GETTING ALONG WITH ELEPHANTS

ELEPHANT ETIQUETTE AND PHILOSOPHY FOR SURVIVAL OF MAN AND ANIMAL



Elle-do's & Elle-don'ts



Understand that there are NO solutions or suggestions workable in every area. Our objective is simply mitigation (or reduction) of loss of life or limb of both man and elephant, by teaching youngsters & others to use more of their own common sense when close to elephants and not rely always on rescue by others.

Remember that every individual elephant, every herd, and every situation or circumstance is or may be different.

Remember that elephants are very smart ...they will become accustomed to any trick you try.

Do's



Alternate your tricks and methods before the elephant catch on.



Take responsibility for your own life.



If you have to run from an elephant, do so in a zig-zag path.



When running, if it doesn't slow you down, throw off pieces of clothing imbued with your scent for the elephant to pick up which may distract it.



Use terrain (especially very steep slopes) to discourage the elephant.



Co-operate with the forest department while they are driving elephants in the forest.



Cultivate crops that are not liked by Elephants.



Stay off roads and out of forests in Elephant areas as much as possible particularly after dark and absolutely if you hear of elephants in the area.



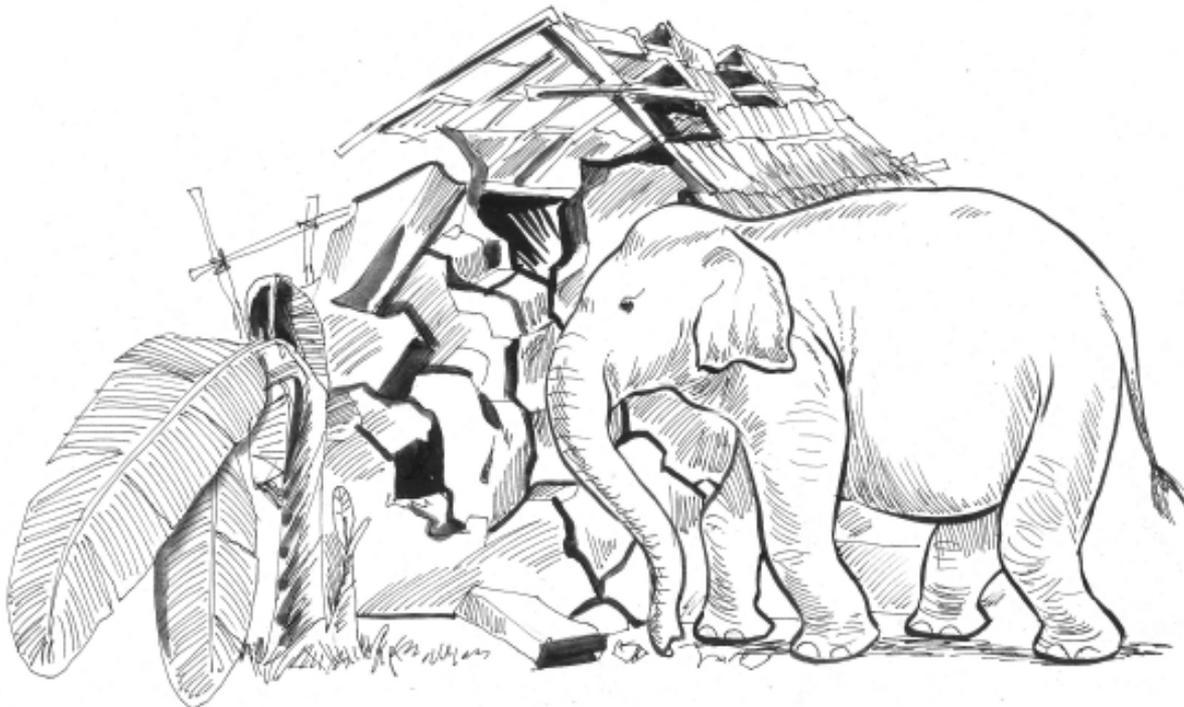
Learn about Elephant behaviour and act accordingly to avoid conflict, injury and death.

GETTING ALONG WITH ELEPHANTS

-  Keep stores and fragrant edibles away from your house if possible, or disguise them with another smell, not liked by elephants.
-  Make a simple basement under your dwelling area for storing foodstuffs but no smell should come from it which would attract elephants.
-  Keep water storage away from your dwelling area; elephants can smell water. Avoid living by a well, pond or other open water source.
-  Store arrack or country liquor away from the home and disguise the smell with another smell not liked by elephants.
-  Dispose of garbage so that it does not attract attention of elephants.
-  Avoid keeping foods particularly liked by elephants - Jack fruit, tamarind, wood apple, banana, coconut, durian, molasses, jaggery, fermented liquids, arrack, etc.
-  Avoid being anywhere near a musth Elephant (male elephant in heat).
-  Avoid tuskers altogether and also avoid female with offspring to minimize chance of conflict.
-  Carry a torch or other light source if you must be out at night, but it is better to stay home.
-  Find out elephant reactions to light in your area. There are contradictory reports of elephants being both repelled and attracted by lights in house.
-  Make your presence known when walking through the forest by tapping or making only neutral noise which does not include any speaking.
-  Listen for elephant presence in the forest - branches breaking, snuffling, etc.
-  Help maintain electric fences if you have them in your area.
-  Dogs, crowds of people, loud voices, motor bikes are believed to irritate elephants.
-  Dogs have also been known to "invite" them.
-  Loud voices may also attract as well as frighten.
-  Irritating an elephant may be last thing you want to do unless it is certain to make them leave, but how will you know until it is too late.

GETTING ALONG WITH ELEPHANTS

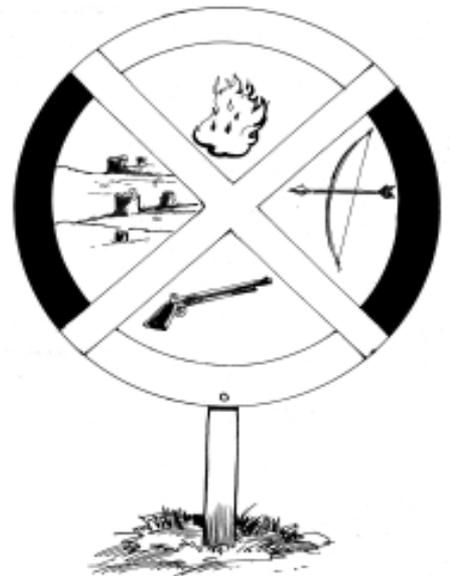
-  Pray to the *God* of your understanding to permit you, your family and elephants to survive and thrive. And then do your best to protect yourself.
-  Conduct *Poojas* for elephant and for your safety - always with a positive theme but keep your eyes open. *God* expects us to be smart, and use our brain.
-  Share your techniques for avoiding conflict and other useful information about elephants with others.
-  Investigate new methods such as beekeeping, camels(!), playing sounds repulsive or frightening to elephants on loudspeaker, etc.
-  Follow the rules in a Protected Areas and other wildlife agency rules.
-  If funds permit try electric fencing, rubble barriers, etc. but know they also are fallible.
-  Gather in groups and shout at elephants - from a distance - if no better method is available.
-  Use torches or other bright lights - once or twice, then change methods.
-  Set up cooperative communication system between villages.
-  Investigate the use of Kunkhi's to herd the elephants out of the area.



GETTING ALONG WITH ELEPHANTS

Don'ts

-  Don't put your whole faith and trust in any one method, individual or agency when living in or near elephant areas.
-  Don't assume you can see all the elephants when chasing elephants away from crop lands. Don't chase them at all without adequate support.
-  Don't use perfume products or any sweet smelling substance when outside that may attract elephant.
-  Do not put all your faith in any one method of wild elephant management, except constant vigilance.
-  Don't block elephants while driving in the forest.
-  Don't leave food out in the open, particularly smelly food.
-  Don't take elephant fences (or any one method) for granted.
-  Don't let down your guard.
-  Don't forget your common sense or vigilance.
-  Don't go close to wild Elephants.
-  Don't walk (or stagger) in the forest while drunk.
-  Don't walk in forest while smelling of alcohol.
-  Don't walk on traditional elephant paths.
-  Don't wear white or bright cloth.
-  Don't use flash camera; this annoys elephants.
-  Don't smoke - this attracts elephants.
-  Don't disturb feeding elephant in the forest.
-  Don't speak ill of elephants within their hearing.
-  Don't harbor anger towards elephant as it may cloud your judgement.



GETTING ALONG WITH ELEPHANTS



Don't insist on keeping to your normal timings or activities if elephants are nearby.



Don't let habit overcome your common sense.



Don't use methods that would maim or kill elephants. It is bad karma ... it will come back!



Don't use high voltage fence ... if it kills an elephant you may be punished by law (and by karma as well).



Don't let fear dominate you when hiding from elephants; fear-perspiration smells. Pray to God to remove your fear and smell.



Don't challenge a wild elephant.



Don't try to lure a wild elephant away from stealing crops with food items carried by you or any other person.

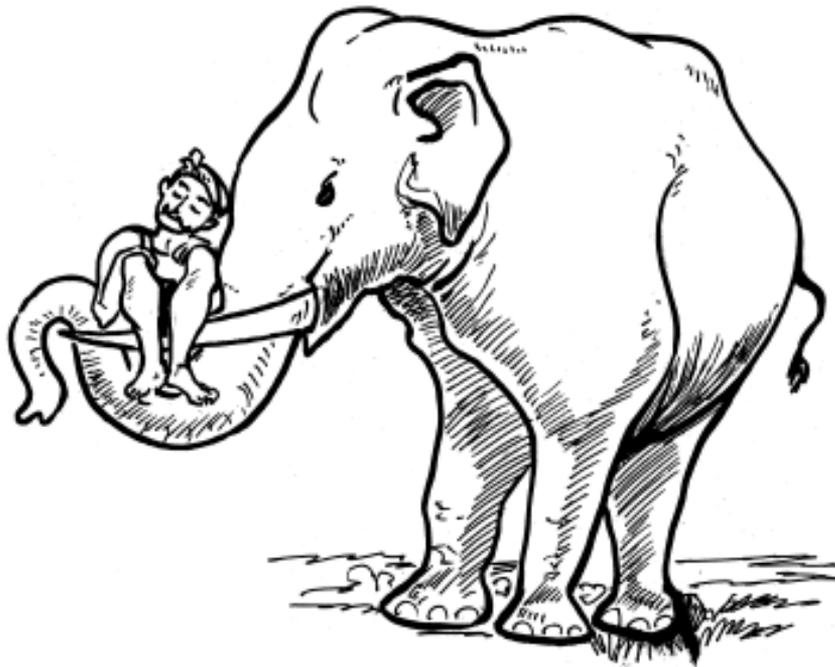


Don't paint your house a bright colour. This has been known to attract the wrong kind of attention of elephants.

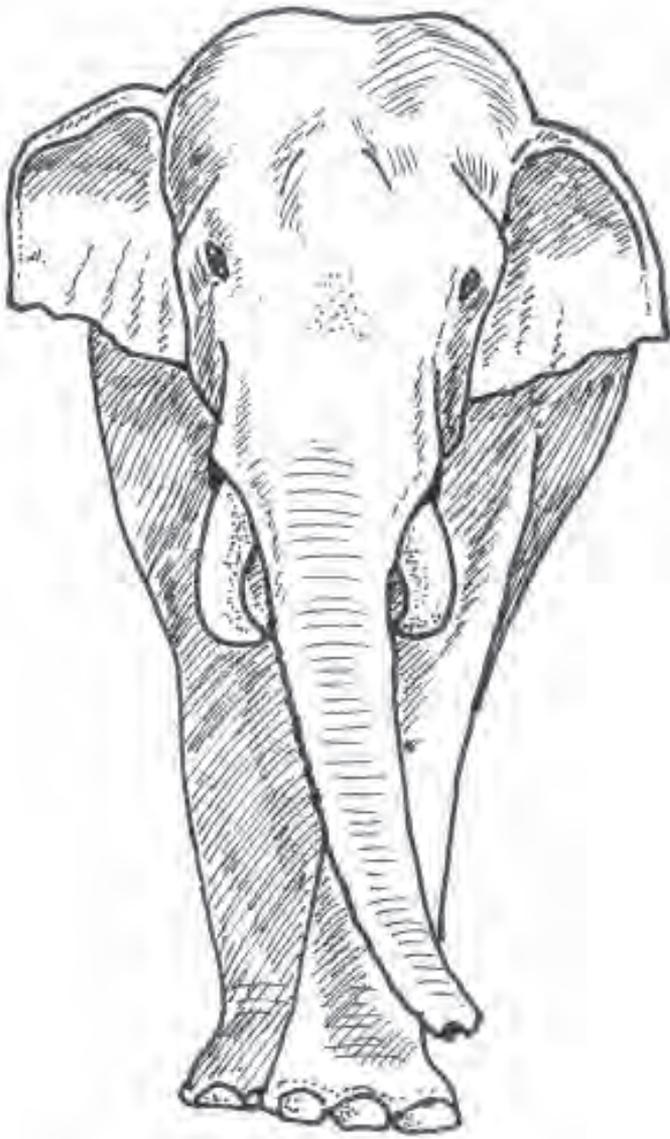


GETTING ALONG WITH ELEPHANTS

Part IV Know Your Elephant



ELEPHANT CHARACTERISTICS
MAPS: FORMER AND CURRENT ELEPHANT RANGES
ILLUSTRATED HISTORY OF ASIAN ELEPHANTS
ASIAN ELEPHANTS IN ASIAN CULTURE
ASIAN ELEPHANTS AND ASIAN PERSPECTIVES
FORGOTTEN PESTS: UNDERSTANDING PEOPLES' TOLERANCE LEVEL
TOWARDS PROBLEM ELEPHANTS
DEBATE: HUMAN-ELEPHANT CONFLICT MITIGATION AND
COMMUNITY PARTICIPATION



GETTING ALONG WITH ELEPHANTS

ELEPHANT CHARACTERISTICS

Understanding some of the adaptive characteristics of Asian elephant

Almost all of us get some opportunity to see and observe the elephant either in a camp, zoo, temple, timber farm or in circus. It is an interesting animal - we can spend hours observing it. Elephants are the largest land mammals (Asian elephants are second largest land mammal next to African elephants) which are adapted to live in a variety of habitats. They exhibit characteristic behaviour which are unique. In order to appreciate the species it is essential that we understand how they are adapted for survival.

The following are a set of group activities that will help you to observe elephants and to understand its adaptive characters. When you play these activities it will give your audience some idea about the behaviour of the elephant. About five activities are listed below. Each activity has brief introduction and instructions to follow. As an educator read these instructions carefully and before starting it keep all the materials ready. This is a group activity. Follow the instructions given in the activity and form groups.

Activity 1. How many of us together equal an elephants body weight?

Asian elephants are the second largest land mammal next to African elephant. Asian elephants live in a wide variety of habitats in Asia. In this activity we will learn some facts about the body weight of Asian elephants from its birth.

Instructions:

Divide your audience into several groups and provide each group with a meter stick or measuring tape. Have each group measure the height and weight of all its members and note it on the blackboard or in a note book. If a scale is not available suggest individuals to estimate their weight. Take the average weight of the group. Now compare the weight of the elephant with that of the group. Find out how many individuals (average of the weight will vary according to your age group) together will equal the weight of an Asian elephant?

Similarly take a random sample of your groups height and compare it with that of the elephant.

	Asian elephant	Human
Weight-Female	2,500-3,500kg	Group average (kg)
Weight-Male	3,500-5,000kg	Group average (kg)
Birth weight	80-100kg	2-3kg
Height (adult)	7-11 feet	Group average (cm)
Height (at birth)	90-100cm	45-55cm

GETTING ALONG WITH ELEPHANTS

Activity 2. Run as fast as an elephant!

Though the elephants are huge in size and mass it can run short distances quickly. Asian elephants walk at the rate of 4 km/hour. Elephants can run short distance at 25 kms/hour. It has been reported, depending up on the terrain, that elephants can reach a speed of about 35-40 kms/hour.

Instructions:

In this activity we will compare the walking and running speed of humans with that of an elephant. Before doing this, mark off a distance of 10 meters in an open ground. Ask a few of your participants (5/6) to walk the distance and note the time taken in seconds. Later ask the same group of people to run as fast as possible and note the time. Use a stop watch to note the time taken for each person to cover the distance. To find the speed in kilometers per hour divide 36 by the number of seconds it takes to run 10 meters. For example, if it takes a person 3 seconds to run 10 meters, that person is running $36/3 = 12$ kilometers per hour.

Discussion

Ask participants if their speed can be matched with the speed of the elephant while walking or running? Can they match with the speed of the elephant and escape when they are in trouble?



Activity 3. Senses game

Elephants have a highly developed olfactory sense. Using the trunk they can smell objects and people. When we are in an elephant area in the wild, to avoid conflict, it is important for us to know the wind direction so that elephants will not detect us. We will be safe if the wind flow is from the elephant towards us. Elephants can detect us if the wind flows from our side towards the elephant.

Instructions:

Wrap separately five or six objects such as soap, camphor, a piece of cake, stone, mint, asafetida, garlic, onion, ginger etc., with a white paper and number it. Place them on the table in a circle and ask them to take turn and smell it without touching or lifting it. You may need 4 or 5 sets depending on your group size. Ask them to write the object names kept on the table individually against the code number given on the object. You can also have group leader for each group.



GETTING ALONG WITH ELEPHANTS

Discussion:

How many objects could you identify? Why you were not able to identify certain objects? What other sense organs are required to identify those objects? Why should we not use perfume when we enter the forest? How to find out the direction of the wind flow?

Activity 4. Trunk

The trunk is an extension of the upper lip and the nose. The shape of the trunk varies while some have a long trunk and others have a short trunk. The distant end of the trunk ends into a finger-like tip. Asian elephant has one finger-like process while African elephant will have two fingers. The trunk is made up of approximately 1,00,000 muscles. Elephants extend or retract the trunk by the action of these muscles. The trunk tip functions in detecting ground vibrations, find out the texture, size, and temperature. They also breathe and suck water through the trunk. They spray water on the body, uproot plants and grass, pull down branches and peel the bark from trees. It can lift even the tiniest object such as a blade of grass from the floor.

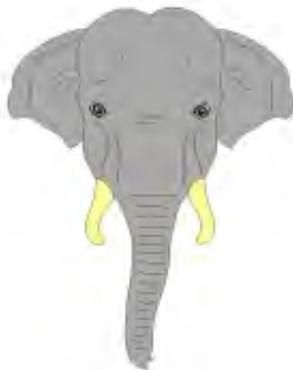


Instructions:

Drop a coin or a piece of pencil lead on the floor and pick it up. See how many times you can do this within 30 seconds. Do this in pairs.

Discussion

How many fingers did you use to pick up the needle? How do you compare this with that of elephant which has only one finger and still picks up small objects easily?



GETTING ALONG WITH ELEPHANTS

Activity 5. Communication

Elephants communicate using sense of smell, visual, chemical, sound and touch signals.

Communication involves supply of information, as conveyed as visual, chemical, sound or touch signals by a sender to a receiver, and the receiver decides how to respond.

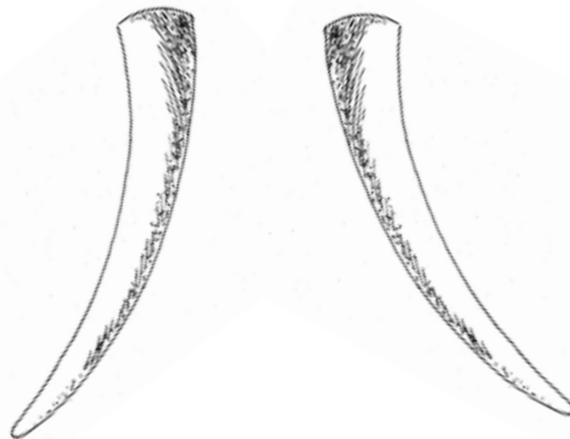
Elephants use their trunk in a variety of contacts.

Instructions:

Divide your participants and form two teams of equal size. Have each team member face the same direction, and have each team facing each other. Instruct each team to hold hands to form two long human chains. At the end of the two lines, place a chair with a small object (paper ball) on it. The referee stands at the front. Ask the two players at the front of the line to watch the referee. Ask others to close their eyes, face downward and remain silent. For each round, the referee has to flip a coin and show it to the first two players. Whenever the coin shows "heads," the two people at the front of the line must give a signal by squeezing the hand of the next person and the signal is passed to the last person. The person on the other end of the line should grab the object on the chair. If heads was flipped and a team successfully grabs the ball, that team wins a point. On the other hand, if the team grabs the ball but heads was not flipped, then the point goes to the other team. Give interval between flips. Keep flipping until the coin shows "Heads." Play until a team gets ten points.

Discussion:

What is the communication method used in this game?



GETTING ALONG WITH ELEPHANTS

MAPS - FORMER AND CURRENT ELEPHANT RANGES

In this chapter we will learn about the past and present distribution of Asian elephants and thereby understand the dramatic decrease in the Asian elephant in its home-range countries.

Elephants, largest of the land mammals had extensive distribution in the African and Asian continents. The Asian elephant was distributed in the Southern parts of Asia only. Its range was wide from Mesopotamia in the West Asia, eastward up to the Yangtze-Kiang in China, apart from its occurrence on several islands.

Asian elephants are both browsers and grazers and thus lived in a variety of forest habitats. They lived and live in different habitats such as tropical forests, moist evergreen, evergreen lowland forest, dry-deciduous forest, mountain up to 10,000 feet, and grass lands. Scientist estimate that there were more than 200,000 wild Asian elephants lived in Asia around 1900 A.D. Now (one hundred years later) there may be fewer than 35,000 Asian elephants left in the whole of the range countries. The population of Asian elephants has been reduced 87% in the past 100 years.

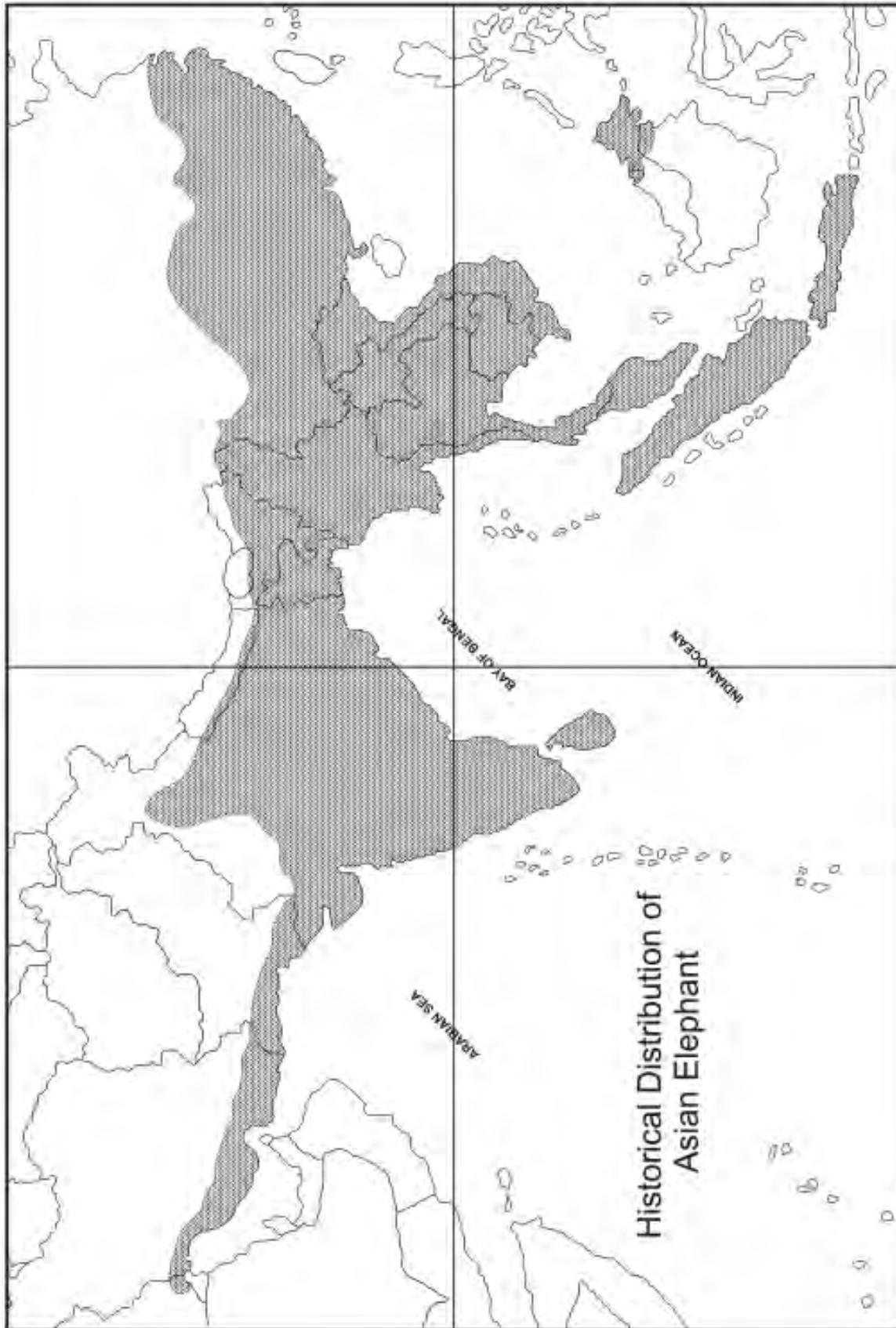
Instructions:

Preparations:

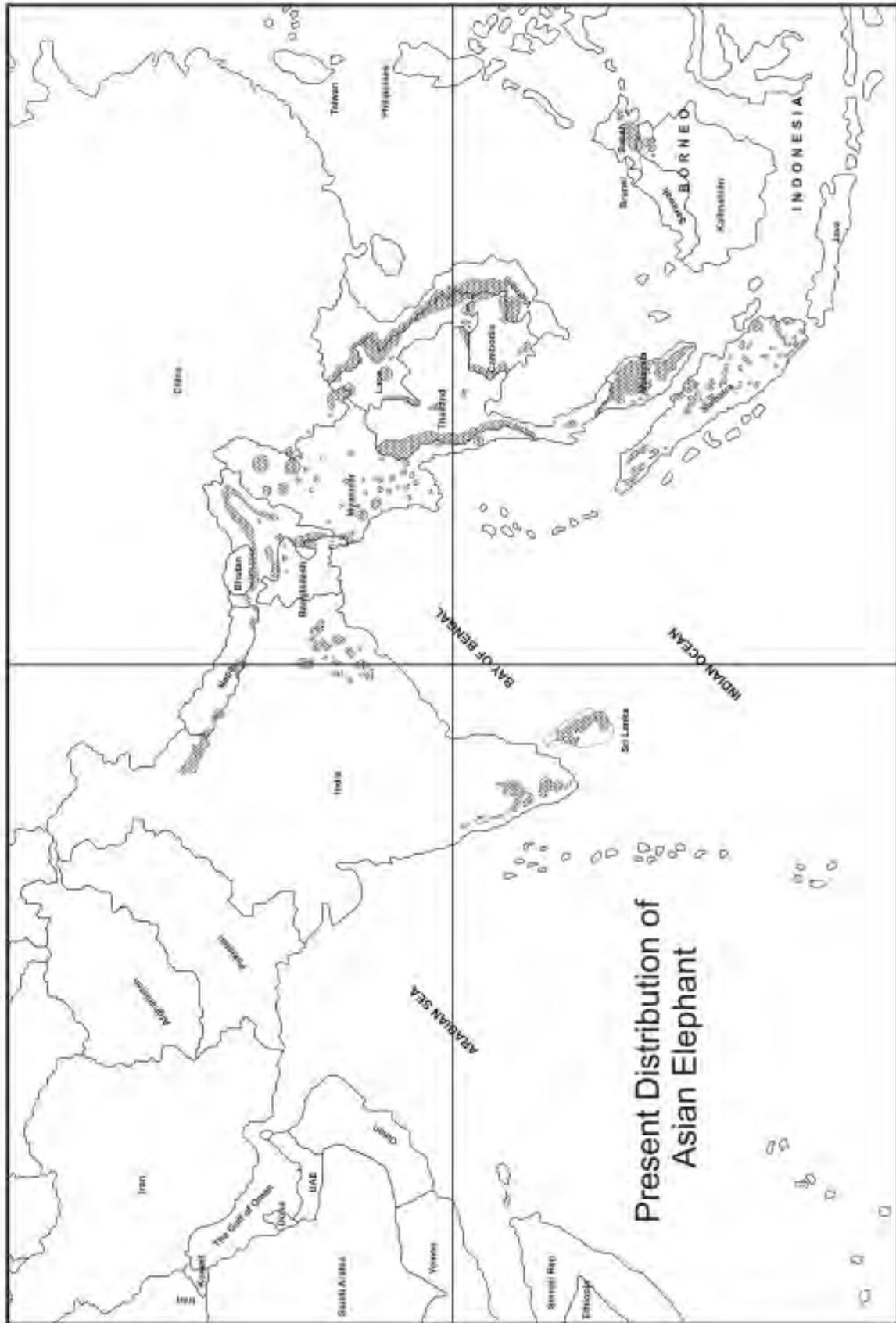
Take photocopies of the historical and present distribution maps of Asian elephant given on pages 82 and 83. Cut them into four pieces as indicated on the map, and enlarge to A3 size. Make multiple copies as per the total number of groups formed.

1. Divide your audience into groups of equal size (6 in a group is ideal).
2. Give each group a set of "historical" maps and ask them to assemble all parts of the set to complete the past Asian elephant distribution range map. After they assemble, give the groups two minutes to study the map.
3. Now give the second set of "present" maps for the group to assemble the current Asian elephant distribution range map. After all the groups assemble, give two minutes to study the map properly.
4. Ask the group to compare the maps of past and present Asian elephant ranges to the maps showing the countries of Asia. Ask them to make a list of all the countries in

GETTING ALONG WITH ELEPHANTS



GETTING ALONG WITH ELEPHANTS



GETTING ALONG WITH ELEPHANTS

which Asian elephants were found about 100 years ago. Write down the countries list on the black board.

(List of countries elephants were found 100 years ago: Bangladesh, Bhutan, Brunei, Cambodia, China, India, Indonesia (Sumatra, Kalimantan), Iran, Iraq, Laos, Malaysia (Peninsular, Sabah, Sarawak), Myanmar (Burma), Nepal, Pakistan, Sri Lanka, Thailand, Vietnam).

5. Now ask them to take the "present" Asian elephant distribution map and to list the names of the countries where elephants are found now. Write down the countries list on the blackboard.

(List of countries elephants are found now: Bangladesh, Bhutan, Cambodia, China, India, Indonesia (Sumatra, Kalimantan), Laos, Malaysia (Peninsular, Sabah), Myanmar (Burma), Nepal, Sri Lanka, Thailand, Vietnam).

6. How do the two lists compare? What is the difference in the area occupied by Asian elephants now compared to 100 years ago?

Estimated number of wild elephants in South Asia - Source: R. Sukumar, (2003)

Country	Minimum	Maximum
1. Bhutan	250	500
2. Bangladesh	150	250
3. Cambodia	250	600
4. China	200	250
5. India	26,390	30,770
6. Indonesia	2,400	3,400
7. Laos	500	1,000
8. Malaysia	2,100	3,100
9. Myanmar	4,000	5,000
10. Nepal	100	125
11. Sri Lanka	2,500	4,000
12. Thailand	2,500	3,200
13. Vietnam	70	150
Total	41,410	52,345

The minimum and maximum number of wild elephants reported by Sukumar (2003) is 2400 and 3400 respectively. Remember though, that these numbers are based on estimates. A lot of scientific work is required to make this estimate.

GETTING ALONG WITH ELEPHANTS

7. Ask participants to figure out the following math problem: If there were 200,000 wild Asian elephants lived 100 years ago, how many have been lost since then? Take an average of the estimate and find out the percentage. If your audience knows how to calculate percentages, have them figure out what percent of the Asian populations have disappeared over the last 100 years.
8. Lead a concluding discussion. Explain that Asian elephants lived in a larger area spread over all 17 countries some 100 years ago and now they are restricted to small pockets. The total land area of Indonesia is 1,919,440 sq. km and the elephant distribution is highly fragmented and they are now present in certain forest habitats. The habitats are lost day by day due to human intervention. Continued decline in the habitat of Asian elephant will lead to extinction of the species. Extinct means 'no longer in existence'.
9. The elephant populations has limited movements due to fragmentation of the habitat. Ask your participants to think about the potential impact of isolating small populations of Asian elephants. Tell them how the isolated elephants become a problem for human living.
10. Tell your participants that Sumatra has a little less than 500 elephants in captivity. Refer country chapters for details on captive elephants in Sumatra.

Lead the group through discussion:

What could be the probable causes that resulted in confined distribution of Asian elephant in its natural habitat?

What are the major threats causing the decline of Asian elephants?

Will linking fragmented habitats help elephants for their survival?

Extension:

Have your participants consider the possibility of creating elephant corridors linking different Asian elephant populations. Have them research what lies in between. Why might protecting a habitat corridor help save a species?

You may wish to ask each of your participants to compose a short poem to explain how they feel about the loss of Asian elephants and its habitat over the last 100 years.

GETTING ALONG WITH ELEPHANTS

ILLUSTRATED HISTORY OF ASIAN ELEPHANTS



The relationship that human beings had with elephants since time immemorial and the status of the elephants now gives us a message that it is the responsibility of human beings to help insure the survival of elephants in the long term. Ever since human beings started taming elephants they have realized the potential of the elephant. Elephants are strong and serve well as beasts of burden. Mankind, utilized them extensively. Now, elephants are worshiped as gods and closely associated with human cultural, religious and social activities. Conservationists report that the species is in danger and now the onus is on us to safeguard the future of the elephant.

If we want to safeguard Asian elephants it is important to know the historical events related to them. Depicting the history of elephants in words and pictures is a great way to learn also.

Here is an activity that your audience can trace the history of Asian elephants. It provides portrayals of important historical events of elephants. This can also serve as an art skills activity. This exercise has to be done in an orderly manner and so before you begin, take a photocopy of the event and dates given below and cut them according to date. You can then paste each event with dates on a piece of cardboard.

Depending on the size of your audience, hand out one or more of the provided elephant history cards to each participant. Make sure you select dates starting from an early date and cover events until 2050. The history card can be given to an individual or to a pair of participants. Give each participant or pair of participants a blank piece of paper (preferably A3; otherwise A4) and also drawing or painting materials. Ask participants to illustrate the elephant events in its history and to write captions explaining how they feel about the events being illustrated.

At the end of this exercise your audience will be creating an illustrated history of Asian elephants, an attractive and fun exhibit on the history of Asian elephant in modern times. Ask your participants to put their

GETTING ALONG WITH ELEPHANTS

illustrations on the wall in chronological order. If you run this exercise in a classroom, it could stay up on the wall for awhile or even be put in the hall or exhibited elsewhere for others to see. Give them a chance to explain the illustration to the group before putting it up on the wall.

To personalize the history pictures and put them in perspective you can also add:

- The date of your education programme about Asian elephant
- Include the date of birth of the illustrator
- Any incidence related to elephants that happened in and around the place where you conduct the education programme
- Date of creation and name of an Elephant Reserve in the State or Province where you run the education programme
- Local newspaper incidents of Asian elephant news

Discussion

After all students or participants have put up their picture, take a break and let them go up and examine the Illustrated history of Asian Elephants as a whole. This will help them to participate more meaningfully in a discussion. You can ask them the following questions.

Did anything different start to happen that might have affected Asian elephants during their history? What was it?

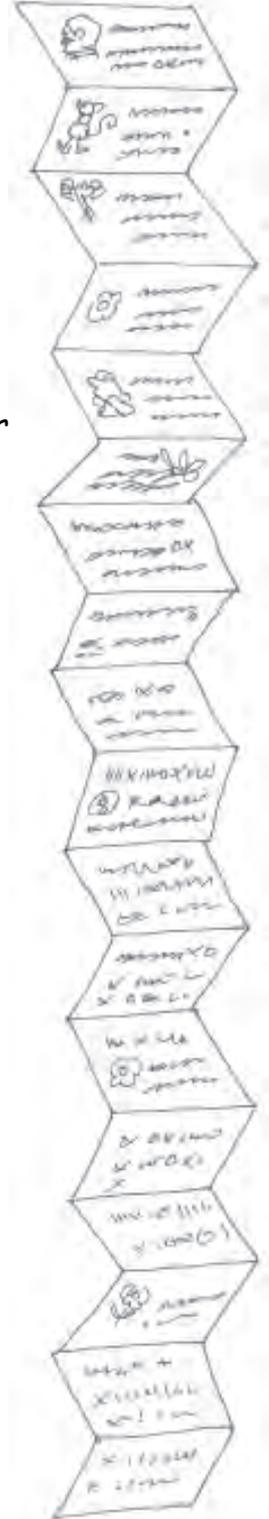
When was the first known record of elephants being tamed by human beings?

What are the causes of decline of elephant in Asia?

Do the events in the history indicate any change in the way humans should perceive them?

Do you have hope that Asian elephants can survive into the 21st Century? Why?

What are the major threats for Asian elephants?



GETTING ALONG WITH ELEPHANTS

Use the following information to make the history cards

2000 B.C.

The Harappan culture commonly featured the elephant in their seals (A device incised to make an impression or to authenticate documents). Elephants were considered as sacred those days. Dravidian cultures had tamed the elephants.

1783-1123 B.C.

The earliest known ivory carvings in China are from the Shang-Yin period of 1783-1123.



1500-600 B.C.

Vedas, composed during these periods provide the earliest sources of information on the human-elephant relationship. (*Vedas* are a series of composition of hymns, prayers, poems, rituals and incantations of the Aryans.)



1000 B.C.

In the Dravidian land, people captured wild animals with the help of trained captive elephants (or *koonkies*) and captive elephants were much more abundant in the presence of the common man. Use of elephants in battle by Dravidian people is evident in ancient texts.

1000-700 B.C.

The ecological significance of the human-elephant relationship has been referred in detail in the two Indian epics, *Ramayana* and *Mahabharata*. *Ramayana* describes noblemen and other people riding elephants, the giving of elephants as gifts, and the use of elephants in battle.

600 B.C.

Buddha is considered the reincarnation of the sacred white elephant. Queen Maya dreamt that a white elephant descended on her to enter her womb and be born as Gautama Buddha.



600 B.C.

Jainism and Buddhism taught *ahimsa* (non-violence) towards all creatures. One of the Jain teachings is the metaphor of the six blind men each touching a different part of the elephant and interpreting the object accordingly.

500 B.C.

The *Gajasastra*, ancient Indian elephant lore, has records of serious conflict between elephants and agricultural communities as early as the 5th or 6th century B.C.

GETTING ALONG WITH ELEPHANTS

400 B.C.

Nandas who inherited the kingdom of Magadha were reputed to have maintained an army with 3000 elephants. These elephants were used in the war during this period.

326 B.C.

Alexander of Macedonia, when marching his army towards Jhelum, was confronted with the impressive elephant army maintained by King Porus. About 80-200 elephants were used in the battle.

321 B.C.

Chandragupta Maurya had 9000 elephants in his army. He established the culture of capturing and training elephants, their veterinary care, their deployment in the army, and even the protection of wild elephants.

300 B.C.

The emperor Ashoka, the grandson of Chandragupta, in his famous edicts, declared that "no living being may be slaughtered for sacrifice".

300 B.C.

Chanakya who wrote *Arthashastra* during Chandragupta period suggested setting up sanctuaries in the forest for the protection of wild elephants as sources for the Mauryan army and that any person killing an elephant was to be put to death.

200 B.C.

The Jataka stories (the stories of the Buddhas former births) written during the second century BC describes the use of elephants extensively as royal elephants, in elephant festivals, with elephant trainers, and the killing of elephants for ivory etc.



Archeological notes at the beginning of AD.

Explorer from Greek and Rome visited Indonesia (Nusantara) and found that Kings at the northern part of Sumatra were riding elephants. The elephants were decorated by gold and stones jeweler. They called the Kingdom as "Tabrobane".

464 A.D.

Changu pillar inscription that stand at the western door of the temple of Narayana, Changu, Nepal, mentioned the use of elephants on the military operation during the reign of Mandev I in circa 464 A.D.

500 A.D.

The elephant headed deity, Lord Ganesha - remover of obstacles and one of the most popular Hindu gods in Asia may have originated as early as fifth century AD is still popular today and worshiped in Afghanistan, Central Asia, Myanmar, Thailand, India, Cambodia, Vietnam, China, Japan, Malaysia to Indonesia and Java, Bali and Borneo Islands.

GETTING ALONG WITH ELEPHANTS

570 A.D.

This year is called year of the elephant. The Holy Prophet of Islam was born to 'Abdullah and Amina' in this year. The Yemen Governor Abraha al-Ashram advanced with a large army towards Mecca to demolish Ka'bah. The army had many elephants. It was an animal which the Arabs had not seen before.

1146 A.D. (540 H)

A book entitled "Rahlah Abu Ishak Al-Makarany" stated that in Peurelak there was an Islamic Kingdom ruled by Sulthan Machdoem Djauhan Berdaulat Malik Mahmud Sjah, (527 ~ 552 H or 1134 ~ 1158 AD). The King riding elephant with gold and colourful decorations.

1605-1627 A.D.

The highest record of elephants in captivity was during Mughal period. Jehangir, son of Akbar had 12,000 elephants in his stable and 113,000 captive elephants throughout his empire. Elephant management was well practiced during Mughal times.

1607-1636 A.D.

At the time of Sultan Iskandar Muda, the Kingdom of Aceh is the only Malay kingdom that had *Ceureumeen Balee* or Glass Hall in the palace. The extent of this palace not less than two kilometers. The Palace named the Dalam Darud Donya Palace (now Meuligo Aceh, the Governor's mansion). In it includes *Medan Khayali* and *Medan Khaerani* halls that could accommodate 300 elephant's troops. Sultan Iskandar Muda had more than 1000 army elephants.

1720s A.D.

One of the Malla Kings of Nepal, Bhaska Mulla or Mahendra Singh was given the title of Gajapati, Lord of the elephants as he has been quite active in capturing elephants. Malla Kings were adventurous and courageous and such kind of hunting expeditions as a source of entertainment was restricted to Kings only.

1800 A.D.

British governors gave out rewards for killing elephants. Hunting for sport and animal control resulted in large-scale slaughter of elephants across the Indian sub continent, Myanmar and Sri Lanka.

1828 A.D.

The British passed a law prohibiting the capture of elephants except for the government. This law was rescinded in 1831.

1873 A.D.

The Elephants Preservation Act (1872) of the Madras Presidency came into force in October 1873. It was extended to other parts of India in 1879. It was introduced in Myanmar to prevent indiscriminate destruction of elephants. This Act ensured continued supply of wild elephants to the military and the logging operations.

GETTING ALONG WITH ELEPHANTS

1898-1904 A.D.

During the war in Aceh, the Dutch army also uses domesticated elephants as a means of transport for troops to attack the remote areas of Aceh.



1900 A.D.

Conversion of elephant habitats into use for plantations of tea, coffee, agriculture, railways, roads, mining, dams and other developmental projects occurred.

1900 A.D.

During this period 200,000 wild Asian elephants existed in south and southeast Asian countries.

1900 A.D.

As a result excessive capture of wild elephants in Bangladesh, the population of elephant herds depleted and so British transferred their regular elephant-catching operations from Dhaka to Myanmar.

1903 A.D.

Nepal Government introduced the management of domesticated elephant management practices and it has a long history. Nepal had 328 domesticated elephants during this period.

1911 A.D.

George V, had stayed in Royal Chitwan National Park for 11 days for his famous hunting expedition, more than 300 elephants were summoned in Chitwan.

1931 A.D.

(Wild Animals Protection Ordinance in 1931), Elephant has been declared as protected and endangered species under the law that its presence should be respected and preserved.

1947 A.D.

There was depletion in the elephant habitat after Indian independence as the country had to raise its economic standards. The increase in the growth of human populations contributed much to forest loss.

1950s A.D.

Following the eradication of malaria from terai, human settlement and forest destruction led to the extirpation of most of Nepal's elephants.



GETTING ALONG WITH ELEPHANTS

1950s A.D.

After the introduction of firearms to Sri Lanka, cultivators killed more than 300 elephants in seven years to protect their crops.

1960 A.D.

Until this year there was a large number of Asian elephants throughout the entire lowland forest area of Nepal.

1972 A.D.

The Indian Wildlife (Protection) Act, 1972 listed the elephants under Schedule I Part I of the Act that gave highest level of protection.

1973 A.D.

The wild elephants along with other 25 mammals were protected under the provision of the National Parks and Wildlife Conservation (NPWC) Act 2029 BS. Hence the capture of wild elephants for domestication was prohibited.

1974 A.D.

All wild elephants in Bangladesh are protected under the Third Schedule of the Bangladesh Wildlife (Preservation) (Amendment) Act, 1974.

July 1975 A.D.

The Asian elephant is put on Appendix I of CITES, prohibiting international trade of elephant products among CITES member nations.

1982 A.D.

Ganesha (Ganesh) operation was carried out by the TNI (Indonesian Army), doing convoy of elephants on a large scale in Lampung province. This operation was done to reduce the intensity of elephants crop raiding at the agricultural area at the time.

1985 A.D. (27 Agustus)

The First Elephant Training Center (ETC) was opened in Way Kambas Lampung. This ETC was built to accommodate the wild elephants captured through Ganesha operation. And successively several ETCs were built in other areas which have populations of wild elephants like South Sumatra, Bengkulu, Riau, North Sumatra and at last in 1987 in Aceh years.

1985 A.D.

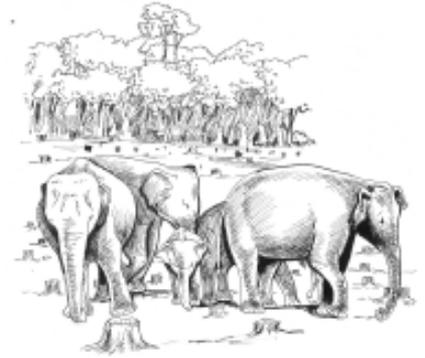
It was reported that conversion of forest (elephant habitats) to mono culture plantations like tea has driven elephants out of their traditional habitats. There have been incidents of man-elephant conflict due to the fact that elephant herds have been isolated in forests west of the Torsa River in North Bengal.



GETTING ALONG WITH ELEPHANTS

1986-1995 A.D.

In the period between 1986 - 1995, around 520 elephants had been captured to mitigate human elephant conflicts. The captive elephants were placed on six (6) Elephant Training Centers; Aceh, North Sumatra, Riau, Bengkulu, South Sumatra and Lampung.



1986 A.D.

Dr. R Sukumar, a well-known elephant specialist, estimated that between 30,000 - 50,000 elephants may have been captured throughout the Indian sub-continent during the past 100 years. These estimates, which far exceed the number of elephants living in the wild today, provide an indication of the enormous numbers that once existed.

1987 A.D.

Vietnam's forest cover is reported to have declined from 43.7 percent in 1943 to 21 percent today.

1989 A.D.

Thailand declares a logging ban, resulting in 3,500 unemployed elephants.

1990 A.D.

Minister of Forestry stipulated "a moratorium on capturing wild elephant" in 1990 after the Sumatran elephants Workshop in Riau at that time.

1990 A.D.

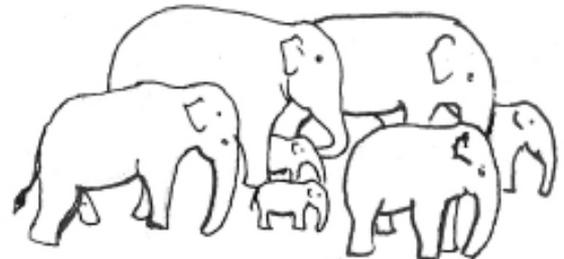
The Asian Elephant Specialist Group, IUCN SSC prepared an action plan for the conservation of Asian elephant. The total reported Asian elephant from all the 13 remaining range countries was 30,000 - 55,000 in the wild.

Mid-1990s A.D.

The total elephant population in Sumatra, Indonesia, is estimated at 2,800-4,800, with only 15 populations of more than 100 individuals.

1991-92 A.D.

Project Elephant was launched by the Government of India along with WWF with an objective of protecting elephants, their habitats and corridors; to address issues of man-animal conflict and for the welfare of domesticated elephants.



GETTING ALONG WITH ELEPHANTS

1993 A.D.

A Population and Habitat Viability Analysis (PHVA) was undertaken to estimate the status of the Asian elephant in Sumatra. It declared that populations of fewer than 25 animals are under very high risk of extinction.

1994 A.D.

250-400 elephants remain in Vietnam, a dramatic decline from 1,500-2,000 in 1990.

1994 A.D.

An outbreak of haemorrhagic septicaemia, a cattle disease that is rare among elephants, resulted in the death of several animals in Sri Lankas Uda Walawe National Park in May.

February 1995 A.D.

Bangkok bans elephants from the streets to prevent their suffering from heat and pollution.

1995-6 A.D.

Poaching of elephants for ivory, hide and meat increases dramatically.

1996 A.D.

The Asian elephant is listed as Endangered on the IUCN (The World Conservation Union) Red List of Threatened Species.



1996 A.D.

India estimates that it has between 23,500 and 27,000 elephants left in the wild.

1996 A.D.

The 1,400 elephants occurring in the Garo and Khasi hills of Meghalaya, India, are reported to be under severe threat from habitat loss due to shifting cultivation.

1997 A.D.

The United States Congress passed the Asian Elephant Conservation Act in 1997 which established a fund for protection of the Asian Elephant and the conservation of its habitats.

1997 A.D.

TRAFFIC reports indicated that, seven years after international trade in ivory was banned, illegal commerce continued in the Far East with South Korea and Taiwan being major markets.

1998 A.D.

Fauna & Flora International, Sumatran Elephant Conservation Program in cooperation with the Natural Conservation Agency (BKSDA) Aceh, empowered the utilization of elephants in Sarees Elephant Training Center to conduct patrol and monitoring in Saree, Aceh Besar.



GETTING ALONG WITH ELEPHANTS

1999 A.D.

A survey shows that there could be anything from 19,090 (definite) to 29,450 (speculative) wild elephants in India.

2000 A.D.

A lack of males, following poaching for ivory, results in a male-female sex ratio of 1:120 in southern India.

2000 A.D.

Numbers of elephants in the wild are estimated at 35,000-50,000 living in highly fragmented groups of no more than 1,000:

- Nepal: between 100 and 125 elephants are estimated to occur in Nepal in three populations. Most are migratory animals from India with 41-60 resident in Nepal;
- Bhutan: between 60-100 resident elephants occur in Bhutan;
- Bangladesh: 195 -239 elephants occur in Bangladesh
- Sri Lanka: between 3,160 to 4,405 elephants in the wild with an estimated 65% decline since start of 19th century
- Borneo (Malaysia and Indonesia): estimated 1,000-1,500 wild elephants.

2002 A.D.

The first Conservation Response Unit Team was established by Fauna & Flora International, Sumatran Elephant Conservation Program in Sekoci-Besitang, North Sumatra. This team empowered domesticated elephants to conduct forest patrol and monitoring, mitigation of human-elephant conflict and conservation education.

2003 A.D.

Dr. R. Sukumar, the Asian elephant expert reported that there were only 150-250 wild elephants left in Bangladesh. This will include migrant elephants from Bhutan, Nepal and India.

2004 A.D.

IUCN Bangladesh Country Office with US Fish and Wildlife Service did an assessment of the elephant population, its habitat condition and threat. Reported 196 - 234 wild elephants distributed in 7 districts in Bangladesh.

2005 A.D.

CRU concept replicated in Bengkulu (Southern Sumatra). This team also empowered domesticated elephants to conduct forest patrol and monitoring, mitigation of human-elephant conflict and conservation education, capacity building of staff, and now is developing ecotourism possibilities.



GETTING ALONG WITH ELEPHANTS

2005-2006 A.D.

The highest number of human deaths (85) has been reported from West Bengal, out of 395 human deaths reported from all over India.

2007 A.D.

Government of Indonesia through the Directorate General of Forest Protection and Nature Conservation in collaboration with several institutions working for the conservation of elephants has completed Strategy and Action Plan for Conservation of Sumatran elephants and Kalimantan elephants for 2007 to 2017. Vision of this strategy and Action Plan is to achieve "human beings live in harmony with the elephants". In this activity the estimation of the current number of Sumatran elephants population was defined, namely around 2,400-2,800 individuals.

2008-09 A.D.

Zoo Outreach Organisation Trust with sponsorship from the U.S. Fish and Wildlife Service, Department of the Interior and several partners, began a programme of HECx education for teachers, NGOs, foresters and researchers.

2009 A.D.

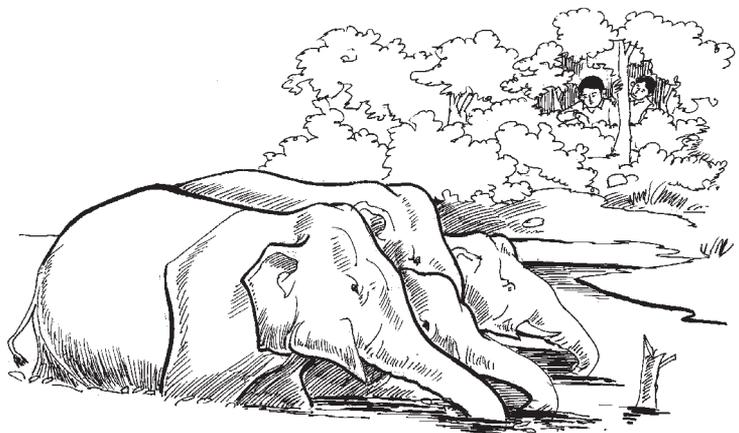
FFI Aceh replicated the concept of CRU Program, and now already established in three districts in Aceh Jaya, Aceh Barat and Pidie. Now FFI Aceh program are developing some CRU posts in several elephant areas in Aceh.

2010 A.D.

COUNTDOWN 2010, a promotion of the Convention on Biodiversity, asks governments, individuals, institutions and organizations to make a commitment to reduce the loss of biodiversity of any species by 2010. Can we do so for elephants?

2025 A.D.

Will elephants still exist? What will you do to help?



GETTING ALONG WITH ELEPHANTS

ASIAN ELEPHANTS IN ASIAN CULTURE

Human beings have built their culture largely through knowledge gained from Nature, which eventually became a value of society. Elephants are part of nature and human beings have learned many things from elephants which has become a part of human culture. Human beings, who have been associated with elephants from time immemorial, are now facing human-elephant conflict. To understand and address the issue of human-elephant conflict (HEC) or to practice human-elephant coexistence HECx, it is essential that we consider manifold views and images that people have on elephants, elephant-problems and problem elephants. This will help us to apply the correct remedy required to mitigate some of the problems. Also, this exercise will establish the important role that Asian elephants have played and continue to play in the cultures of Asia and the world. This unit will help us to explore the cultural role of elephants in human life.

Perspectives on elephants differ from person to person and from place to place. Understanding these values and addressing them is vital to successful protection and conservation of elephants. This session teaches what may happen to our cultural legacy if the elephant becomes extinct.

Through the materials in this unit, people will examine Asian elephants in arts, advertising and poetry in and around Asia, particularly South Asia. Through these media, the important role that Asian elephants have played in the culture of humans will be established.

The elephant has been used as a popular symbol in most cultures around the world especially in Asia and Africa. In Asian culture elephants have been accorded a position of dignity and divinity. There are also treatises dealing with the art and folklore. All cultural evidence demonstrates the strong bond that man has had with the elephant. This bond was based on respect for the elephant and understanding of the needs of the animal.

Ask participants to work in small groups and to list examples of elephant symbols being used in their own culture. Ask them to categorize the examples under folklore, fairy tales, stories, art, drama, cinema, songs, advertising, literature, sports, religious symbols, placenames using elephant name, animal or plant names based on elephants, games, etc.



GETTING ALONG WITH ELEPHANTS

Give about 20 minutes to list specific examples on a piece of paper and turn this activity into a competition to see which group can come up with the most examples.

After having each group make the list collect all the papers and let the groups present the list one by one. Make a Table on the black board and assign marks for each example given by the group. The group with the highest score will be the winner. Afterwards conduct a discussion.

In Asia the following are some examples that could be mentioned:

- Advertising:** Elephant match box, Fevicol (adhesive),
- Sports:** Tug-of-war
- Stories/movies:** The elephant and the sparrow, *Living giants*
- Literature:** "Sumatran elephant" by FFI - Sumatran Elephant Conservation programme
- Proverbs:** Elephant could be defeated by Lemur (A great man can be defeated by smart people)
- Animal/plant names:** Elephant garlic, elephant shrew
- Place name:** Elephant road

Ask your participants for the reason to use elephant as a symbol in our culture? What characteristics of elephants lend themselves for use in so many different contexts?

Elephant in Asian ideology

Elephant culture in countries like India and Nepal has historical record. The elephant-headed god, Lord Ganesha, is one of the most beloved of all Hindu Gods in the Indian subcontinent. Lord Ganesha is worshiped as a deity who removes all obstacles and he is a god of learning. The present Ganesha is the result of a complex process exceeding the pre-vedic time (1500-600 B.C). Now the popularity of Ganesha and worship of the "elephant god" has extended over wide regions of Central, South and South East Asian countries. In western countries also there are a number of people that have adopted Ganesh as their personal god.

Origin of Elephant and birth of elephant care taker Palakapya-Hindu Mythology

Elephants are worshipped and respected all over India, by Hindus. Indian mythology contains several stories about them. There is one such story about their origin. *Lord Brahma* created elephants with his divine power. According to mythological history, he rolled up some loose soil into a sphere. He chanted some *Vedic mantras* and the sphere of soil acquired divinity. This divine sphere was consumed by Aditi, a *Devadasi* or celestial beauty. After a gestation period of 1000 years, Aditi delivered the sphere, and it split



GETTING ALONG WITH ELEPHANTS

immediately into 2 halves. *Brahma* took the two halves and transformed them into two elephants. The male was named *Airavat* and the female, *Abramu*. Both of these elephants had white skin, 4 tusks and a pair of wings. It is believed that these two elephants are the procreators of all elephants that are living. These divine elephants were very strong. The Gods in heaven, thought it would be good to have a few more to protect them against demons. Lord *Brahma* therefore created 7 more pairs of elephants. These seven pairs of elephants along with *Airavat* and *Abramu* were posted at the 8 entrances to heaven as guards. They were collectively called as *Ashtadikpalakas*, meaning 8 divine guards. The elephants became arrogant with their newly acquired status and powers. They misused their powers to annoy and disturb *rishis* (saints) who were meditating. The outraged *rishis* cursed the elephants and also deprived them of their wings and one pair of tusks. One of the *rishis* also banished the elephants from heaven and ordered them to live on earth thereafter. Before leaving heaven, the elephants requested Lord *Indra*, (king of heaven), to arrange for a physician, who would treat and take care of them on earth. In response to the request, *Brahma* created an *Apsara* or celestial beauty named *Gunavati*. *Gunavati* was very proud of her looks and this displeased *Indra*. He turned her into a cow elephant and banished her from heaven to earth. *Gunavati* was, however, assured that she would be redeemed of the curse, if she consumed the semen of *Samagayana rishi*. She also had to produce his child before she could return to heaven.

Gunavati thus lived on earth, near *Samagayana rishi's ashram* (camp), as a cow elephant. One day by luck and accident she was able to consume the *rishi's* semen and became impregnated with his child. A child (boy) was born to her, after 1000 years of gestation. She abandoned the boy in the jungle, and left for heaven. The boy was adopted by the elephants and was named *Palakapya*. *Palakapya* grew up among elephants and as he grew older, also became their caretaker and physician.

As years went by, the elephant population continued to grow in the jungle. They began to encroach the nearby villages and terrify the human inhabitants. King *Romapada*, of the kingdom of *Champa*, was distressed by the misery of his subjects. He ordered the capture of all the elephants around the jungle. *Palakapya* was upset by this incident and he asked the king to release his elephants. He also assured the king that they would not cause any more trouble to people. The king was impressed with *Palakapya's* love for elephants and released the elephants immediately. *Palakapya* returned with the elephants to the jungle. He then wrote the *Sanskrit* text, *Hastay ayurveda*.

This text discusses the various elephant diseases and *Ayurvedic* treatments to cure them. It is believed that *Palakapya*, wrote the book himself, based on his experiences with treating elephants during his life. - Dr. K.C. Panicker.

GETTING ALONG WITH ELEPHANTS

Stories with elephants in Asian culture

Divide your audience into groups and let each group take any one of these elephant myths as handouts. Ask each group to read the handouts. Ask them to read it aloud as a group with individuals taking turns reading. After reading the handouts, ask them to respond to the following questions for each myth.

1. How is the Elephant presented in the story?

**foolish rogue friendly polite intelligent helpful beautiful
dangerous affectionate stupid strong big small kind mean
generous powerful greedy**

2. Did the elephant in the story have qualities based on the qualities of real elephants? If "yes", what characters in the story resemble real elephants? If not, what characters in the story do not resemble real elephants?

3. How many of you like the character of the elephant given in the story? Why?

4. If you don't like the character of the elephant in the story, how do you want the elephant character to be?

Elephants and Woodseeker

In a village in West Aceh district, a middle-aged man lived together with his wife. The villagers used to call him Pak Amat. Because he did not have enough land to raise crop, Pak Amats livelihood resources come from taking firewood in the forest, besides helping his neighbors in their garden when needed.

One day, Pak Amat was fun gathering dry wood in the forest. The wood he had gathered quite a lot, so the usual buffalo-cart he used to carry firewood was barely able to accommodate the timber. Pak Amat immediately rushed to return to the village since the sun had started to move into the western horizon. He did not want her wife to worry about him.

Just a few steps to move, he suddenly heard the faint sound shrill and groans of an animal. The voice sounded very sad, that Pak Amat

GETTING ALONG WITH ELEPHANTS

immediately decided to see what was happening. He immediately moved towards the direction of the sound and then Pak Amat found a baby elephant who was squeezed between large timbers. So with all the effort Pak Amat tried to free the elephants calf.

Once separated from the wood crushed, the calf elephant ran away. Pak Amat then proceeded his walk to the village. On the way, the wheels sank into the hole so the carriage can not move anymore. Finally Pak Amat forced to leave the cart and its cargo at that place. Pulling the buffalo, Pak Amat continuing journey to his village on foot. He could not leave the buffalo in the jungle for fear of being caught by tigers.

The next day, with two young men accompanied him from the village, Pak Amat rushed to pick up his cart and firewood in the forest. But when he reached the gate of the village, Pak Amat was very, very surprised to see the cart and its cargo was there. With the curiosity, the three men ran toward the cart. After, they saw the traces of a lot of elephants around the cart. Apparently elephants move the cart down to the gate of the village.

With the feeling of awe and admiration, Pak Amat told what he experienced on the previous day to the villagers. And then this story even more widespread in the community to the neighboring villages. So that the community finally getting respect for elephants.

The Elephant and the Dog

This is an interesting story from the Jataka collection. Once upon a time, there was a royal elephant that used to reside in the premises of the kings palace. The elephant was very dear to the king, so he was well-fed and well-treated. There was a dog who used to live in the neighborhood of the elephant-shed. He was very weak and skinny. He was always excited by the smell of the rich sweet rice being fed to the Royal elephant.

One day, the dog could not resist the aroma of the rice and he sneaked into the elephants shed. He ate the sweet rice that fell from the elephants mouth. He liked the rice so much, that he started coming daily to eat the rice. For days, the huge elephant didnot notice the small dog as he was busy enjoying the delicious food. Gradually, the dog became bigger and stronger by eating such rich food. He then came to the notice of the elephant.

GETTING ALONG WITH ELEPHANTS

The elephant came to enjoy the company of the dog and started sharing his food with him. They spent time with one another and soon became good friends. They ate together, slept together and played together. While playing, the elephant would hold the dog in his trunk and swing him back and forth. Soon, neither of them was happy without the other. They became great friends and didn't want to be separated from each other at any time.

Then one day, a man saw the dog and said to the elephant-keeper, "I want to buy this dog. What price do you seek for the dog?" The elephant-keeper didn't own the dog but still he sold the dog, extracting a good sum of money out of this deal. The man took the dog to his home village, which was quite far away. The King's elephant became very sad after this incident. He missed his friend a lot and started neglecting everything, even eating, drinking and even bathing. He didn't want to do anything without his dear friend.

Ultimately, the elephant-keeper reported this to the King; however he did not tell anything about the dog. The King had a wise minister, who was known for his understanding of animals. At once, the King asked the minister, "Go to the elephant-shed and find out the reason for my elephant's condition". The intelligent minister went to the elephant-shed and found the elephant very sad. He looked the elephant over and asked the elephant-keeper, "There is nothing wrong with this elephant's body, so why does he look so sad? I think this elephant is grief stricken, possibly due to the loss of a dear friend. Do you know if this elephant shared a close friendship with anyone?"

The elephant-keeper said, "There was a dog who used to eat, sleep and play with the elephant. He has been taken by a stranger three days ago". The Minister asked, "Where is the dog?" and the elephant keeper replied, "I don't know". The minister went back to the King and said, "Your majesty, as per my opinion, the Royal elephant is not sick, but he is lonesome without his dear friend, the dog". The King said, "You are right, friendship is one of the most wonderful things of life. Do you know where that dog is?"

The Minister replied, "The elephant-keeper has informed that a stranger took him away and does not know its whereabouts". The King asked, "How can we bring back my elephant's friend and make him happy again?" The

GETTING ALONG WITH ELEPHANTS

Minister suggested, "Your Majesty, make a declaration that whoever has the dog that used to live at the Royal elephant's shed will be penalized". The King followed this advice, and the man who took the dog instantly turned him loose when he heard the proclamation.

When he got free, the dog ran back as fast as he could to reach the elephant's shed. The elephant was so delighted to see the dog that he picked his friend with his trunk and made him sit on his head. The dog waved his tail, while the elephant's eyes sparkled with happiness. The King was contented to see his elephant happy once again. He also rewarded the minister for his wise judgment. Both the elephant and the dog lived happily together thereafter.

The Elephant and the Jackal

This is a nice story from the collection of Hitopadesha Tales. Once upon a time, in a forest, there lived an elephant by the name of Karpuratilaka. He was brutal and haughty by nature, and roamed the forest spreading destruction and fear. Without any purpose, he used to pull down trees and rip off branches. He destroyed innumerable nests with eggs and crushed the nestlings under his massive feet. All the animals of the forest were afraid of him. In short, he had created all around chaos in the forest. Even fierce animals like lions and tigers also kept themselves at a safe distance from this elephant. Once it happened that this elephant destroyed the burrows of the jackals in his merciless stroll. This was not tolerable to the animals and all of them wanted to kill him.

They tried to make a plan to kill the elephant, but thought it was nearly impossible due to his gigantic size and immense strength.

The jackals were full of rage and planned to call a separate meeting. They were ready to do anything to get rid of the mighty elephant, but killing the huge elephant was not a small task. All of the jackals had a discussion that how could they kill the elephant. Suddenly, an old jackal said, "Leave everything to me. I will cleverly bring about his death". Everyone gave his consent to the offer of the old jackal.

The next day, the old jackal went to the elephant, bowed respectfully before him and said, "My Lord! favor me with your Royal gaze". The elephant looked at him and said in a loud voice, "Who are you? Why you have come here?" The intelligent jackal replied, "I am only a poor jackal, your

GETTING ALONG WITH ELEPHANTS

Majesty. No one can deny your greatness. You are kind-hearted, gentle and possess all the qualities of a ruler. Taking these things in mind, all the animals have chosen you to be their King. Please accept this offer and make us obliged".

The elephant appeared to be happy with all the praise bestowed on him by the jackal. The jackal found the time to be appropriate and further proclaimed, "Your Highness, all the animals are eager to see your kingship ceremony. It will be held in the middle of the forest, where thousands of animals have already gathered to get your blessing. Our astrologers have told all that this is the auspicious moment for your crowning. Time is fleeting fast. So, please come with me without any delay".

The elephant was really pleased by the jackals speech. He always dreamt of becoming a King. He reflected that the kingship ceremony would be a matter of honour to him. Instantly, he got ready to accompany the jackal to the place where ceremony was to be held. The jackal took the elephant deep into the forest.

On the way, they had to walk through a swampy area by the side of a lake. The jackal walked across the swampy region easily, but as soon as the elephant stepped in the swamp, he got stuck in it! He tried his best to come out of the swamp, but to no avail — The more he tried to move out, the more he went deep into it. The elephant became frightened and called out the jackal: "My friend! my friend!, please help me to come out of this mud. I am sinking deep into the mud. Call other animals quickly to help me, otherwise I will die".

The jackal replied, "I am not going to save you. You are a cruel, arrogant and a merciless creature. You killed our siblings and kids. You have destroyed our burrows and nests of poor birds. You knew everything, but remained indifferent. Your end has come". The jackal left the place immediately and the elephant kept shouting for help. In a short time, the elephant disappeared, sinking into the deep mud.

The Rabbits and the Elephants

This is another nice story from the Hitopadesha collection. Once upon a time, there lived a herd of elephants in a forest. A mighty elephant by the name of Chaturdanta was their king. There was a big lake in the middle

GETTING ALONG WITH ELEPHANTS

of the forest where all the animals used to go to drink water and to take a bath. Once it so happened, that there was no rain for the whole year and the lake dried up. Many of the birds and the animals died of thirst. The elephants became worried that if they didnt get water soon many of them would die of thirst.

The elephants decided to take the matter to their king, Chaturdanta. So they approached their king and said, "You Majesty, as you know there is no water in our forest, many of the animals have died due to thirst. We require water in order to survive. If we stay here, soon many of us will die. We have to find out water as soon as possible". The King elephant considered the idea and asked the elephants to go in different directions to find water. Fortunately, one of them found a large lake full of water in another jungle far away.

The King elephant was happy to hear this. He ordered all his followers to make their way towards the lake. This lake was full of water and never went dry even if it did not rain. On the way to this lake, there was a settlement of rabbits. The elephants had to pass through this settlement of rabbits. Thousands of rabbit got crushed under the heavy feet of the elephants and many of them got wounded. The rabbits fled in terror. The situation was getting severe, so the King of the rabbits called up a meeting.

In the meeting, the King rabbit said, " A herd of elephants is passing through our area. They have killed thousands of our friends. We have a critical need to avoid more deaths. I want all of you to think of a way to save our race". All the rabbits thought and thought. Suddenly, a little rabbit said to the King, "Your Majesty, if you will send me as your messenger to the King of the elephants, I might find a solution to this problem". The Rabbit King gave his approval to the idea. The little rabbit rushed towards the lake.

When he saw the herd of elephants returning from the lake, he realized that it was impossible to get near to them. Then he thought of a way to talk to the King of elephants. Thus, he climbed up a hill and shouted, "O, King of the elephants. Please listen to me". On hearing the rabbits voice, Chaturdanta stopped for a while and replied, " Who are you? From where have you come?" The smart rabbit answered, "I am a messenger sent to you by the Moon God". The King of the elephants said, "Why you have come here?"

GETTING ALONG WITH ELEPHANTS

The rabbit replied, "Moon God has sent a message for you. A messenger speaks only truth. Please consider that a messenger is never punished for what he has to say. He is only doing his job so you must not become angry with me". Chaturdanta confirmed him that he wont be harmed in any way.

The little rabbit said, "The Moon God is angry with you because you have brought your herd to his holy lake and have disturbed the peace. You have crushed thousands of rabbits to death on the way to lake. Rabbits are under the special protection of the Moon God. Since you have bothered the Moon God and his special creatures, he is extremely annoyed with you and wants you to leave his kingdom at once. If not, then you might face terrible consequences".

The King elephant was scared to hear this message from the Moon God. He said, "You are right. We have killed many rabbits on our way to the lake. But really that was done in ignorance. I will see that you do not suffer anymore. I want to request the Moon God to pardon me for my sins. Please advise me what I should do". The rabbit replied, "Ok. I will take you to the Moon God. Pay your homage to the God and ask him to forgive you for the crime you have committed. Come with me".

At night, the rabbit led the King of elephants to the lake. Both, the rabbit and the elephant stood near the bank of the lake. There they saw the reflected image of the Moon in the still water. Just then, a mild breeze blew disturbing the waters of the lake and the moon seemed to move to and fro. When Chaturdanta saw this, he thought that the Moon God was really angry with him. He bowed to the Moon God in panic. The rabbit said, "Oh Moon God, The King of elephants has done a sin in ignorance. Please forgive him. He is taking away his herd from here and promising never to come back".

Frightened Chaturdanta bowed once again to the Moon God and left the place with his herd immediately. And the rabbits lived happily in their settlement ever after.



GETTING ALONG WITH ELEPHANTS

ASIAN ELEPHANTS AND ASIAN PERSPECTIVES

Just as we see diversity in Asian mythology, people have different views about elephants. Views about elephants vary from person to person, their perceptions based on their past experience with elephants. As educators it is important for us to be aware of these different perspectives and use them effectively to educate and involve others in resolving elephant issues. Understanding their perspective will also help us sympathise with their attitudes. In this activity participants will take the role of different characters and express their perceptions and views about elephants.

Divide your audience into selected groups as per your convenience or as follows: farmers, weight lifters, priests and devotees, advertising executives, film-makers, artists, politicians, song-writers, elephant researchers.

Farmers

You are all farmers with farms in close proximity to elephant habitats. Your participation to solve the issue of human-elephant conflict is very essential since you are among the primary people who are affected. Farms are raided frequently by elephants and crops are trampled. Conflict with elephants has occurred many times. You have lost your peace of mind and your village is consumed with fear.

1. As a group, list out points that you think could be the reason for the entry of elephants in your farms and/or village.
2. Write down a list of solutions that you as a group think might solve the problem. **Your solutions must insure your safety and that of the elephants. Your solution should also be cost effective.**
3. Write a petition to your area *Panchayat* and *MLA* proposing your solutions to the existing situation. Give details of support in terms of materials that your village will require to implement your plan.



GETTING ALONG WITH ELEPHANTS

Weightlifters

You are a team of weightlifters of different weight category who represented the Nation. One of your team members won a gold medal in a recent competition. He gained interest in weight lifting after his visit to a nearby forest area where he observed elephants lifting huge logs. He wanted to do it himself, and thus entered weight lifting sports. Immediately after the announcement of the medal the sports commentator interviewed the team and put the question to the gold medalist: 'Tell me, what made you choose weightlifting as your career and who inspired you?' As a reply the winner should:

1. Narrate what made him appreciate the strength of the elephant?
2. How he thinks the elephant was influenced to pick up interest in weightlifting?
3. What would have been your career if you had not seen the elephant on that day?



Advertising executives

Many business people wish to sell their products using elephant as the trade mark. They feel that elephant symbols boost up their business many times. Imagine you are an advertising executive in a big company with a team of very creative people. Your job is to create an advertisement that will appear on television, in a magazine or as a poster. For example a chocolate company has just come out with a new chocolate using elephants in their advertisement. You can choose your own product for this activity.

1. As a group think of a commercial product for which an advertisement has to be developed using elephant as a theme. (example - Fevicol).
2. See that as many characteristics of elephants are included as highlights in your advertisement as possible.
3. Present your advertisement to the rest of the audience. Use props and be creative.



GETTING ALONG WITH ELEPHANTS

Song writers

As songwriters your responsibility is to write a song that expresses the human-elephant conflict issue. Poetry is a powerful medium of communication to raise awareness about any issue that makes people think and take the right decision.

1. Decide on the message(s) that you want to include in the poem. List out the points that you wish to add.
2. Share ideas with your group and write the lyrics. Give tunes to your lyrics; traditional or folk tunes would be particularly appropriate.
3. Rehearse your song and perform it for the other groups.



Film story writers

You are a group of film story writers. One of you received an invitation from a film producer to make a documentary on "troubled elephants" for public viewing. You have an appointment with the producer to narrate the story of your documentary film.



1. Develop a storyline for the documentary film on 'Troubled elephants'.
2. Narrate the story to the producer and use all your team members assistance to enact a scene.
3. Your theme should be such that the film creates some interest in viewers to help elephants for their survival.

GETTING ALONG WITH ELEPHANTS

Artists

Elephants have been a part of art throughout the history of man. As artists, your group has been hired to paint a wall painting or create a poster to address the issue of human elephant conflict.



1. Your task is to draw, paint or create a wall painting or poster to address the issue of human elephant conflict.
2. Your drawing should be a message or suggestion for the people who live in elephant areas.
3. Give catchy captions and make your drawing very colourful. Decide upon a scene to depict and the parts of it that each member of your group will be responsible for.

Politicians

Politicians are the decision makers and their contribution to face the present situation of human-elephant conflict is very much essential. While making policies, the politicians should not fail to consider the needs of the people, of individual lobby groups, the interests of the nation as well as the welfare of elephants. Assume you are all politicians and as a group you must write a speech to be delivered to the public just before the upcoming elections. In these elections, the main agenda you have to address is protecting people from elephant depredation existing at this point of time keeping in mind also the conservation and welfare of elephants.



1. Prepare a speech highlighting the needs of a community (which has big vote bank) that live close to elephant range areas. Include your responsibility to protect the forest and the animals that live therein.
2. Make a list of new proposals (example: income-generating proposals for the villagers) that will bring in benefits to the community. It can be done only if you are elected.
3. Read out the speech before the gathering with passion and sincerity.

GETTING ALONG WITH ELEPHANTS

Elephant researchers

You are a team of elephant researchers working to promote human-elephant coexistence. Your immediate research work is to visit villages where there have been frequent elephant visitations and find out the cause and remedy.

1. As a researcher you compose a questionnaire survey to help in understanding the reasons for elephant visitation in the village. Frame a minimum of 6 questions that will help you to understand the issue.
2. Conduct a survey in the village using the questionnaire. Find out the villagers opinions about the issue. Interview at least 2 - 3 people depending on the time.
3. Consolidate your survey results.



After the groups have had time to complete their assignments, provide a substantial amount of time for each group to make a presentation.

Farmers should share the reasons for elephant visitation in their village.

Weightlifters should share their experience with the audience about the secret of their success

Advertising executives should present and explain their creative advertisement.

Film story writers should narrate the story to the film producer.

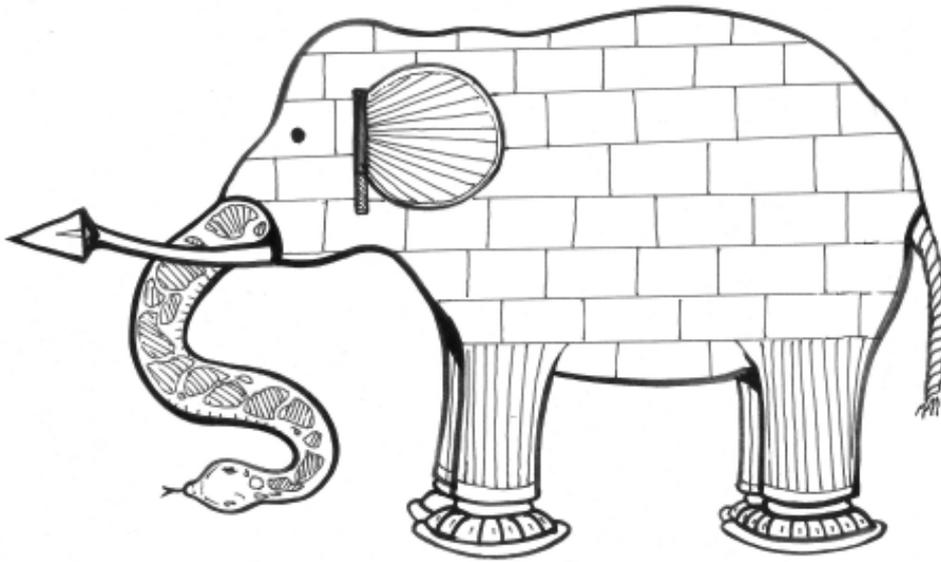
Artists should present and explain their wall painting or poster.

Politicians should present their speech.

Songwriters should sing their songs with music.

Elephant researchers should declare the results of the survey.

GETTING ALONG WITH ELEPHANTS



GETTING ALONG WITH ELEPHANTS

The Six Blind men and the Elephant

John Godfrey Saxe (1816-1887) version of the famous Indian legend

*It was six men of Indostan
To learning much inclined,
Who went to see the Elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.*

*The First approach'd the Elephant,
And happening to fall
Against his broad and sturdy side,
At once began to bawl:
"God bless me! but the Elephant
Is very like a wall!"*

*The Second, feeling of the tusk,
Cried, -"Ho! what have we here
So very round and smooth and sharp?
To me 'tis mighty clear
This wonder of an Elephant
Is very like a spear!"*

*The Third approached the animal,
And happening to take
The squirming trunk within his hands,
Thus boldly up and spake:
"I see," quoth he, "the Elephant
Is very like a snake!"*

*The Fourth reached out his eager hand,
And felt about the knee.
"What most this wondrous beast is like
Is mighty plain," quoth he,*

*"'Tis clear enough the Elephant
Is very like a tree!"
The Fifth, who chanced to touch the ear,
Said: "E'en the blindest man
Can tell what this resembles most;
Deny the fact who can,
This marvel of an Elephant
Is very like a fan!"*

*The Sixth no sooner had begun
About the beast to grope,
Then, seizing on the swinging tail
That fell within his scope,
"I see," quoth he, "the Elephant
Is very like a rope!"*

*And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong,
Though each was partly in the right,
And all were in the wrong!*

MORAL.

*So oft in theologic wars,
The disputants, I ween,
Rail on in utter ignorance
Of what each other mean,
And prate about an Elephant
Not one of them has seen!*

GETTING ALONG WITH ELEPHANTS

FORGOTTEN PESTS: UNDERSTANDING PEOPLES' TOLERANCE LEVEL TOWARDS PROBLEM ELEPHANTS

Elephant Vs smaller pests (Rodents)



In Asia, 30 million tones of rice are lost which accounts 5% of the total rice production. 30 million tones of rice is enough to feed 180 million people for one year. Recent studies show that loss of grain to rodents in India alone is approximately 25% in the field before harvest and 25-30% post harvest. The losses to rodents alone cost at least IRs 24,500 Crore (US\$ 5 billion) annually in stored food and seed grains in India. We do not have estimate for other rice producing countries. However, biologists claims that this estimate could be a conservative figure. They estimate that there could be 2.5 billion rats in India and they could cause a damage of IRs 49,000-73,500 Crore (US\$ 10-15 billion). How do they assess this? Generally rodents eat an amount of food equivalent to 7% (rats) to 20% (mice) of their body weight daily. Therefore, the potential annual consumption of grain per rat is about 6.5 kg and per mouse about 1.5 kg. This is a forgotten loss in productivity. These rodents also cause damage indirectly. Rodents are carriers of many diseases for both human and animal. This indirectly impact the productivity which is not taken into account.

Periodic outbreaks also occur following floods or cyclones in certain parts of Asia. For example, in Andhrapradesh, South India, 1996 cyclone was followed by an outbreak of rodent populations in 1997, leading to damage of up to 29% of the standing rice crop at early tillering. This prompted the government to provide free rodenticides at a cost of Rs. 19 Crores (US\$ 3.8 million). In one district alone (West Godavari), 43 lakhs (4.3 million) farmers were affected by the rodent outbreak.

In Bangladesh, in the year 2002, the financial loss in 12 districts due to HEC has been estimated as 2,91,65, 638 Taka (US\$ 423,303). The will include damage to crops, houses, bamboo, livestock, fruits and trees. Crop loss alone comes to 1,48,56,500 Taka (US\$ 215,624) which is 51% of total loss. The loss including all plant produce (fruit, trees and Bamboo) come to 79%.

Irrespective of all these damage rodents and other smaller pests do not attract much criticism. However, elephants attract much criticism when many other smaller pests (eg. rodents, birds, primates, wild pigs) actually do **far more damage to stored or growing food crops**. One of the factors that attract attentions is the tolerance level of the people who face the problem. All factors involved in tolerance of wildlife pests are



GETTING ALONG WITH ELEPHANTS

gathered together and tabulated here. Here we can see the perspective of affected people towards problem elephants.

Activity:

Read the Table given below. List how many factors will fall under an increasing and decreasing trend of tolerance compared to the damage caused by rodents as well as elephants.

Increasing >>> Tolerance	<i>Socio-economic factors</i>	<<< Decreasing Tolerance
Abundant	LAND AVAILABILITY	Scarce
Abundant, inexpensive	LABOUR AVAILABILITY	Rare, expensive
Low	CAPITAL AND LABOUR INVESTMENT	High
Various	ALTERNATIVE INCOME SOURCES	None, less
Varied, unregulated	COPING STRATEGIES	Narrow, regulated
Small	SIZE OF DISCUSSION GROUP	Large
Subsistence	TYPE OF CROP DAMAGED	Cash or famine crop
Community, group	SOCIAL UNIT OBSORBING LOSS	Individual, household
Low	POTENTIAL DANGER OF PEST	High
<i>Ecological factors</i>		
Small	PEST SIZE	Large
Early	RAID TIMING RELATIVE TO HARVEST	Late
Solitary	PEST GROUP SIZE	Large
Cryptic	DAMAGE PATTERN	Obvious
Narrow, one crop	PESTS CROP PREFERENCE	Any crop
Diurnal	TIMING OF RAIDS	Nocturnal
Self limited	CROP DAMAGE PER RAID	Unlimited
Rare	FREQUENCY OF RAIDING	Chronic
Leaves only	CROP PARTS DAMAGED	Plant, fruit, tuber, grain, pith

Tally your personal views below:

Species	Increasing Tolerance	Decreasing Tolerance
Elephant		
Rodent		

GETTING ALONG WITH ELEPHANTS

DEBATE: HUMAN-ELEPHANT CONFLICT MITIGATION WITH COMMUNITY PARTICIPATION

Elephant habitats and human-elephant conflict

We understand from the existing elephant habitats as referred in the country chapter that elephants in Sumatra have restricted distributed. These elephants in Sumatra are restricted to 100,000sq km area out of 1,919,440km² sq km of the countries total land area. The number may vary from 2,400-3,400 elephants. Once widely distributed elephants are now restricted to small areas and forced to compete with people who are living adjacent to the forest or protected areas and National Parks for food, water and space. Elephants are not getting enough food and water within that limited space and they are forced to get out of the forest. In addition to this introduction of mega development projects such as construction of dams, irrigation channels, electricity installations and monoculture plantations blocked the traditional migratory routes of elephants. When elephants come back to their traditional routes they come in contact with human beings that result in human-elephant conflict (HEC). Elephants raid the cultivated crops and when farmers try to protect their crop they are killed or injured by the raiding elephants. Likewise the elephants are also killed or tortured. Now HEC is a world wide problem.

Elephants are generally viewed as problematic animals by damaging crops, destroying infrastructures and human life but it also has the capacity to act as a beneficial resource for local communities as in Sri Lanka and Zimbabwe where elephants provide many benefits for local villagers by way of tourism industry.

HEC may not be able to be eliminated entirely but it can be reduced by properly planned natural resource management. Traditional conservation practice is to reserve a place for nature and animal and thereby separate human from the Nature. But with the increasing trend in population and the need for natural resources, it is necessary that human should learn to live with Nature. Particularly people who live close to the forest and national parks should have enough knowledge to live in harmony with animals. The cause for HEC varies from place to place and there is no standard solution to it. Thus the local people, in collaboration with wildlife department and forest managers, should be in a position to find a solution to meet the existing HEC situation in their living space. This system of finding a solution for the existing HEC problem is a way to involve local people in elephant conservation and to live harmoniously and also to address human-elephant conflict in a comprehensive manner.

GETTING ALONG WITH ELEPHANTS

Considering the above point it is important for your participants to consider the human factor essential to find a solution to the HEC problem and to conserve elephants. It is also fruitless for the conservationist to just address elephant conservation without considering the needs of the people. Conservationists should initiate actions that will address the needs of human beings and their involvement to find a solution to the HEC problem.

This role-playing activity models a conflict-resolution process. This is in one of the areas in Bangladesh where about 1000 families live in a village which is close to a elephant area. Their main occupation is agriculture. They also depend on the forest resource for fuel, minor forest produce and cut down trees in order to clear space to build homes. Enforcing wildlife laws in this village is much more difficult. The village is experiencing HEC situation for many years and the traditional way of lessening the problem is not helping much. In order to find out a suitable long-term solution to solve or lessen the HEC issue, it has been proposed to invite suggestions from various groups who could help to find a solution.

Instructions for the activity

Share the above information with your audience. Divide your participants into equal groups as per the roles given below:

- **Village committee (three member)**
- **Villagers representing both men and women**
- **Forest department officials and managers**
- **Officials from tourism department**
- **Rural Sociologist**
- **NGOs to provide alternative livelihood support**
- **Elephant researchers/educators**

The Village Committee must be made up of an odd number of people of three representing village head, forest official and NGO representative. The other participants should be divided into equal numbers and assigned characters.

The objective of this activity is to meet as groups and find out some alternate solution to meet the existing HEC situation. The unsuccessful traditional practices such as throwing fireballs, killing elephants should be stopped. Instead, a plan should be made involving community people, Government agencies, researchers and NGOs to find a participatory, sustainable long-term management that will benefit both the people and the elephant.

GETTING ALONG WITH ELEPHANTS

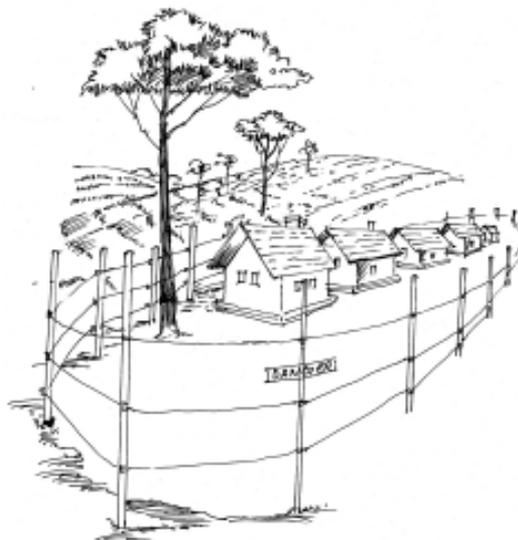
Once you have assigned roles and made them into groups, introduce the following proposal:

PROPOSAL

The village people are experiencing HEC situation for the past 20 years and the traditional way of lessening the problem is not helping much but remains as a short-time solution. In order to find out a suitable long-term solution to solve or lessen the HEC issue, it has been proposed to invite suggestions from various groups who could help to find a solution. The Village Committee VC and the people of this village will listen to all the suggestions and formulate a scheme to solve HEC situation. The people of the village will implement the proposed scheme wholeheartedly with the support of the government and NGOs. This scheme will support the development of the rural socio-economic conditions and induce social tolerance to damage caused by elephants. The objective is to make a model village in handling the HEC situation with the participation of the villagers and the support of the government.

Give each group the appropriate information given in the following pages. Each group must only have information relevant to the assigned role. They are not supposed to see the instructions of other groups.

Allow the groups about 15-20 minutes to read the information. Make sure that the groups understand they have to present their view points to the Village Committee (VC) based on the given proposal and highlight the needs associated with their roles.



GETTING ALONG WITH ELEPHANTS

Once all the groups are ready, have each group come up and present their case to the Village Committee. Explain to the groups that it is important for each group to be as persuasive as possible. Once all the presentations have been made, the Village Committee will put all the points together and introduce a scheme as a solution to solve HEC issue. After the activity you can ask one of the participants to act as a media person and interview randomly about the role play and about the scheme announced.

1. Was the Village Committee scheme sound practical and good?
2. Do you think this scheme will help to solve HEC in a long run?
3. Was the participation from all sectors equal?

Village Committee VC

You are a group of committee members representing one each from the village, forest department, tourism department, or NGO. Other group will meet you and tell their concern about the proposal. You will listen to all the ideas from different sectors of the society and form a scheme as a long-term solution for HEC issue. Listen carefully as all are equally important. Make note of all the important points that you wish to add in the scheme. You must consider several issues such as: Is this in the best interest of elephants? Is the suggestion a long-term or short-term interest? Are the needs of the people taken into consideration? Where would the funds come? Who would look after this scheme? After each group presents their case ask questions to find the weak or strong points of each argument. Once all presentations are made, you must hold a discussion with in your group and announce your scheme that the village people will take it over.

Villagers (both men and women)

As a villager you are the ultimate group who is affected by the HEC. You have almost lost your peace of mind because elephants raid and destroy your crop every season. It has affected your daily life as well. You can propose that the entire forest has to be fenced. If damage occurs, immediate compensation should be given. However, you are also ready to take up alternate livelihood methods if someone can train the people and teach the ways to sell the product in the market. Some of your children have stopped attending school for fear of being chased by elephants during to and fro from their schools. If you are from an HEC area you can list out the real points and explain to the Village Committee.



GETTING ALONG WITH ELEPHANTS

Officials from Tourism Department

Your group represents officials from Tourism department. Your department has already identified the forest area adjacent to this village as a potential area to make it into a tourist site by allowing public to see animals especially elephants in the wild. The department can also provide job for the villagers at various levels as guards, guides, messengers and any other suitable jobs. Sixty percent of the money generated by tourism can go to the people of the village.



Non-Government Organisations

Your group represents a group of NGOs who can support the people by providing training to be trackers, forest guards, guides, anti-poaching agents, and other training in land management with the combination of indigenous knowledge and innovative new conservation techniques. The changing of land use patterns in local areas is important in order to protect against elephant damages. As a group list out various training that you can provide to the villagers that will help implement the scheme. You can also think of including alternate livelihood support programmes that they can conduct in the village as a community.

Elephant Researchers/Educators

Your group is made up of conservation biologists and conservation educators. Your primary concern is the protection of elephants and the forest. As researchers you can track the movement of the elephants and the seasons of visitation. Your information can be passed on to the villagers and to warn them about the presence of elephants around the village so that people will be prepared to meet the situation. As a group you plan some awareness programme to teach the villagers about elephants. You strongly believe that conservation education among rural communities has changed personal attitudes and behaviour in regarding elephants as only a pest to seeing them as natural resource and beneficial animals. The group will also look into creating corridors linking rivers and reservoirs.



GETTING ALONG WITH ELEPHANTS

Rural Sociologist

You are a group of social workers representing the government.

Your job is to make a list of "do's" and "dont's" in HEC area (You can refer the tips given in the guide to make your list.)

Some of you are from this village itself and so you know the history and the degree of the HEC problem. You are skilled to put the scheme into action by linking people and officials. You feel that participatory programmes with rural people encourage idea sharing about preventive measures against elephants.

Motivating the people and to change the attitude of the people is your objective.

You work with all levels of people and you prepare a "do's" and "dont's" with regard to HEC in the village.



Forest Department Officials and Managers

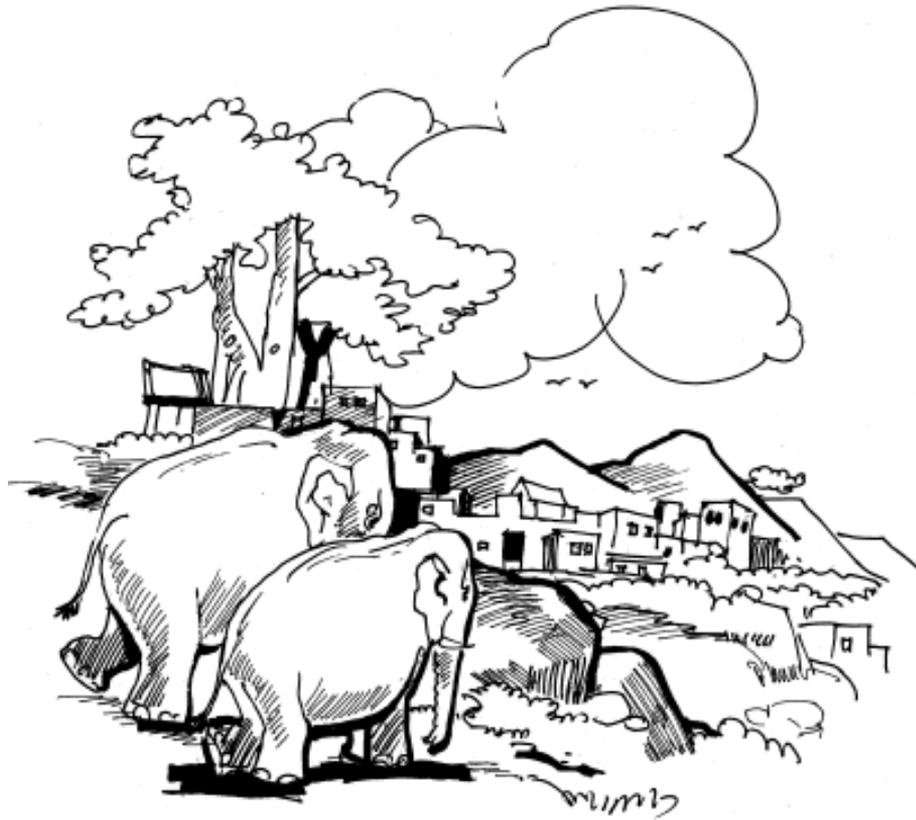
You are a group of forest officials who are ready to help solve HEC situation in this village. You are ready to support the village by way of constructing electric fence, by building water holes and providing year-round water supply in the forest area thereby stop those thirsty elephants from entering the village.

Utilizing your expertise you can teach them various ways of sustainable utilization of forest resource to generate support for their livelihood. The department can also be involved in tree plantation with the support of the villagers. Providing compensation for crop raiding by elephants or any animal is not a solution for HEC and you are clear with this idea. So you disagree with compensations but instead believe that money can be allotted for various other projects that will help generate income in which a percentage can be distributed as compensation. All this support from your department will help the Village Committee VC to develop a good scheme to face the HEC situation in the village.



GETTING ALONG WITH ELEPHANTS

Part V Understanding Species Problem & Resolution



*SPECIES PROBLEMS AND SOLUTIONS
PROTECT RESOURCES AND SAVE ELEPHANTS
CONFERENCE ON PROTECTION AND MANAGEMENT OF HEC AFFECTED
AREAS IN INDONESIA
TIPS FOR PLANNING AN EDUCATION PROGRAMME
HOW TO USE ELE-KIT PACKET
HOW TO USE ELEPHANT FINGER PUPPET KIT*

GETTING ALONG WITH ELEPHANTS

SPECIES PROBLEMS AND SOLUTIONS

The materials in this part of the unit will guide participants as they investigate the major conservation problems faced by elephants with special reference to the Indonesian population. Participants will be encouraged to identify various threats to the elephant, such as habitat destruction, degree of other existing threats, and issues on reduction in population size etc.

Understanding species problems:

Conservation Assessment and Management Plan (C.A.M.P.) workshop

In this section, participants will become elephant experts, captive facility managers, field biologists, wildlife managers, conservation biologists, representatives of academic institutes working on elephant conservation. Tell your participants that the C.A.M.P workshop process was developed by the IUCN SSC Conservation Breeding Specialist Group (CBSG). Tell them that this assemblage of experts is to provide the most current information about elephants and related issues in order to assign species to IUCN Red List Categories of Threat, formulate broad-based management recommendations and develop more comprehensive management and recovery programmes. (See appendix for Structure of the Categories; also check http://www.iucnredlist.org/info/categories_criteria2001),

Introduction to C.A.M.P. Process:

In a Conservation Assessment and Management Plan (C.A.M.P.) workshop participants will be divided into groups depending on the delegates, country representation (Example: India, Sri Lanka, Indonesia, Nepal and Bangladesh) or their academic specialty or regional distribution according to the country (Northern Bangladesh and South Eastern Bangladesh). The groups will receive a Taxon Data Sheet (TDS) to fill in. In addition to their own knowledge each group will also be able to consult reliable references necessary to fill in details in the TDS about the species. The TDS serves as a compendium of the data collected species by species pertinent to the condition of the populations and habitats. IUCN status is deduced using information in the TDS by applying IUCN criteria. The Taxon Data Sheets also provide documentation of the reasoning behind recommendations, of the criteria used for deriving a status for a species, as well as details of other information pertinent to the species. After determining status and using other information from the TDS and participants experience, special issue working groups make recommendations which are put together. A report is compiled about what actions need to be taken to conserve elephants.

GETTING ALONG WITH ELEPHANTS

After explaining the C.A.M.P. process give participants 10 minutes time for them to see the data sheet on *Elephas maximus* - Asian elephant (See Appendix). Plan a discussion to help participants understand how the status of a species is assessed.

For Discussion:

What information in the Taxon Data Sheet might tell us if the species is in trouble? (Look at the information after habitat status in the column to the left in the Taxon Data Sheet. If the habitat is decreasing in area and is also predicted to decrease more, this is a sign of trouble. The species living area is disappearing... thats trouble.

What does an increase in cultivated forest mean? Is this good because it is an increase? (No! cultivated forests such as teak or eucalyptus monocultures mean that the elephants do not have adequate food source for their survival).

What about threats? Read the threats and discuss with your group if they think these threats are serious and why?

What about population trends? Do you think a population declining by more than 50% is a good thing? This is another topic you can discuss with your group.

Read the rationale for the status of Asian Elephant after you have discussed all these things. Now you can begin to understand how conservation biologists figure out such things. Although it is a high level subject, common sense also goes a long way in understanding species extinction.

What do you do after a C.A.M.P. Workshop? Consult the recommendations and see what you can do as an individual or a group.



GETTING ALONG WITH ELEPHANTS

PROTECT RESOURCES AND SAVE ELEPHANTS

In general the population of Asian elephants has been declining in its range areas, probably for some time. Most of the countries in South Asia are showing similar trend in species population. However, due to improved conservation initiatives the Western Ghats elephant population in India has increased in the recent years.

One of the major reasons why Asian elephant populations have decreased in the last 100 years has to do with the growth of the human population and competition for resources between humans and wildlife. The activity given below is designed to dramatize the crucial link between human population and species decline.

The object of the game is for individuals representing elephants to avoid becoming threatened or becoming extinct. Tell your audience that there are three major resources most wild animals need in their habitat in order to survive: food, water and shelter. These are the major resources that need to be protected in order to protect elephant and other wild animals. Depending on its ecology and desirability to humans, each wildlife species may also need other sorts of protection. For example Asian male elephants which are hunted for their tusks need protection from poaching.

Instructions:

Divide your group into four groups of equal size. Distribute a piece of blank paper to each member of your audience. Tell them that they have to prepare placards to denote the three basic elements of life, ie. food, water and shelter. Ask the first group to write in caps the word 'FOOD' on the blank paper provided. The second and third group should write WATER and SHELTER respectively on the paper provided. The last group should write TUSK. Provide some time for the participants to prepare the placard.

After everybody has finished making their placards, bring the four groups together and find an area of clear floor space. Collect the placards and place each other on the floor in a random way. Then divide your groups into five new teams equal in size. Explain that teams 1-4 represent the human population of Asia. Each team represents millions of people. Explain that team 5 represents Asian elephant of different populations, say Indian, Bangladeshi, Nepali, Sri Lankan, Sumatran etc. Ask all the elephants to wear the masks.

Ask the group representing Asian elephants to come forward. Explain the roles of the game. Each elephant must find and pick up one food placard, one water placard and one shelter placard to successfully complete round one. In addition to the three resources,

GETTING ALONG WITH ELEPHANTS

elephants must also pick up one tusk placard. While picking up placard the elephants should move from one resource to another. When they pick up a placard they have obtained the resource written on it. Each elephant should remain standing in the place of the last resource it pick up. Explain to the participants that they may not always be able to find all three resources they need. If they can not find all three, they will be given a mark on the chart to designate when they are threatened, another mark to designate when they are endangered, and another mark to designate why they are extinct.

There will be four rounds;

Round 1

Explain that you are starting the game in year 1925. Ask the members of Team 1 who represent the human and the elephant group to step forward. Each of these individuals should find a resource placard, stand on it, and call out what the resource is.

Ask the group: Why are the people representing humans standing on the animals resource cards? Help participants understand that humans compete with animals for all three natural resources. Humans may compete for food, water and shelter directly, or indirectly through destruction of habitat. Also explain that humans compete with elephants by hunting them for tusk and skin. Explain that teams 2-4 will enter the game in the later rounds to represent human population growth over time.

Team 1 should pick up several resource placards. Have each elephant find and pick up the three resources placards it needs to survive. Elephants will need four placards: the three resources and the one saying 'tusk or skin. Remind the animals to freeze in place of the last resource they obtain. In this round, all of the individuals should have been able to find the resources they needed. Now have all the elephants and team 1 to put their resource placards back on the floor in a random way.

Round 2

Tell the group that it is now 1950. Explain that the human population of Asia has grown by many millions of people. Send the members of Team 2 into the game to represent the growing population. Ask them to pick up the resources they need. Ask if every elephant was able to obtain every resource it needed. If an elephant was not able to obtain all three resources it becomes a threatened species. If this occurs, draw an "X" on the chalkboard in the box marked THREATENED next to the elephants name. Then have all the animals put the resource placards back on the floor.

GETTING ALONG WITH ELEPHANTS

Round 3

Now you are ready for round 3. Explain to your audience that it is now 1975. Send in Team 3 to represent greater population growth. Once all individuals in Team 3 have occupied placards, send in the animals again to find their resource cards. In this round, more animals may become threatened, and some that were threatened may become endangered, if they fail to collect all their necessary resources. Again, place "X" s in the appropriate boxes on the chart. Have the animals return their resources to the floor.

Round 4

Explain to your audience that it is now the year 2010. Send in Team 4 to represent another burst of population growth. Then have the elephants again try to find and pick up their resources. On the chart, mark another "X" in the boxes for the elephants that did not obtain all necessary resources. If an elephants population has "X: in all three boxes, it becomes extinct.

Conclusion

Direct participants attention to the chart, noting the status of each elephant population. Ask the group in what ways they think the game was realistic or unrealistic. Ask older participants whether they can remember elephants or any animal or natural places near their homes that they saw as children and do not see today. Discuss with the group whether human population growth and/or direct competition with humans were reasons for the disappearances mentioned. Ask participants to speculate about the major effects humans have on Asian elephants. Make sure the following are mentioned: habitat destruction, poaching of elephants for tusk and skin; decrease in the food plants of Asian elephants due to destruction of habitat. Ask the group what impact they think it would have on elephants in the Resource Round-Up game if people did not hunt elephants for tusks.

Table:

Elephant population	Endangered	Critically Endangered	Extinct
Bangladesh			
India			
Nepal			
Sumatran			
Sri Lanka			

GETTING ALONG WITH ELEPHANTS

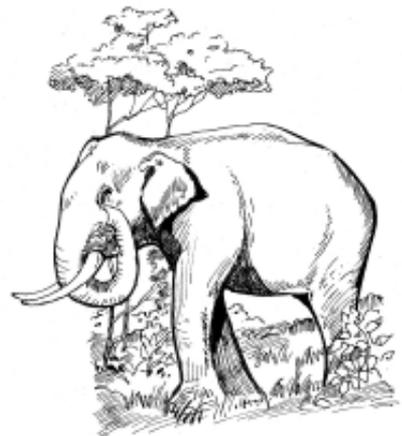
CONFERENCE ON PROTECTION AND MANAGEMENT OF HEC AFFECTED AREAS IN INDONESIA

Ask your participants to assemble in groups. Give each group the following list, or write it poster size in advance and place it in a place where it is easily examined by the entire group.

Tell the groups that their job is to consider which of the nine actions are most important to give protection and to manage properly in the HEC areas. Each group has 100 points and it must assign its points between the nine actions, to whatever extent it sees fit. Depending on time and the level of your audience, you may wish to have them assign points only to the major actions, or divide points among all the secondary actions listed under the nine major ones. It is important to explain that one group may decide that all nine actions are important and therefore to assign an equal number of points to each. Alternatively, a group may decide that three actions are so important that sixty of the 100 points should be divided among those three. Stress that the goal is to consider the actions in accord with the information on the existing problem of human-elephant conflict in Sumatra and to make well-reasoned decisions about priorities. These sorts of decision models how an action is prioritized in a conference with regard to protect and manage human-elephant areas.

Pool all points and develop a National level decision made by the groups choice about what efforts needed to make in Indonesia to meet the HEC situation. Have each group make a presentation in which it explains how its points were allocated. Keep a class tally on a black board as a group makes their presentations. After the last presentation, assess the number of points received by each action. Ask the group to assess the point totals and discuss whether they feel those totals reflect the true priorities to meet the HEC situation. Make sure that an action which may be very important in one location may get least priority in another location. If any actions did not receive points, ask whether they should be dropped from the list.

The following are the outcome of the workshop recommendations to mitigate HEC. The workshop recommendations suggest measures to improve management and protection of HEC-affected areas.



GETTING ALONG WITH ELEPHANTS

Recommendations for the management and protection of HEC affected areas are:

1. Improve elephant habitat

- = Improve year-round water supply - deepen ponds- create - dams on streams to hold water
- = Improve forest food supply - forestation to stop/reverse degradation - integrated planning to enhance elephant habitat
- = Encourage the return of natural predators

2. Prevent/reduce crop-raiding

- = Erect barriers: e.g. trenches, electric fence or other appropriate protection measures
- = Establish guard system e.g HEC patrol units.
- = Change the agricultural system around HEC area - create buffer zone with crops not eaten by elephants - harvest before ripe & preserve (e.g. mangos)
- = Create corridors to river/reservoir - erect signs to warn of potential elephant route
- = Provide reasonable compensation for elephant-damage

3. Build community knowledge & understanding

- = Raise awareness among villagers - about impacts from using the forest - create positive image of elephants as able to help solve HEC problems
- = Create community based conservation development and planning groups
- = Create system of collaborative PA management - set up village review committee - ensure government officials regularly meet during village committee

4. Improve law enforcement

- = Improve protection - increase check-posts at forest entry/exits - improve guard patrol system - provide extensive law enforcement training
- = Improve provisions for rangers - increasing ranger salaries - provide patrol food allowance - provide field equipment.

5. Manage the use of forest resources sustainably

- = Establish a system for using some forest resources - collaboratively create regulations for forest use - specify areas for sustainable use
- = Plan development options by village - organise training for alternative occupations - develop ecotourism e.g. elephant watch tower, trekking, wildlife photography
- = Training to produce forest products locally - form cooperative outlets to sell NTFPs to non-locals
- = Grow crops outside the elephant habitat eg. Mushrooms

GETTING ALONG WITH ELEPHANTS

6. Livestock management

- = Reduce impact on forest - introduce zoning for grazing livestock - establish regulations for grazing cattle in elephant habitat
- = Seek alternative cattle raising system - introduce cattle feed - improve cattle quality/health - establish strict disease control measures
- = Form village committees to manage cattle - facilitate open discussion with all stakeholders

7. Research / monitoring / Research forest use

- = Study the existing trend in HEC
- = Study how forest resources are used
- = Study the impacts of forest resource use
- = Study on habitat loss and impact on wild elephants

8. Improve PA management

- = Clarify PA boundary - set up stakeholder committee to agree boundary - mark the boundary
- = Establish regulated community user zones - set up community/PA committee for zoning - agree, map & mark zones for NTFP collection - establish forest use monitoring system - develop forest resource database including impacts
- = Allocate land to local villagers if it is preferable for them to move fields away from forest area
- = Management training to raise PA staff potential

9. Improve collaboration

- = Develop public relation's communication system - enhance community understanding - present information to every level of administration (State, district, village) - use media (radio/newsletters) to share information - develop links between and within local communities
- = Address need for community participation



GETTING ALONG WITH ELEPHANTS

TIPS FOR PLANNING AN EDUCATION PROGRAMME

After the educators skills training programme on 'Getting along with Elephants' you can plan education programmes at your place for your students. Combining the activities that you learned in the training programme and utilizing the *Ele-Kit* packets that has stickers, masks, placard, rakhi and elephant booklet you can plan half a day, full day or three days education programme for any groups or your school children.

Ele-Kit packets are effective if they are simply given out as souvenirs. It should be used as part of a systematically organized educational programme, featuring a variety of activities such as drama, debate, mime, games and any other activity that you learned during the training, focused on the theme, they will be more effective.

A full-fledged programme will be better organised if there is an educator or person with experience in facilitating an event with your audience, and a few other helpers. There are many things to do in even a simple programme.

You may need volunteers to help you prepare a short presentation from the information given in the kits and packets, and to help announce and coordinate the activities which are possible with the packet. All these activities are designed for maximum fun and emotional and intellectual impact.

HOW TO USE ELE-KIT PACKET

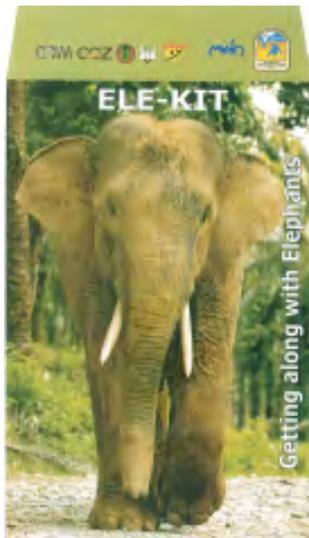
- rakhi-tying ceremony with participants using the rakhi enclosed in their packet (the rakhi can be a symbol of the participants committing themselves to conservation, or animal welfare, and to live harmoniously with elephants)
- a marching demonstration and/or standing still chant where participants put on their masks and hold up their small placards in a public area (this is also a good photo opportunity which will please the press and also be more interesting for readers than a set of dignitaries on a dias or other photos typical of such events)
- quiz programme testing participants on the information contained in the *Elephant etiquette* booklet .
- at least one or two games from the *Getting along with Elephants* teaching guide to be played with the participants
- a pledge card included in the *Getting along with Elephants* teaching guide; they should be given an opportunity to sign the pledge card and state their pledge;
- if a painting or drawing competition is conducted or a debate, one or more of the themes should be concerned with HECx themes

GETTING ALONG WITH ELEPHANTS

- After successful completion of the programme make a brief report to send it to ZOO either email or hard copy.
- Photographs of the event are important in our programmes and are intended for publication and display on a website.
- Sometimes in our theme based programmes sponsored by an international organisation, these photos end up not only in our magazines and newsletters but on many websites with many hits or a yearly report.
- Photos of participants in action which can be identified as part of the programme and associated with the theme, are preferable to plain group photographs.
- Best is when participants are wearing their masks or carrying their placards or tying *rakhi*.
- There are some programmes where participants play a game with an extra large t-shirt that can be sacrificed and this is always a good photo for the press.
- Credits: be sure the host, organisers, and sponsors, both local (ZOO) and international should be included in thanks and in press.
- In ZOO programmes organisers should write a report after the programme so that we can determine if best use has been made of materials and what is lacking from our side. This is a good idea for any programme where you are being given help from others.

Drama

- Participants of this workshop will get a Drama Kit with its own guidelines and a set of all masks. Please refer to these guidelines which accompany your Drama Kit and try to organise a drama period during your education programme. For smaller and more informal activities you can use the finger puppets with instructions on the next page.



GETTING ALONG WITH ELEPHANTS

HOW TO USE ELEPHANT FINGER PUPPET KIT

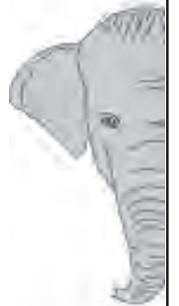
In the Drama Kit cover you will find a smaller cover which contains a whole Drama Kit for finger puppets!

Although finger puppet dramas would not be as dramatic as "whole person" dramas, there are some advantages! The puppets are all squares with an open space at bottom. Children put their finger(s) in the open space(s) and have finger puppets.

For the "Getting Along with Elephants" packets which you will get to use for teaching, we have created **Tio** and **Yuni** elephants, so that kids can play with them even when they are alone. You can use the Finger Puppet Mini Kit in many ways. Here are some :

- 1. Working groups** - you can organize students that sit a few to a table into small groups to design and conduct a drama just among themselves. This is more for playtime but if you are teaching about elephants, they can use the information you have told them to create dramas or just to have something to say in the drama.
- 2. Practice** - if you are short on space, you can use the finger-puppets in preparing for a drama, practicing dialogue or movement with the puppets for a run-through on the floor, stage, or outdoor theatre.
- 3. Teaching** - with a little practice you could try teaching elephant lessons with some of the finger puppets on one of your hands ...or both. This will not work well with huge classes but if you have a small groups of young students, this will delight them and your lessons will be remembered.
- 4. You can have your class make their own finger puppets easily.** You just need some paper and glue, tape or even staples. Most economical way is to fold paper over to the size puppet you want. Let the fold be the top. Then seal the sides, leaving plenty of room for a finger, and leave the bottom open for the finger. Kids can draw their own characters, either front and back or two characters, one on the front and one on the back.
- 5. Your kids can stage short or long chats** between **Tio** and **Yuni** elephants who could be brother and sister, mother and father, even boyfriend and girlfriend, or just two elephant friends. They can make them talk to one another and to you. You can ask them questions about their lives, and as you learn about elephants, you can make their lives more interesting.
- 6. You kids can also stage elephant dramas** using finger puppets with friends or schoolmates who also have them. That means they will have a **BIG** herd of elephants in your drama! Unlike other dramas you need very little space and you can do sitting down ...even riding the school bus, or at the lunch table, sitting under a tree
- 7. Your kids can also put your elephant puppets on your fingers** for a photo with your friends and have a close up photo or a photo of a whole herd.
- 8. You can make up ideas for using the finger puppets.** Have a good time with **Tio** and **Yuni** Elephants.

Appendix



GETTING ALONG WITH ELEPHANTS

Data Sheet on Asian elephant

Scientific Name: *Elephas maximus*

Species Authority: Linnaeus, 1758

Common Name/s: Asian Elephant, Indian Elephant

Assessment Information

Red List Category & Criteria: Endangered A2c (ver 3.1)

Year Assessed: 2008

Assessor/s: Choudhury, A., Lahiri Choudhury, D.K., Desai, A., Duckworth, J.W., Easa, P.S., Johnsingh, A.J.T., Fernando, P., Hedges, S., Gunawardena, M., Kurt, F., Karanth, U., Lister, A., Menon, V., Riddle, H., Rübel, A. & Wikramanayake, E. (IUCN SSC Asian Elephant Specialist Group)

Evaluator/s: Hedges, S. & Desai, A. (Asian Elephant Red List Authority)

Justification: Listed as Endangered (EN) because of a population size reduction inferred to be at least 50% over the last three generations, based on a reduction in its area of occupancy and the quality of its habitat. Although there are few accurate data on historical population size, from what is known about trends in habitat loss/degradation and other threats including poaching, an overall population decline of at least 50% over the last three generations (estimated to be 60–75 years, based on a generation time estimated to be 20–25 years) seems realistic.

History: 1996–Endangered (Baillie and Groombridge 1996) 1994–Endangered (Groombridge 1994) 1990–Endangered (IUCN 1990) 1988–Endangered (IUCN Conservation Monitoring Centre 1988) 1986–Endangered (IUCN Conservation Monitoring Centre 1986)

Geographic Range

Countries: Native: Bangladesh; Bhutan; Cambodia; China; India; Indonesia (Kalimantan, Sumatera); Lao People's Democratic Republic; Malaysia (Peninsular Malaysia, Sabah); Myanmar; Nepal; Sri Lanka; Thailand; Viet Nam Regionally extinct: Pakistan

Population:

A recent estimate for the global population size of the Asian elephant was 41,410–52,345 animals Sukumar (2003) The estimated population size for each country was: Bangladesh 150–250; Bhutan 250–500; Cambodia 250–600; China 200–250; India 26,390–30,770; Indonesia 2,400–3,400; Lao PDR 500–1,000; Malaysia 2,100–3,100; Myanmar 4,000–5,000; Nepal 100–125; Sri Lanka 2,500–4,000; Thailand 2,500–3,200; and Viet Nam 70–150 (Sukumar, 2003). However, Blake and Hedges (2004) and Hedges (2006) argue that the oft-repeated global population 'estimate' of about 40,000 to 50,000 Asian elephants is no more than a crude guess, which has been accepted unchanged for a quarter of a century. They argue that with very few exceptions all we really know about the status of Asian elephants is the location of some (probably most) populations, with in some cases a crude idea of relative abundance; and for some large parts of the species range we do not even know where the populations are, or indeed if they are still extant. These difference of opinion are due in part to the difficulty in counting elephants in dense vegetation in difficult terrain, different survey techniques being used in different places, and a too-widely held belief that population monitoring is unimportant. Nevertheless,

GETTING ALONG WITH ELEPHANTS

whatever the error margins, it appears almost certain that over 50% of the remaining wild Asian elephants occur in India. The overall population trend of the Asian elephant has been downwards, probably for centuries. This remains the case in most parts of its range, but especially in most of the countries of South-east Asia. Within India, there is evidence that the large population in the Western Ghats in south of the country has been increasing in recent years due to improved conservation effectiveness.

Population Trend:

↓ Decreasing

Habitat and Ecology:

Asian elephants are generalists and they occur in grassland, tropical evergreen forest, semi-evergreen forest, moist deciduous forest, dry deciduous forested and dry thorn forest, in addition to cultivated and secondary forests and scrublands. Over this range of habitat types elephants are seen from sea level to over 3,000 m asl. In the Eastern Himalaya in northeast India, they regularly move up above 3,000 m asl in summer at a few sites (Choudhury, 1999). The Asian elephant is one of the last few mega-herbivores (i.e. plant-eating mammals that reach an adult body weight in excess of 1,000 kg) still extant on earth (Owen-Smith, 1988). Given their physiology and energy requirements, elephants need to consume large quantities of food per day. They are generalists and browse and graze on a variety of plants. The proportions of the different plant types in their diet vary depending upon the habitat and season. During dry season in southern India, Sukumar (1992) observed that 70% of the elephant's diet was browse, while in wet season, grasses make up about 55%. However, in an adjoining area, Baskaran (2002) observed that browse formed only 15% of the diet in dry deciduous forest and 47% of the diet in the thorn forest in the dry season, while the annual diet was dominated by grass (84%). In Sri Lanka, elephants may feed on more than 60 species of plants belonging to 30 families (McKay, 1973). In southern India, Baskaran (2002) recorded that elephants fed on 82 species of plants (59 woody plant species and 23 grass species). Elephants may spend up to 14–19 hrs a day feeding, during which they may consume up to 150 kg of wet weight (Vancuylenberg, 1977). They defecate about 16–18 times a day, producing about 100 kg of dung. Dung also helps disperse germinating seeds. Elephants range over large areas and home ranges in excess of 600 km² have been recorded for females in south India (Baskaran *et al.*, 1995). In north India, female home ranges of 184–326 km² and male home ranges of 188–407 km² have been recorded (Williams, 2002). Smaller home range sizes, 30–160 km² for females and 53–345 km² for males, have been recorded in Sri Lanka (Fernando *et al.*, 2005). Given their requirements for large areas, elephants are regarded as an “umbrella species” because their conservation will also protect a large number of other species occupying the same area. They are also a premier “flagship species” and are sometimes regarded as a “keystone species” because of their important ecological role and impact on the environment. The life span of Asian elephants is 60 to 70 years, and males reach sexual maturity at between 10–15 years of age; females usually first give birth in years 15 or 16 (Shoshani and Eisenberg, 1982).

Systems: Terrestrial

Citation: IUCN 2008. 2008 IUCN Red List of Threatened Species. <www.iucnredlist.org>. Downloaded on **28 October 2008**.



GETTING ALONG WITH ELEPHANTS

Certificate

GETTING ALONG WITH ELEPHANTS Human Elephant Co-existence HECx

This is to certify that

_____ has acquired a greater knowledge in HECx and appreciation of elephants by completing the

**Getting Along with Elephants HECx
Educators Skills Training Programme**

_____ which is dedicated to understand HECx.

This graduate is now qualified to teach others about HECx

Course Coordinator

Date



PLEDGE CARD



GETTING ALONG WITH ELEPHANTS HEGx

I, _____ pledge to practice that I

learned in this training by committing myself to do the following two actions:

1. _____

2. _____

Date _____ My Signature _____

Name of witness _____ Signature of witness _____

ISBN 81-88722-27-3



9 788188 722273