GANGES RIVER DOLPHIN OIL BAIT FISHERY IN THE RIVER BRAHMAPUTRA AND INTRODUCTION OF CRUDE SHARK LIVER OIL AS A SUBSTITUTE

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The oil of Ganges River Dolphin (*Platanista gangetica*) is used for the preparation of a bait for the schilbeid fish *Clupisoma garua* which is commonly known as 'neria' in Assam or 'garua' in Bihar. The fishery is prevelant in Ganges between Bhagalpur and Sahibgunj (Motwani & Srivastava, 1960; Mohan, 1996a, b; Mohan & Kunhi, 1996). But very little information is available on the dolphin oil bait fishery of Brahmaputra which varies from the dolphin oil fishery of the Ganges River.

The demand for the river dolphin oil is one of the main reasons for the depletion of river dolphin population (Mohan *et al*, 1993; Mohan 1996a, b). The introduction of the crude shark liver oil as an alternative to the dolphin oil for the preparation of bait may reduce the pressure on the river dolphins. Experiments were conducted in the fishing villages Dhubri and Goalpara in lower Assam between April 1994 and April 1996 and it was observed that in Brahmaputra River also shark liver oil could be used in place of dolphin oil.

Dolphin oil fishing in Brahmaputra River

Fishing (luring) of schilbeid fish *Clupisoma garua* in Brahmaputra River is carried out with dolphin oil by the 'Bin' fishermen who migrated to Assam from Bihar a few decades back.

The fishery in Brahmaputra River is different from that of Ganges, where the fishes are attracted by the lure in two stages and caught by a net (Mohan & Kunhi, 1996). The bait prepared in Brahmaputra is by roasting the poultry waste and goat intestine along with a few pieces of charred bamboo for buoyancy. To this mixture about 50-75g of dolphin oil is added. Two or three pieces of dolphin meat are suspended from the boat from a short pole to attract the fishes (Fig. 1). The boat is kept stationary with the help of a rudder at a depth of 4-7 metres and the bait is sprinkled in the river.

Lured by the bait, the fishes come close to the boat. Hook and lines with long bamboo poles of length 2-5m are used for fishing. The line and the hooks are also soaked with dolphin oil. Fishermen often use two lines, one in each hand, with great skill and dexterity.

During the study, fishing was observed to be mono-specific and the larger fishes of *C. garua* of size between 10-20 cm only were caught. On a good fishing day 10-15kgs of fishes were obtained in a single operation lasting two hours. The fishery was slightly different in Goalpara, a fishing village 80km upstream from Dhubri. Short bamboo poles of length 0.75 cm were used here for fishing as the river was shallow.

Fishery

During the study altogether about 40 units/month were seen engaged in fishery. In lower Assam, Dhubri has the maximum number of units. The following numbers of dolphin oil fishing units were operating in Assam. Fishing units operating in each centre are given with their numbers in paranthesis: Manka Char (3); South Salmara (2); Singmari (2); Fakirganj (3); Dhubri (7); Gauripur (3); Chunari (3); Kharmaza (2); Bagri Mari (3); Bilaspara (2); Jogipara (2); Nagerbera (3); Palasbari (2); Guwahati (2)

The 'Bin' fishermen are usually dispersed in small fishing villages of lower Assam and migrate up to Tezpur during December to April.

Shark liver oil as an alternative to dolphin oil

The experiments conducted at Kahalgoan (Bihar) in Ganges have earlier demonstrated that the shark liver oil and Sardine oil could be used for the preparation of bait for *C. garua.* (Mohan & Kunhi, 1996).

Trials conducted at Dhubri and Goalpara also confirmed the suitability of shark liver oil in the place of dolphin oil for the preparation of the bait. Six units were selected for the experiment. Three units were given 1 kg. of crude shark liver oil each and another three were given 1kg. of dolphin oil each for fishing. Fishermen were not informed of the name of the oils given to

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Table: 1. Results of dolphin oil and shark liver oil in Dhubri (Assam) for catching fishes.

	Dolphin oil			Crude Shark liver oil		
Experiment number	**1**	**2**	**3**	**4**	**5**	**6**
Oil used (kg)	1	1	1	1	1	1
No. of fishes obtained/hr.	30	21	22	42	32	38
Average weight of the fishes obtained (g)	45	50	55	50	45	55
Length of fishes (cm)	15-32	15-34	18-35	15-30	12-32	12-35
Cost of 1kg of oil (Rs.)	70	70	70	25	25	25

them.

Fishing was conducted from 1130 to 1230 in Dhubri on 28.10.94 at a depth of 4-7m . The results were encouraging. The fishermen with shark liver oil obtained 42, 32 and 38 numbers of C. *garua* in one hour where as the units with dolphin oil could get 30, 21 and 22 numbers of the fishes (Table 1).

Follow-up action

As the trials with shark liver oil was found to be successful, about 200 kg of shark liver oil was distributed at a rate ofRs. 25/ kg. to the fishermen of South Salmara, Dhubri and Goalpura in Assam. The feed back received indicated that the fishermen got about 6 kg. of fish for every 1 kg. of shark liver oil as compared to 4-5 kg. of fish got using river dolphin oil (Table 1). Ganges River Dolphin is included in the Schedule I of Indian Wildlife Protection Act (1972). It is illegal to use the dolphin oil for fishery. The Act prohibits use of any part of the animals mentioned under Schedule I. The river dolphin protection committees are creating awareness among the fishermen, not to use dolphin oil but to use other oils such as shark liver oil or rape-seed oil. (Mohan, 1996c, 1996d).

Conclusion

If the shark liver oil can be provided to the fishermen of Ganga and Brahmaputra rivers for the preparation of bait, they will not use dolphin oil. Further they cannot complain that their livelihood is affected if the use of dolphin oil for fishing is stopped. It is time that very strong action is taken to protect the river dolphins before it is too late.

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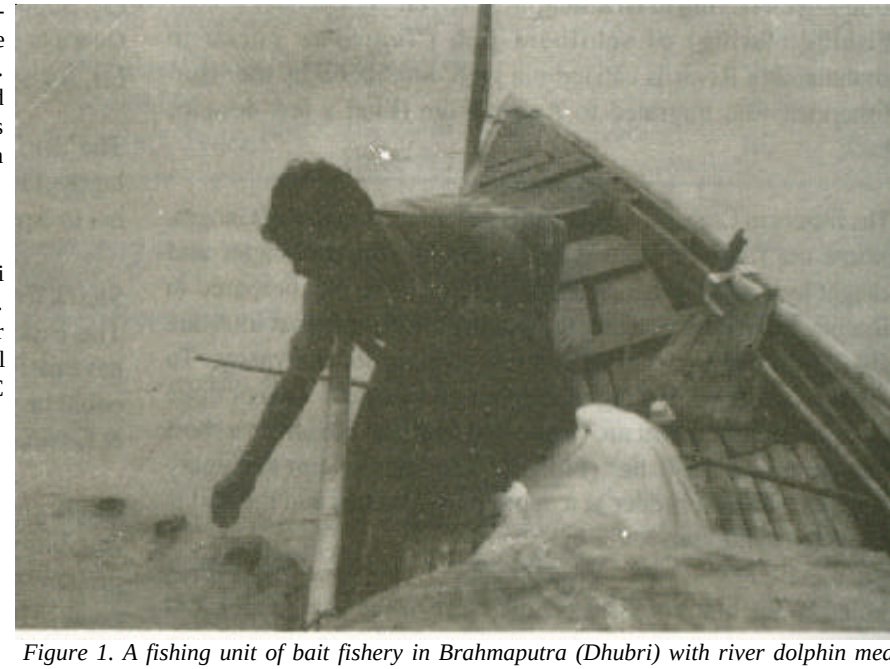

Figure 1. A fishing unit of bait fishery in Brahmaputra (Dhubri) with river dolphin meat tied to a pole.... a fisherman sprinkling the bait.