

Report on Dolphin Yatra in Subansiri River



Report prepared by-

Abdul Wakid, Anumitra Phukan, Manoj Das

Gangetic Dolphin Research and Conservation Initiative, Aaranyak
50, Samanwoy Path, Survey, Beltola, Guwahati-28
Assam, India



Introduction:

The Gangetic dolphin (*Platanista gangetica gangetica*), national aquatic animal of India and state aquatic animal of Assam, is found in the Ganges-Brahmaputra-Meghna and Karnaphuli river system of India, Bangladesh and Nepal (Anderson 1878, Kasuya & Haque 1972, Jones 1982, Mohan 1989, Reeves & Brownell 1989, Shrestha 1989, Reeves et al. 1993). Due to various anthropogenic pressures the distribution and abundance of this species has sharply declined. IUCN upgraded its status from threatened to endangered (IUCN) due to a 50% population decline and because the factors causing the decline (entanglement in fishing gear, diversion of water, pollution and fragmentation of habitat) persist, are not fully understood and irreversible.

One of the principle reasons behind the intentional killing of dolphins is for oil, which is then used in the preparation of catfish *Clupisoma garua* bait (Mohan et al., 1997, Bairagi 1999). Additionally, most villagers in the remote riverine area believe that dolphin oil has medicinal properties and it is used in the treatment of rheumatic disease (Wakid 2006). Extensive use of various types of gill nets in the Brahmaputra River over the last 15 years has resulted in the sharp decline of fish fauna and has likely reduced the amount of dolphin prey (Mohan et al., 1997; Biswas & Baruah, 2000, Wakid & Biswas, 2006). Gill net entanglement of dolphins is also very common; although very small mesh-sized gill nets (current jal) are banned in Assam from 1st May to 15th July, we observed this activity throughout the year. Lack of proper management attention to this important issue has resulted in a severe increase in fishing pressure in the Brahmaputra river system, in turn causing dolphin prey depletion (Wakid, 2009). Since most Gangetic dolphins are found outside protected areas, conservation of this species in the Brahmaputra river system depends entirely on the support of the community residing in and around existing dolphin habitats. Current awareness levels within these communities are not sufficient to protect the species; a mass community engagement and awareness campaign is needed in the riverside villages, particularly those of fishermen in Assam. Observing this need, we, the Gangetic Dolphin Research and Conservation Initiative (GDRCI) of Aaranyak started in 2012 a specially designed boat based community awareness campaign among the river side communities in Brahmaputra river system, which we coined as 'Dolphin Yatra'. In 2014, the Dolphin Yatra was first conducted in Kulsi River (reported in the previous progress report). In this Report, we are describing Dolphin Yatra conducted in Subansiri River on 1st to 7th March, 2014.

The Subansiri River:

Subansiri River is the largest tributary of the Brahmaputra River. It is 443km in length, and originates at Purum peak (5059 m) in Tibet, where it is known as Lokong Su. From its origin the river crosses about 143 km of Tibet before entering into Arunachal Pradesh, India. It passes through about 190 km of Arunachal Pradesh and finally enters Assam near Garukamukh in Lakhimpur district. At Sawoldhuwa ghat, which is about 10 km downstream of Garukamukh, the Subansiri crosses National Highway No. 37. The river finally discharges into the Brahmaputra at Jamuguri ghat, which is about 100 km downstream from Sawoldhuwa ghat.

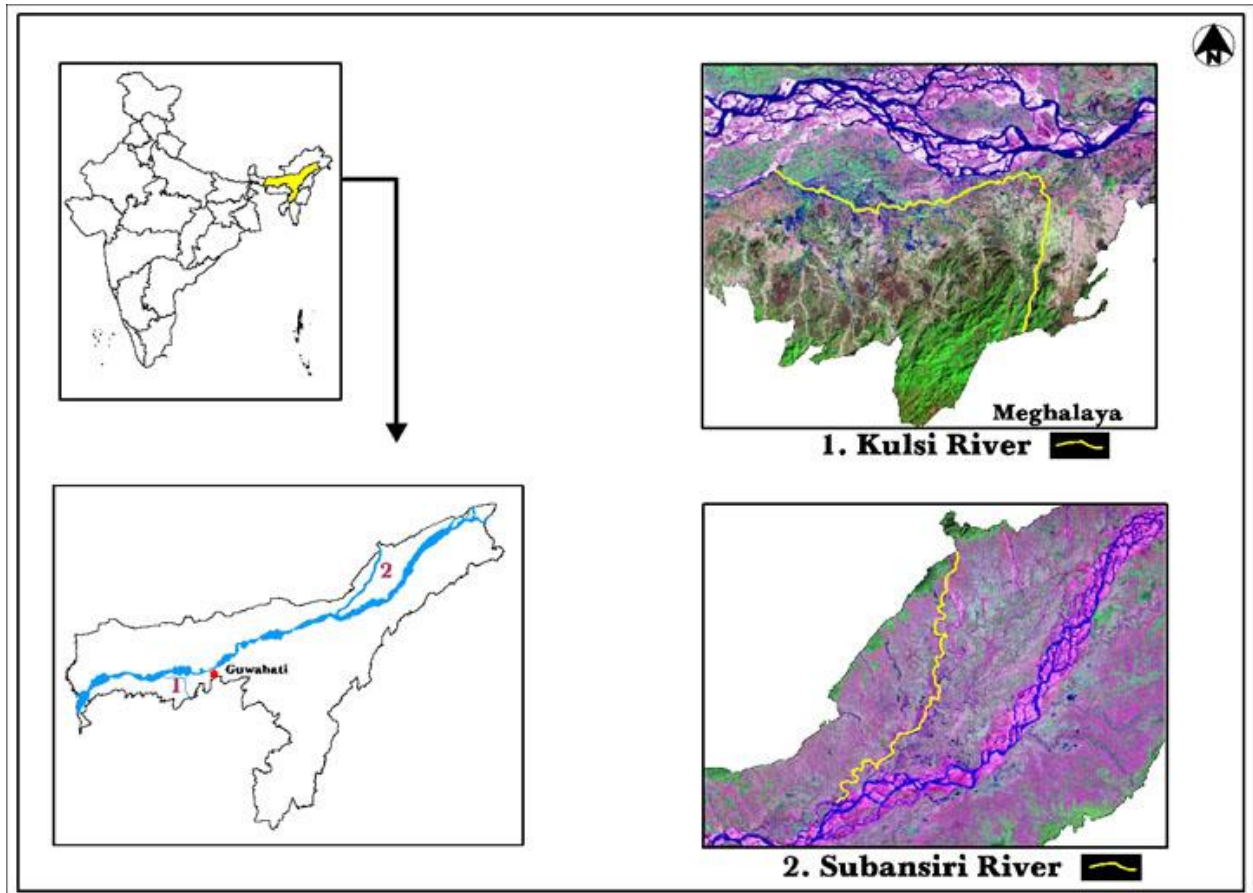


Fig-1: Location map of Subansiri River

Dolphin Yatra method:

Community awareness campaign in Subansiri River was conducted from 1st to 7th March, 2014 in the bank of the river of Lakhimpur district. The method was same as followed during Kulsiri Dolphin Yatra in February, 2014 (reported in the previous half yearly progress report). A 7-member trained education team performed the entire awareness campaign. The performing sites were identified based on the dolphin survey results in 2012-13. The team conducted talks through poster presentation and performing drama on dolphin and river ecosystem conservation. Following tools were used (showed in previous half yearly report) during this awareness campaign:

- (a) **Booklet:** This contained general information about dolphins with detailed illustrations in Assamese language.

- (b) **Poster:** A pictorial poster was prepared showing two contrasting situations for the river dolphin. The first illustration depicted an ideal dolphin habitat with a healthy aquatic ecosystem, the second a disturbed dolphin habitat and threats to their survival.
- (c) **Leaflet:** One leaflet was prepared with a general description of Gangetic dolphin and an appeal to the community for its conservation.
- (d) **Drama:** Drama was prepared, focusing on the threats to and causes of dolphin population decline in the Brahmaputra river system. A team of six drama artists participated in this street drama.

Before and after the awareness campaign the team conducted questioner survey among the audiences to understand the dolphin and river ecosystem conservation awareness level among the participating audiences and performance of the awareness campaign.

Results and Discussion:

This phase of Dolphin Yatra was conducted in total 7 days. Total 22 awareness campaigns were conducted in 22 river side villages of Subansiri River. Total 3260 river side people participated in this awareness campaign, out of which there were 1685 were students. Total 2890 education materials (booklets, poster, leaflet) were distributed among the participated audiences. Total 176 people participated in the questioner survey and total 352 questioner forms were filled up during the whole Dolphin Yatra. A few Dolphin Yatra activities in different sites of Subansiri River are as follows:



Fig-2: Dolphin Yatra at 2 No. Dohghoria



Fig-3: Dolphin Yatra at Alisiga



Fig-4: Questioner fill up before the awareness programme



Fig-5: Dolphin Yatra at Bodoti



Fig-6: Dolphin Yatra at Bordubi sanag



Fig-7: Dolphin Yatra at Chenimora Bholukaguri



Fig-8: Dolphin Yatra at Jugalpur



Fig-9: Student awareness campaign during Dolphin Yatra at Katoi sapor



Fig-10: Dolphin Yatra at Mohghuli chuck



Fig-11: Students with education materials during Dolphin Yatra

Evaluation results of the awareness campaign were as follows:

1. What is Gangetic dolphin?

Before presentation 71.59 % respondents knew the correct answer while after presentation 92.17% respondents knew that.

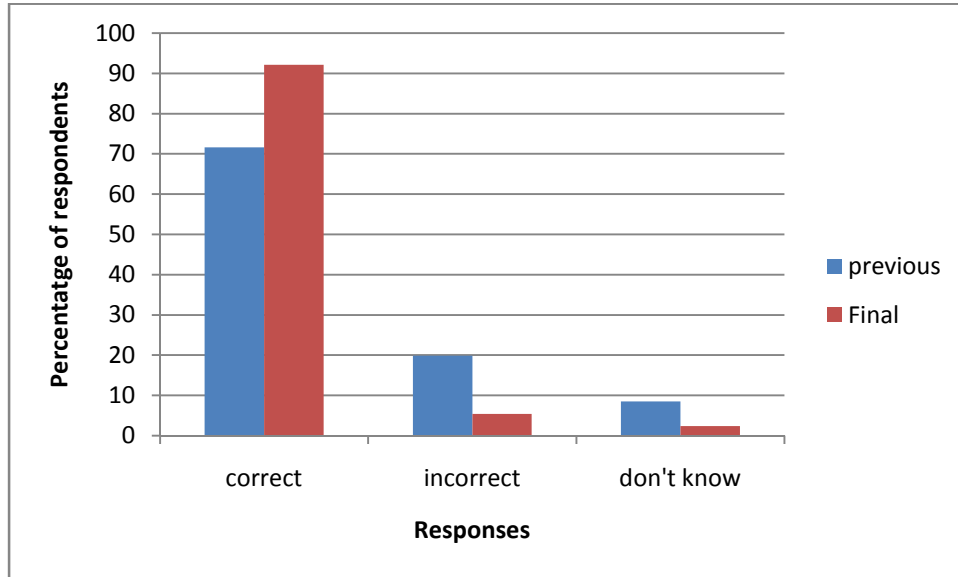


Fig. 1 Response regarding “What is Gangetic dolphin?”

2. How many river dolphins are in Assam?

Before presentation only 13.07% respondents gave the correct answer while after presentation 37.95% respondent gave the correct answer.

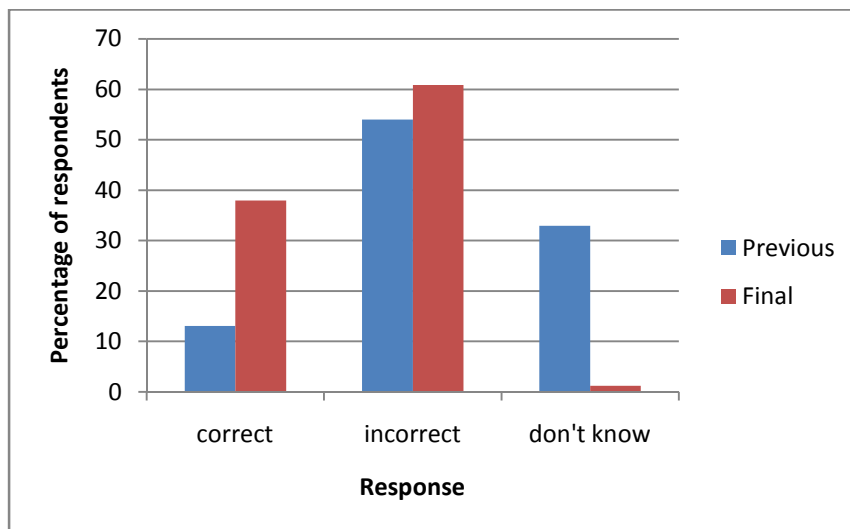


Fig.2 Response regarding “How many River dolphins are there in the world”

3. Which River dolphin gone extinct from the world?

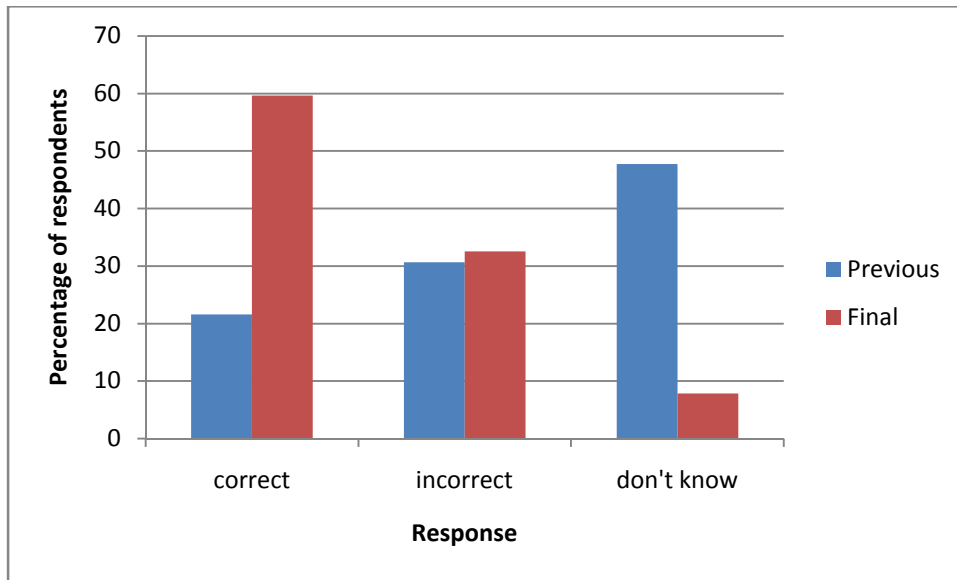


Fig. 3 Response regarding "What River dolphin has gone extinct?"

4. What is the scientific name of Gangetic dolphin?

21.59% respondents knew the correct answer before presentation while 75.9% respondents gave correct answer afterwards.

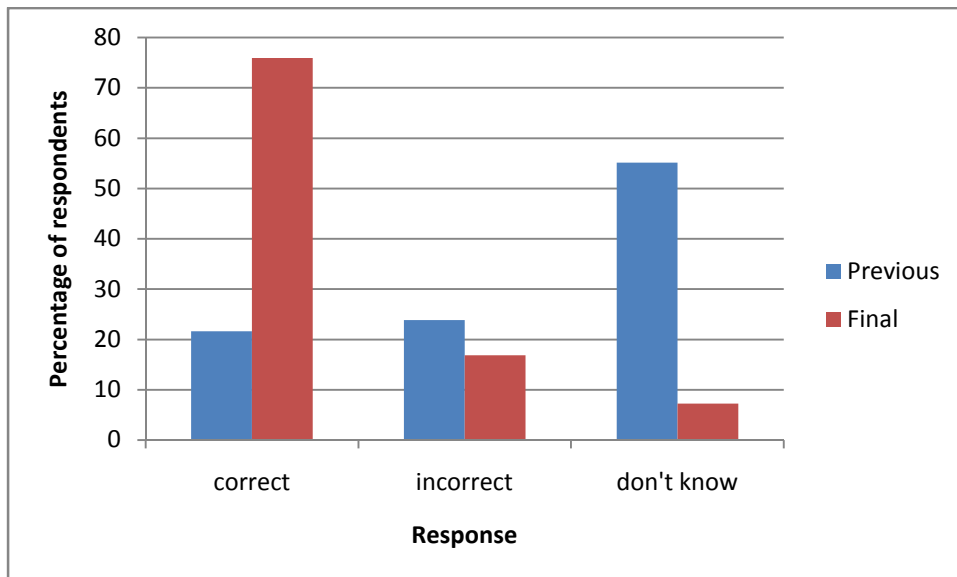


Fig.4 Response regarding "Scientific name Gangetic dolphins"

5. What is the English name of “Hihu”

27.27% respondents gave correct answer before presentation while 56% respondents gave correct answer afterwards.

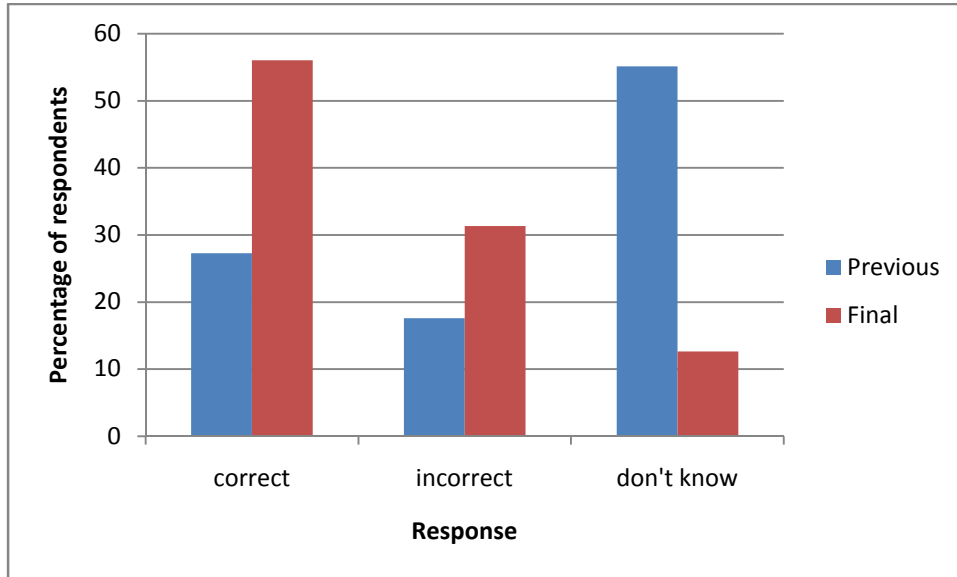


Fig.5 Response regarding English name of “Hihu”

6. In which river system Gangetic dolphin are found?

42.05% respondents gave correct answer before presentation while 55.42% respondents gave correct answer afterwards.

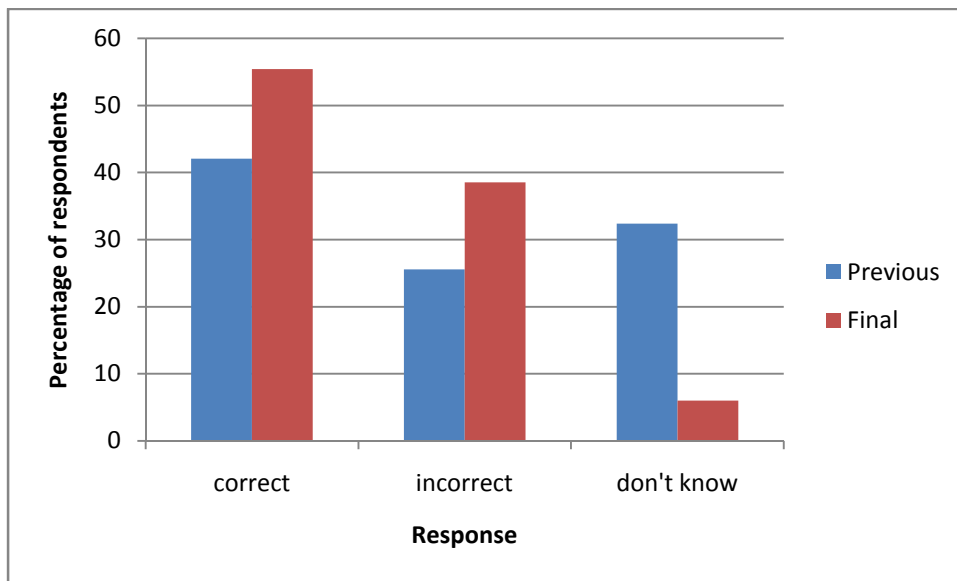


Fig.6 Response regarding “In which river system Gangetic dolphins are found?”

7. Who discovered Gangetic dolphin?

44.88% respondents gave correct answer before the presentation while 80.12% respondents gave correct answer afterwards.

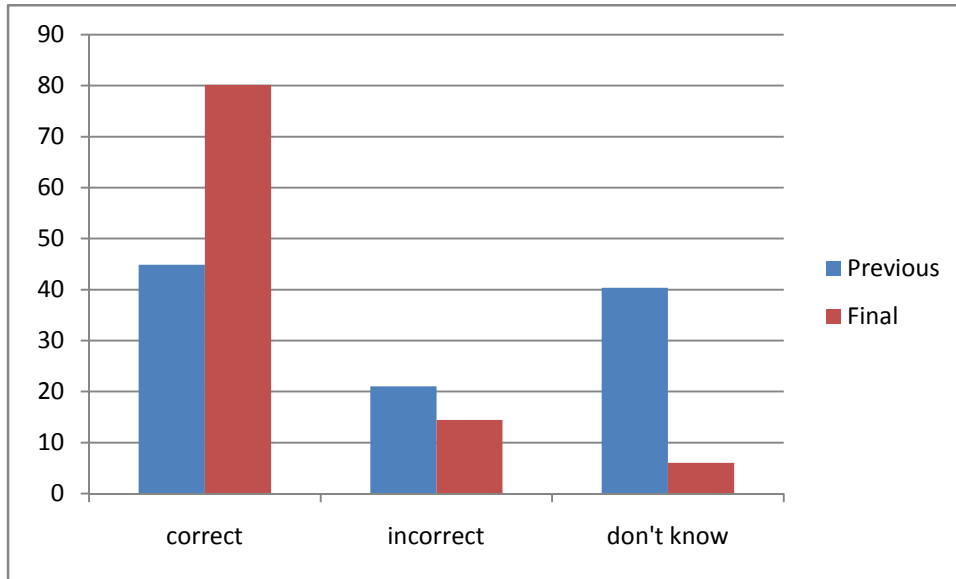


Fig.7 Response regarding “who discovered Gangetic dolphins?”

8. In which year Ganges dolphin is discovered

42.61% respondents before the presentation gave the correct answer while 88.55% respondents gave correct answer afterwards.

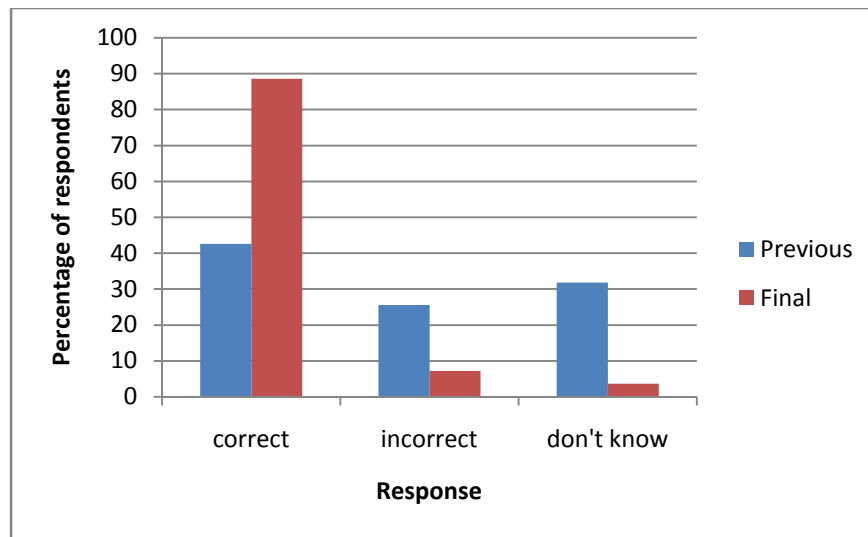


Fig.8 Response regarding “In which year Gangetic dolphin is discovered?”

9. Which animal is compared with Gangetic dolphin in terms of ecological importance:

23.86% respondents before presentation gave the correct answer before the presentation while 83.73% respondents gave the correct answer afterwards.

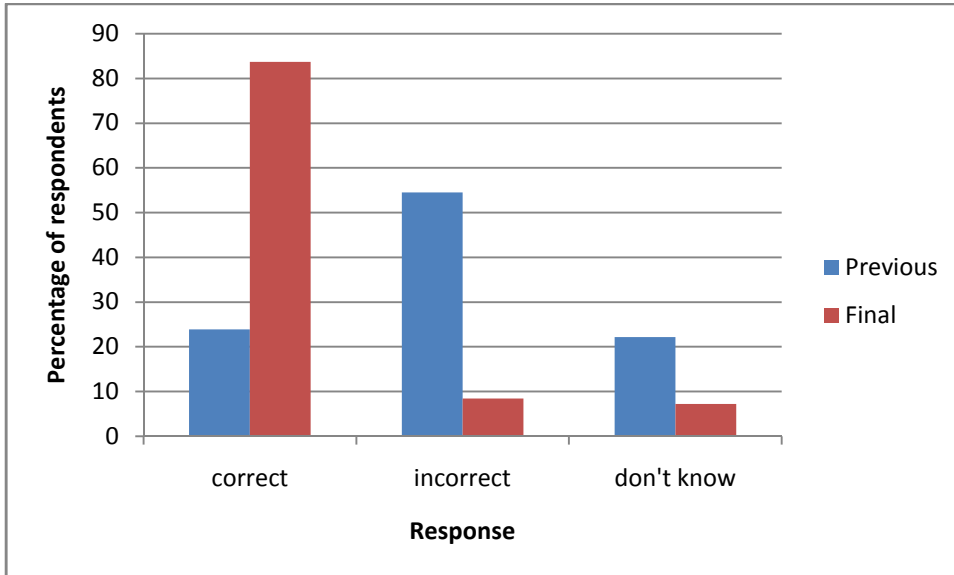


Fig.9 Response regarding “which animal is compared with Gangetic dolphins according to similarity in ecological importance”

10. According to IUCN Gangetic dolphin is listed under which category?

16.47% respondents gave correct answer before the presentation while 21.69% respondents gave correct answer afterwards.

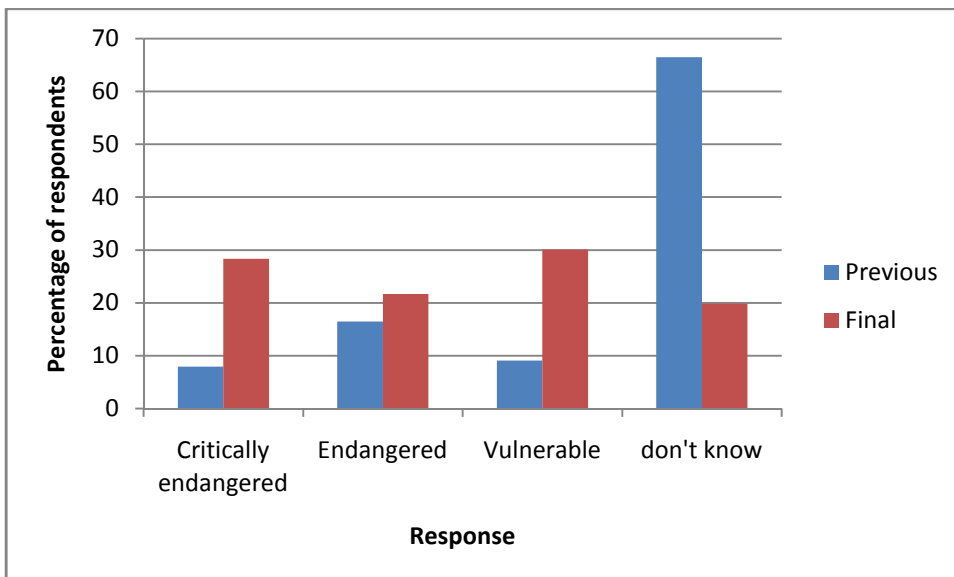


Fig.10 Response regarding “the status of Gangetic dolphin according to IUCN”

11. Ganges dolphin is national aquatic animal of India

35.79% respondents knew that Gangetic dolphin is a national aquatic animal before presentation while 48.79% respondents knew that afterwards.

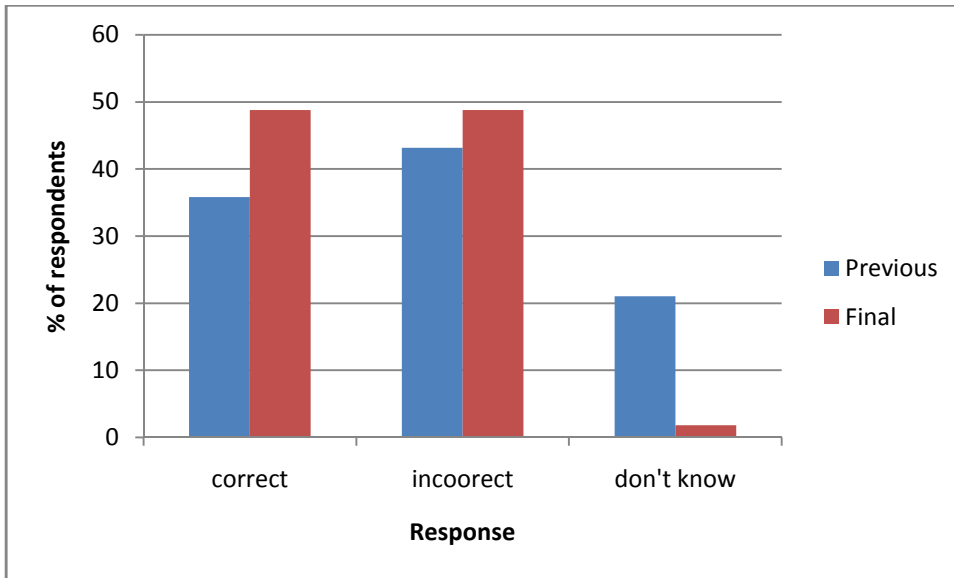


Fig. 10 Response regarding people's awareness about Gangetic dolphin as national aquatic animal

12. In which year Assam Government declared Ganges dolphin as state aquatic animal?

44.89% respondents gave correct answer before presentation while 83.73% respondents gave correct answer afterwards.

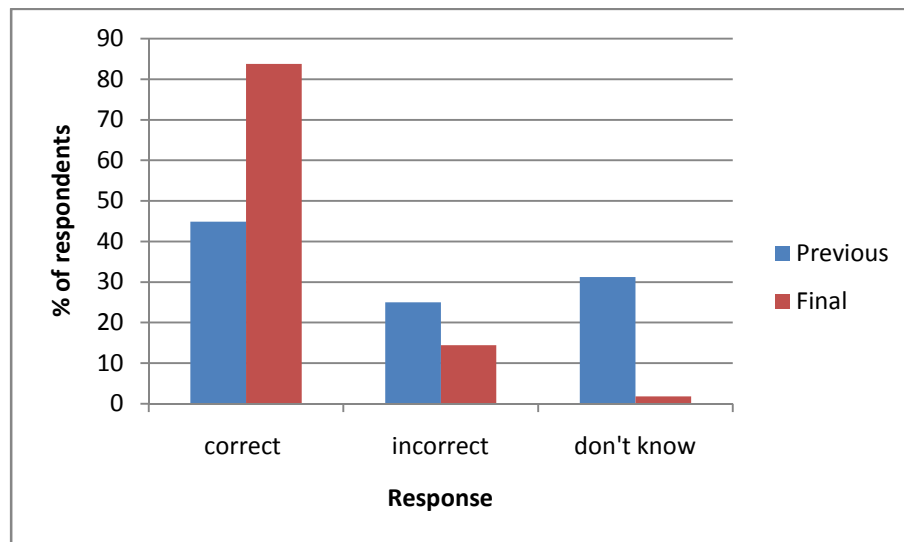


Fig.11 Response regarding "In which year Assam government declared Gangetic dolphin as state aquatic animal"

13. Indian wildlife protection act included Ganges dolphin as schedule 1 species

28.97% respondents gave correct answer before the presentation while 84.34% respondents gave correct answer afterwards.

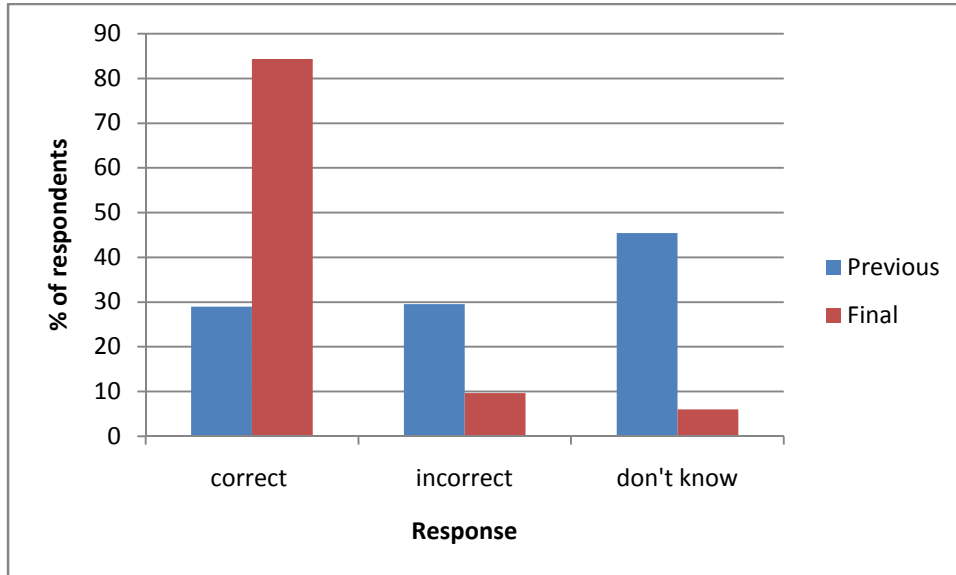


Fig.12 Response regarding status of Gangetic dolphins according to wildlife protection act

14. Punishment for killing Ganges dolphin

28.41% respondents knew that there is punishment for killing Gangetic dolphins while 84.34 % respondents gave the correct answer after the presentation.

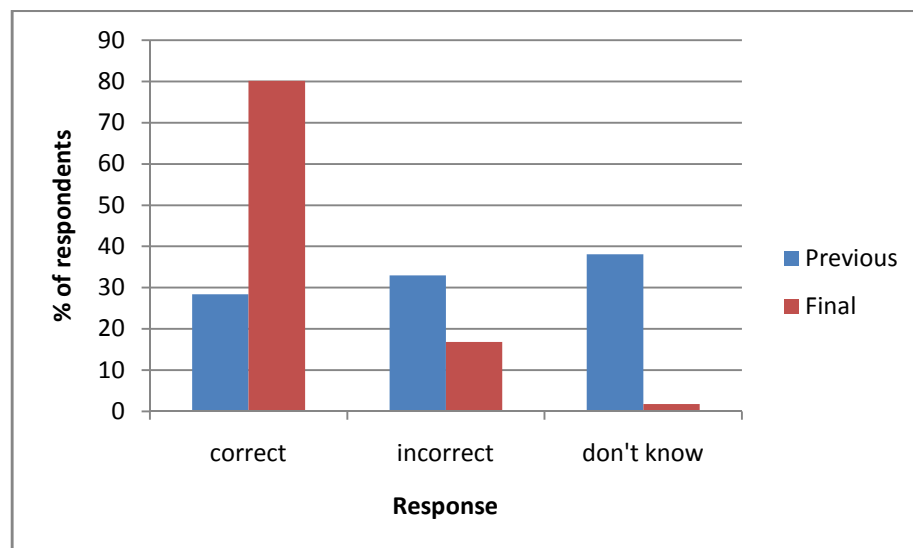


Fig. 13 Response regarding the punishment for killing Gangetic dolphins

15. What is the population of Ganges river dolphin in the world?

25.57% respondents gave the correct answer before the presentation while 66.27 % respondents gave correct answer afterwards.

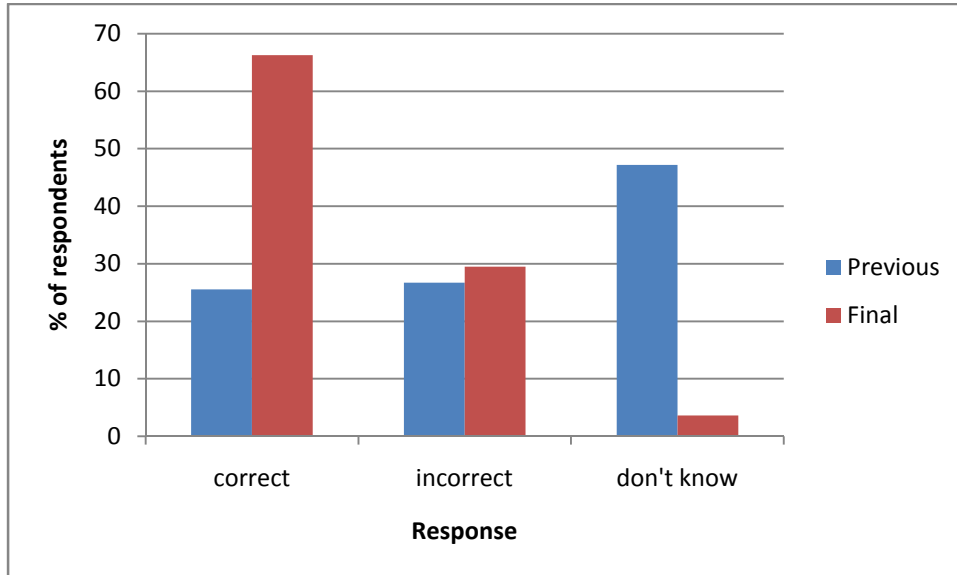


Fig.14 Response regarding the population of Gangetic dolphins

16. What is the lifespan of Ganges river dolphin

34.66% respondents gave the correct answer before the presentation while 79.52% respondents gave the correct answer afterwards.

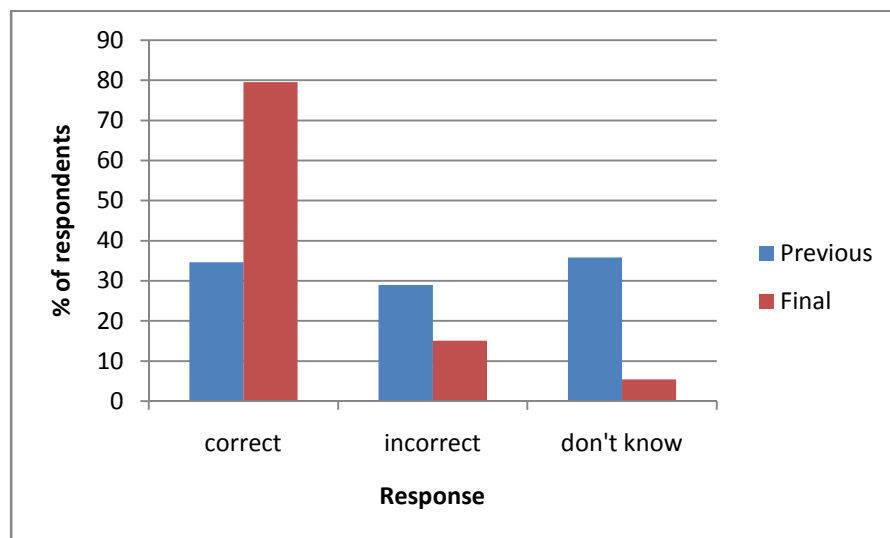


Fig.15 Response regarding the lifespan of Gangetic dolphins

17. What type of animal a Ganges dolphin is?

46.02% respondents gave the correct answer before the presentation while 88.55% respondents gave the correct answer afterwards.

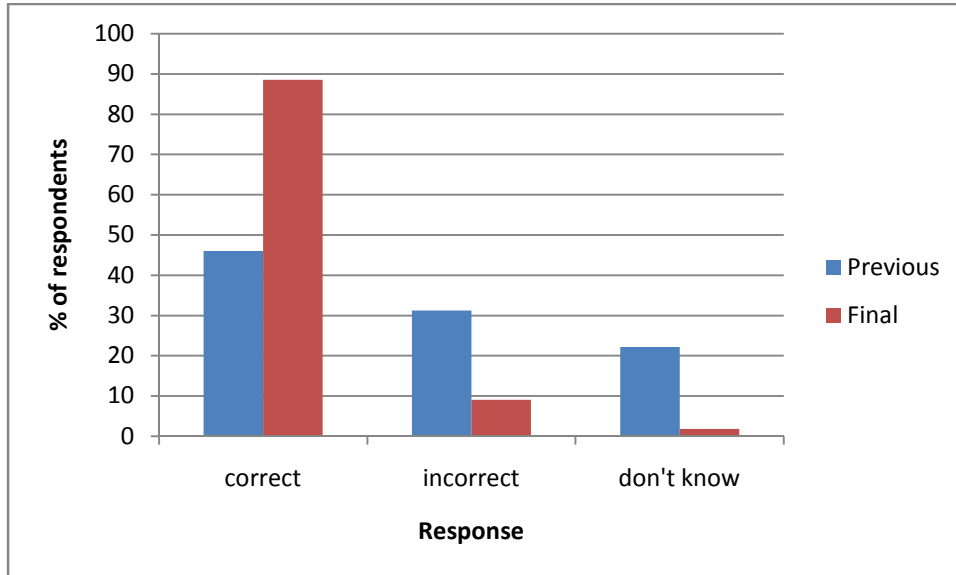


Fig.16 Response regarding “what type of animal a Gangetic dolphin is?”

18. Ganges dolphin can't breathe inside water

44.32% respondents gave the correct answer before the presentation while 89.76% respondents gave the correct answer afterwards

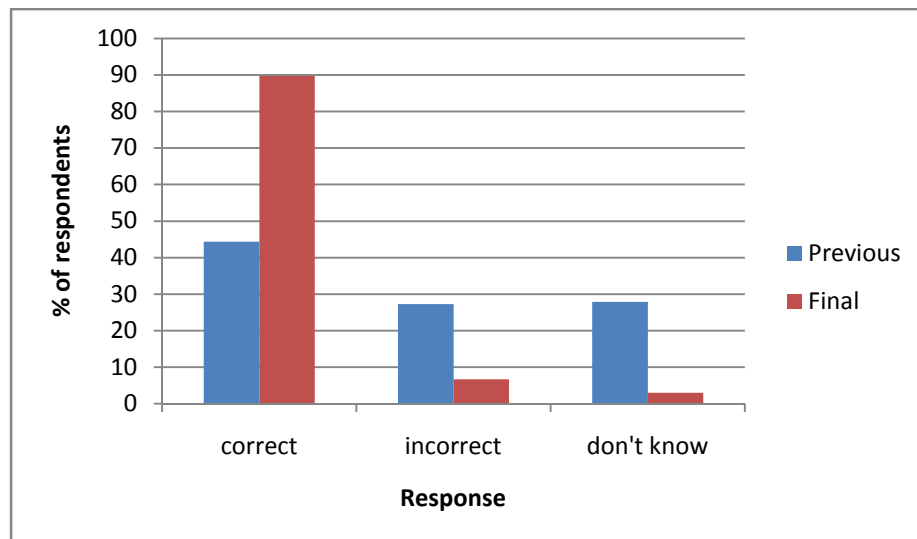


Fig.17 Response regarding “Do the Gangetic dolphins can breath inside water?”

19. Ganges dolphin can't see inside the water:

43.75% respondents gave the correct answer before the presentation while 95.78% respondents gave the correct answer afterwards.

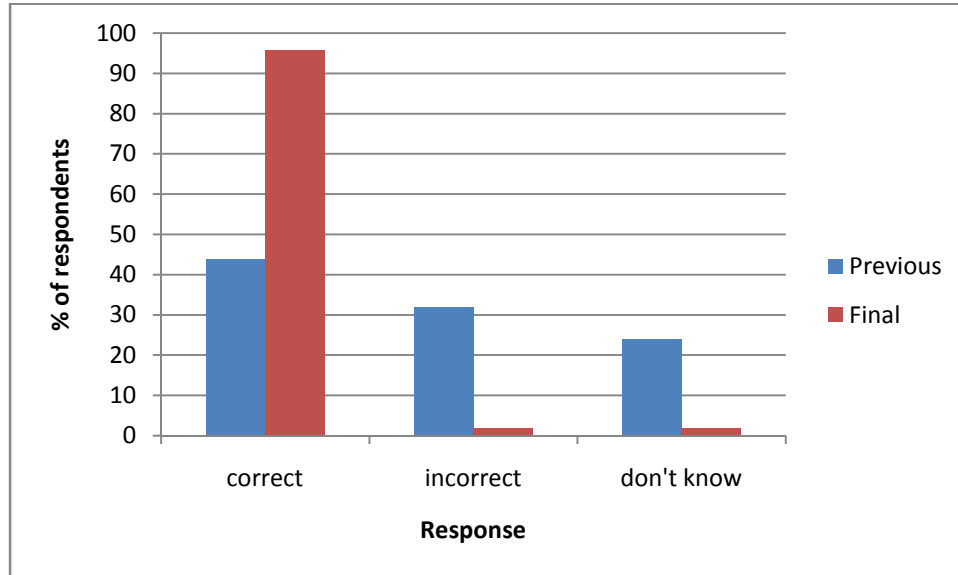


Fig.18 Response regarding “Do the Gangetic dolphins can see inside water?”

20. Echolocation of Ganges dolphin is similar to which animal?

51.14% respondents gave the correct answer before the presentation while 87.35% respondents gave the correct answer afterwards.

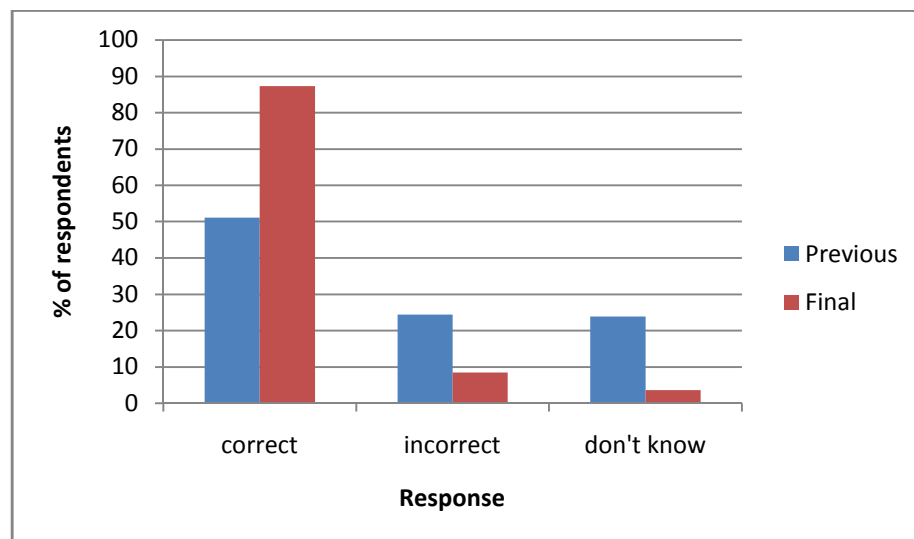


Fig. 19 Response regarding “Echolocation of Gangetic dolphins is similar to which animal?”

A Wilcoxon signed ranked test showed that people's responses during questionnaire survey before the awareness campaign were significantly different from post campaign questionnaire survey ($Z=-3.92$, $p = 0.001$). After presentation the respondents showed more knowledge on the Gangetic dolphins and its conservation status.

97% respondents said that the awareness program was good while rest gave no comment. 80.72% respondents said that there were no previous such awareness programmes in their areas. 91.56% respondents said that they understood well from the poster presentation, 7.83% respondents said that they understood a little. 95.2% said that the poster presentation were very good, whereas 91% respondents said the drama was very good. 90.36% respondents said the performance of the actors were very good.

Conclusion:

Entertainment education, such as theater performances and puppet shows, is effective because it links directly to the daily life of local communities (Papa *et al.* 2000). In addition, posters, murals and billboards are cheap and effective ways of disseminating information to rural communities (Tambasheet *al.* 2003; Trewhella *et al.* 2005). Our survey results supported these statements, with awareness of river dolphins, their threats and conservation increasing as a result of the Dolphin Yatra. Our campaign was well received by audiences and the educational team's overall performance was rated as "good" by 92% of respondents. Drama was appreciated too.

In case of Subansiri, also we observed a positive effect of poster presentation on respondents' awareness about Gangetic dolphins and its conservation status. The respondents were giving more correct answers after participating in drama performance and presentation ($Z=-3.92$, $p = 0.001$). Total participated audiences for poster presentation were 2240 and for drama presentation were 3260. Among the total audiences number 1685 were students. Getting such a huge mass for presenting our programs was also a great achievement of the education team.

To maintain the continuity of peoples support to the cause of river dolphin and river ecosystem conservation, such awareness programmes through Dolphin Yatra should be conducted regularly.