

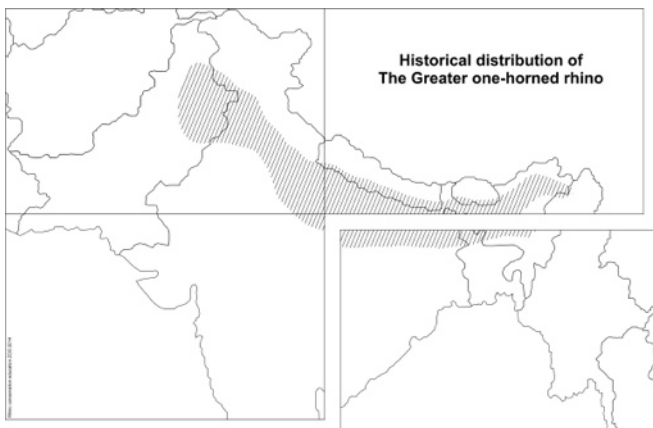
# Rhino conservation education: methodology, evaluation and recommendations for future actions

B.A. Daniel\*

Conservation education and training programmes for the conservation of Greater one-horned Rhino was designed and conducted by ZOO at Lataguri, North Bengal during July 2014. This was carried out with the financial support of the Ocean Park Conservation Foundation, Hong Kong and in collaboration with Nature and Wildlife Conservation Society and the Forest Department of West Bengal. A full report of the programme series is available in *Zoo's Print* (29(9): 27-29).

During the educator skills training workshop and the awareness programmes conducted for the communities in Jalpaiguri District, a series of active teaching and learning tools were introduced. ZOO's successful education module as exercised in programmes for sloth bear, hoolock gibbon, and elephant was used. Thus active teaching tools for Rhino conservation includes assessment tools, know your species, mini drama, past and present distribution, illustrated history of rhino, rhino in our culture, rhino status, threats and conservation and rhino conference.

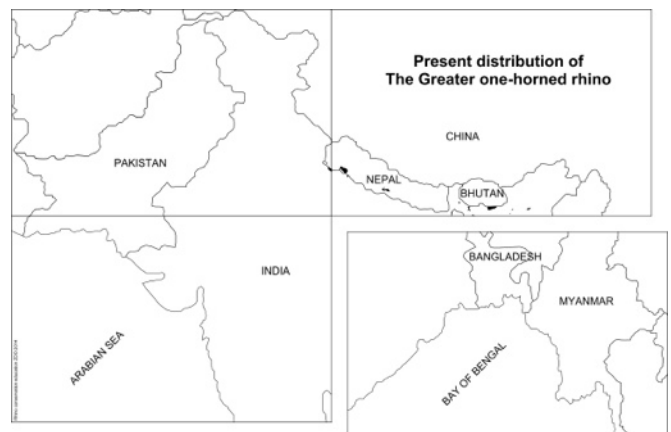
**Assessment tools:** It is important for the organizer of an education programme to assess how the programme affects the participant's knowledge about the subject and evolution of their behaviour, attitudes and actions. Assessment tools help us to measure these. Before the actual programme the participants were asked to draw a brain map using 'Rhino' as the subject. During the programme series two types of assessment tools, that is, brain map and attitude assessment were used. The pre-workshop brain map with their name and date was collected and returned back on the last day of the workshop to compare it with the post-workshop brain map and to assess the knowledge that they gained during the programme. These exercises are done before and after the training so as to compare the difference they made. Attitude assessment was another tool, which is interactive. This help in the assessment of the group and individual's attitude about Rhino.



**Know your species:** one section in the Rhino teaching manual ([http://zooreach.org/ZOO\\_WILD\\_Activities/2014/Rhino/Rhino%20Manual\\_FINAL%20Web.pdf](http://zooreach.org/ZOO_WILD_Activities/2014/Rhino/Rhino%20Manual_FINAL%20Web.pdf)) has been apportioned exclusively for species information. This includes rhino classification, rhino facts, difference between African and Asian rhinoceros, facts about the Greater one-horned rhino, and the history of rhino. All these species information was taught to the participants through drawings, visual aids and interactions.

**Drama:** Drama is a powerful tool that can help to spread the message of species related information. To make the people understand the biology and species threats, drama was performed. It was a fun way method to learn about the species and its issues related to conservation. The group performed two dramas and it took minimum time to understand species problems and also to convey the message to other audiences easily. The discussion at the end of each performance helped them to understand and realize Rhino biology and conservation status in the wild.

**Past and present distribution:** Another group activity 'historical and present distribution of Greater one-horned rhino' was to understand the dramatic decrease in Asian rhino and its habitat. The participants were given two sets of maps that they have to arrange and read. Each group has to come up with a list of countries where rhinos occurred 300 years ago and another list with present distribution. They also have to calculate the percentage of decline of rhino which is 97% and the total area of the existing rhino habitat which is less than 20,000 sq.km. At the end a detailed discussion was conducted so as to make them understand how fragmentation become a threat for a species, which can be easily understood through map reading.



\*Senior Scientist, Zoo Outreach Organization, Coimbatore, Tamil Nadu. Email: badaniel@zooreach.org

**Rhino history:** This activity was to create an illustrated Rhino history of the past until now and the future. The participants were given a series of dates starting from 6000 BC up to 2050 AD that had associated history with the Greater one-horned rhino. The task for them was to present the information as an illustration. They used the instruction in the card to do the illustrations. Within a short span of 45 minutes the group traced the entire history of the rhinos. The posters when exhibited according to the chronological order gave the complete picture of rhino history which was self explanatory.

**Rhino behaviour:** Rhino exhibit characteristic behaviours which are unique to the animal. In order to appreciate the species it is essential that we understand how they are adapted to survival. This is an activity to make the participants understand and to create interest to appreciate Rhino adaptations and behaviour. This objective was achieved through a series of exercises where participants learnt about Rhino's height and weight, behaviours on communications, walking, crawling, sprinting, wallowing and also about Rhino poo and its ethological importance.

**Rhino in Asian culture:** In this activity the teams came up with a number of stories, songs, movie names, place names associated with rhinos.

**Rhino status:** This session dealt with understanding the IUCN process of assigning the rhino species its status in the wild. The Greater one-horned rhino is assessed as 'Vulnerable' now. The participants understood how the status changed from Endangered to Vulnerable and what kind of information are required to do this kind of assessment.

**Rhino conference:** This is a mock conference exercise where the participants learned to understand how the recommendations in rhino conservation are prioritized and implemented.

**Rhino Vision 2025:** The Assam state that holds high number of Asian rhinos in the wild developed on a 'Rhino Vision 2020' that aims to increase the rhino population to 3000 by the year 2020. During this exercise a similar vision statement was created by the participants (box 1).

#### **Box 1. West Bengal Rhino Vision 2025**

##### *Background*

*This is an exercise done by the workshop participants to understand how a vision statement is made. They were given the following instruction and they worked in groups to give their suggestions to make the vision statement. Five working groups were formed to draw the recommendations.*

**The vision:** To attain a population of 300 wild Rhinoceros in West Bengal distributed over two of its protected areas by 2025.

**Aim:** The vision of the programme is to increase the total rhino population in West Bengal by the year 2025.

##### **Objectives**

- To improve the security of all rhinos in the PAs of West Bengal
- To re-introduce rhinos in suitable habitats with in suitable PAs in West Bengal.
- Prevention of future rhino-human conflict.

The different working groups are:

1. Habitat restoration & PA management: This group of participants represented managers from Protected Areas of West Bengal. They know that the vision of the programme is to increase the total rhino population in West Bengal by the year 2025. As a group they were asked to list out actions that can be taken to restore and expand the existing PAs. They should also list out actions that are required to improve the PAs so as to achieve the WBRV2025.

2. Research and survey: This group represented Biologists, researchers, scientists, sociologists who has lot of experience on the ecology of rhino and other species. As a group their task is to identify new areas for rhino re-introduction within the historical areas of West Bengal with reasons for choosing those areas.

3. Re-introduction / Translocation: This is a group of experts in veterinary science, ecology, PA management, biologists, captive breeding, sociologists and researchers contributed for Rhino studies. As a group their task was to suggest recommendations on actions or requirements for translocation / re-introduction of rhinos to a newly identified area with in WB suitable for rhinos.

4. Mitigation of Human-rhino conflict: They are all managers, educators from Protected Areas of West Bengal. To achieve the vision the state government took initiatives such as re-introduction and strict regulations to improve rhino population in PAs. With increase in population and exceeding carrying capacity, conflict situation may arise. As a result we may have to take care of the straying rhinos by providing safe corridors for them. The group's task was to list out actions that are required to prevent anticipated conflicts.

5. Capacity building: The members are representatives of educators on Rhino conservation education, veterinarians, managers, educators, researchers, ecologists, sociologists, skilled persons & trainers with lot of interest and experience in re-introduction. Their task as a group was to list out various capacity building for rhino conservation required to prevent future problems in PA and Population management and to achieve WBRV2025.

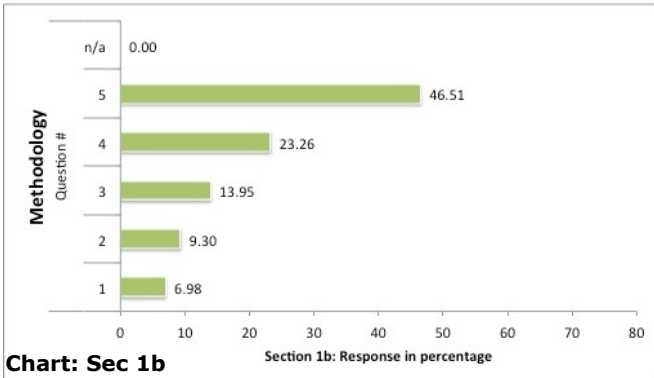
**Workshop evaluation:**

Evaluation during this project was done at two levels. The first evaluation was done during the workshop. This is an inbuilt assessment process which was taught to the participants while assessments were taken. This assessment is for the organisers of the education programme to measure not only the acquisition of facts about rhino species but also attitudes, comprehension, feelings and impact on the behaviour of the participants. To assess acquisition of facts, Brain map was conducted before and after the workshop. The acquisition of facts was measured using the score that each one obtained before and after the workshop.

The second evaluation was about the workshop. A separate evaluation questionnaire was used to evaluate the impact of the workshop. The questionnaire has three sections with 12 questions. The questions mainly focused to assess the workshop content, quality of the teaching tool and workshop design, facilitation, delivery and application of the tool kit.

As per the evaluation the active teaching tool introduced to the participants were new to 69% of the participants while rest of them are familiar with some of the teaching tools (section 1b). Among them (n=46), 72% of the participants said that the teaching tool is most useful and can be fully applied in their state / village (section 1c). When they were asked if this training will help to solve the conflict issue and conserve the rhinos in their state, 34% said the training will definitely help while 30% said it will and 23% said will help to a certain extent (section 1e).

In another section questions were asked to understand the quality of the tool kit produced and used for during this project period. 65% of the participants said the tool kit is very good and very useful while rest responded as appropriate to use or as usable (Section 2a). About the packets they gave the following mixed response. 31% - I love all the items given in the packets; 30% - Packets will be liked by all age group; 13% - Packet items may not

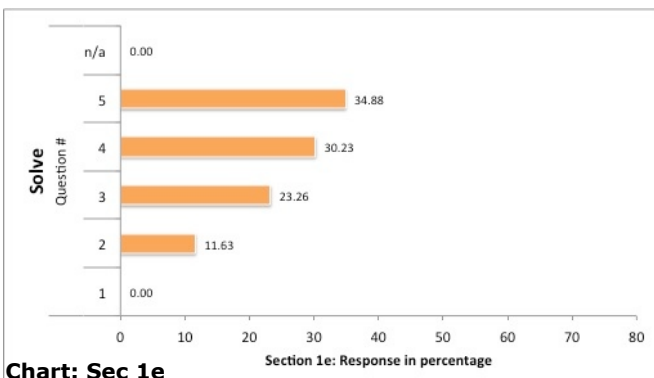
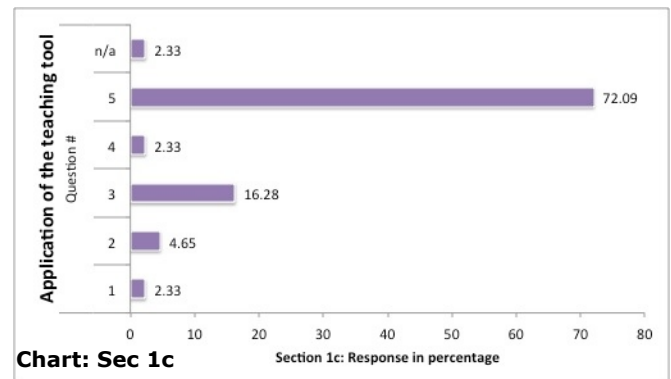


**Sec 1b. Methodology**

1. I am aware of this kind of teaching methods given in this training
2. Most of the teaching methods are known to me
3. Some of the teaching methods are known to me
4. I am aware of one or two teaching methods given in this training
5. This method of teaching is completely new to me

**Sec 1c. Application of the teaching tool**

1. This teaching tool cannot be applied in my State / Village
2. Most of the teaching tools can be applied in my State / Village
3. Some of the teaching tools can be applied in my State / Village
4. A few teaching tools can be applied in my State / Village
5. This teaching tool is most useful and can be fully applied in my State / Village

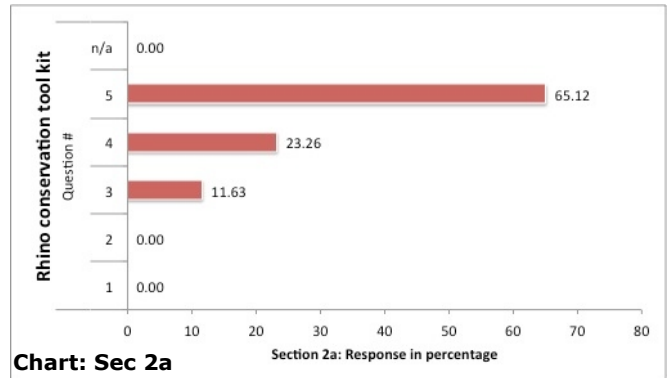


**Sec 1e. Solve**

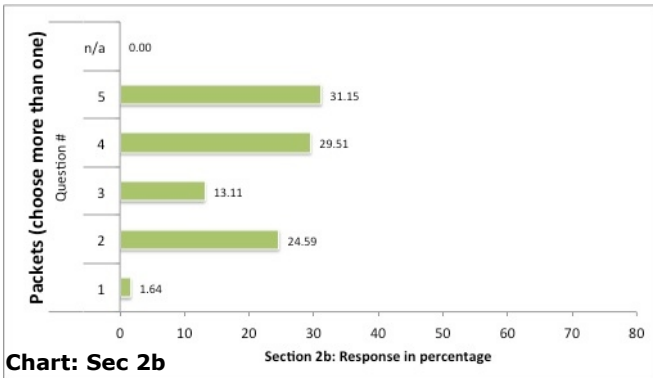
1. This training will not help to conserve Rhino in my State
2. This training may help to conserve Rhino in my State
3. This training will help to a certain extent to Rhino in my State
4. This training will help to conserve Rhino in my State
5. This training will definitely help to conserve Rhino in my State

**Sec 2a. Rhino conservation tool kit**

1. The teaching tool kit is highly technical and not reader friendly
2. The teaching tool kit cannot be used by me but can be used by colleagues
3. The teaching tool kit is just usable
4. The teaching tool kit is appropriate for use to use and teach
5. The teaching tool kit is very good and very useful to teach



**Chart: Sec 2a**



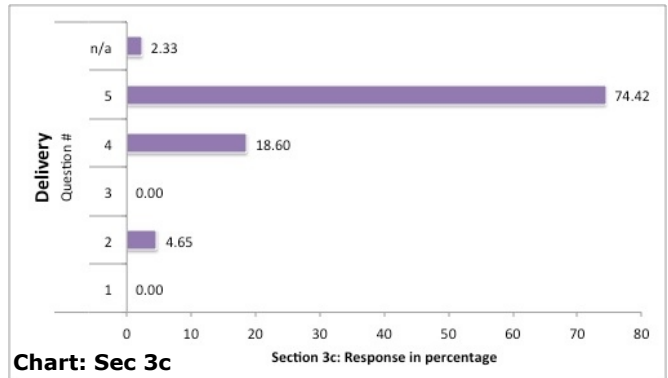
**Chart: Sec 2b**

**Sec 2b. Packet materials**

1. Packet materials are very childish and not a good tool
2. Packet items are very attractive
3. Packets items may not be liked by adults but by children
4. Packets will be liked by all age groups
5. I love all the items given in the packet

**Sec 3c. Delivery**

1. The delivery of the workshop was not satisfactory
2. The delivery of the workshop satisfactory
3. The delivery of the workshop was fair
4. The delivery of the workshop was good
5. The delivery of the workshop was very good



**Chart: Sec 3c**

be liked by adults but by the children; 25% - Packet items are very attractive and 1.6% Packets materials are very childish and not a good tool (Section 2b).

Questions related to delivery and facilitation of the workshops were also asked. Top score in this evaluation was given for delivery of the workshop. About 75% of the participants said that the delivery of the workshop was very good while 2% did not give any reply (Section 3c).

On the whole the entire project was very welcomed and well attended throughout the training and awareness program period. The success of the project is evident from the comments given by the participants and the community e.g. One of the participants said that *the workshop was very interactive, innovative, interesting and really I have gained lot of experience during workshop days. Looking forward to practice such workshop in my forest and forest fringe villages.*

