



Annual Progress Report – Summary

Project Title: Rangewide Estimation of River Dolphins

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Researchers:

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Objectives:

1. Range-wide estimation of River dolphin population in its ranges
2. Estimation of the associated fauna in the river dolphin ranges
3. Assessment of Water quality and pollution in the river dolphin habitat

Progress during the year

Preparation and publication of standardized multilingual field guide on “Monitoring Ganges and Indus River dolphin, Associated aquatic fauna and habitat”

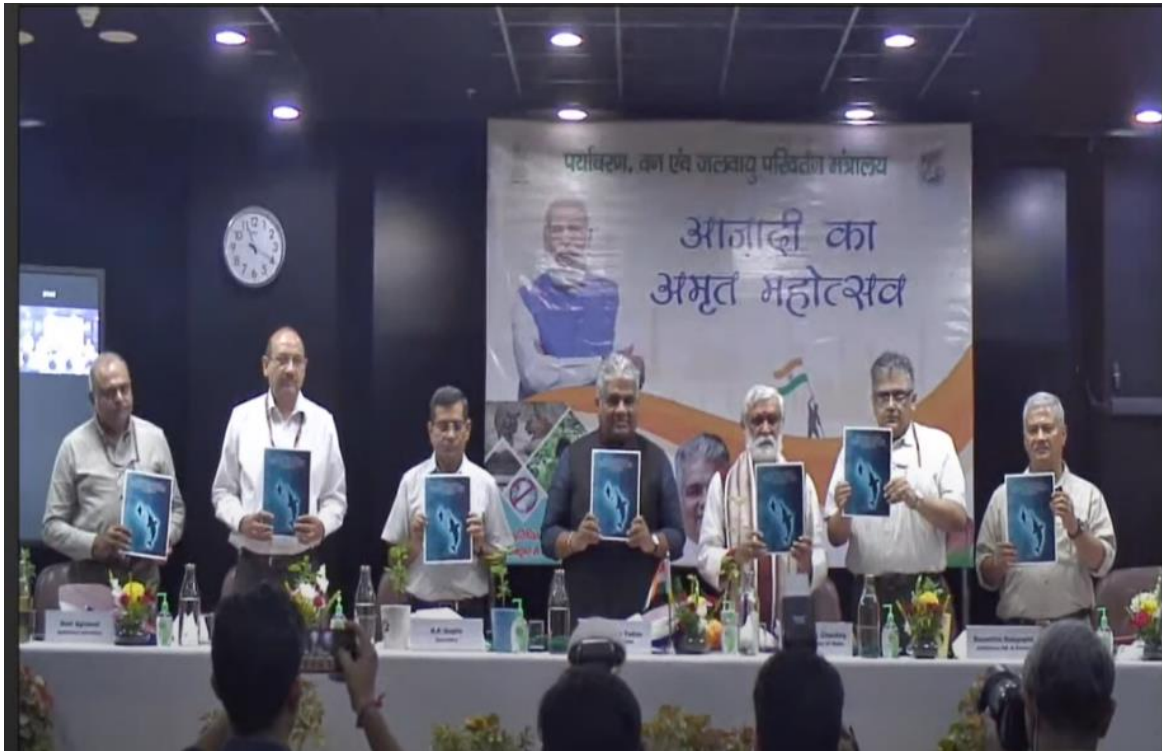


Figure 1: Inauguration of Monitoring protocol on the occasion of MOEF&CC's 'Iconic Week' of Azadi ka Amrit Mahotsav & 'Wildlife Week' celebrations, Environment Minister Shri Yadav and Environment Minister for states Shri Ashwini Kumar Choubey ji launched the field guide for the “Monitoring Ganges And Indus River Dolphins, Associated Aquatic Fauna And Habitat”

Rangewide Estimation of River Dolphins (Effort)

- Current distribution of river dolphins
- Seasonal Presence
- Dolphin extinct rivers
- Protected Area
- Riverine Districts
- States of survey
- Barrages and Dams
- International Boundary

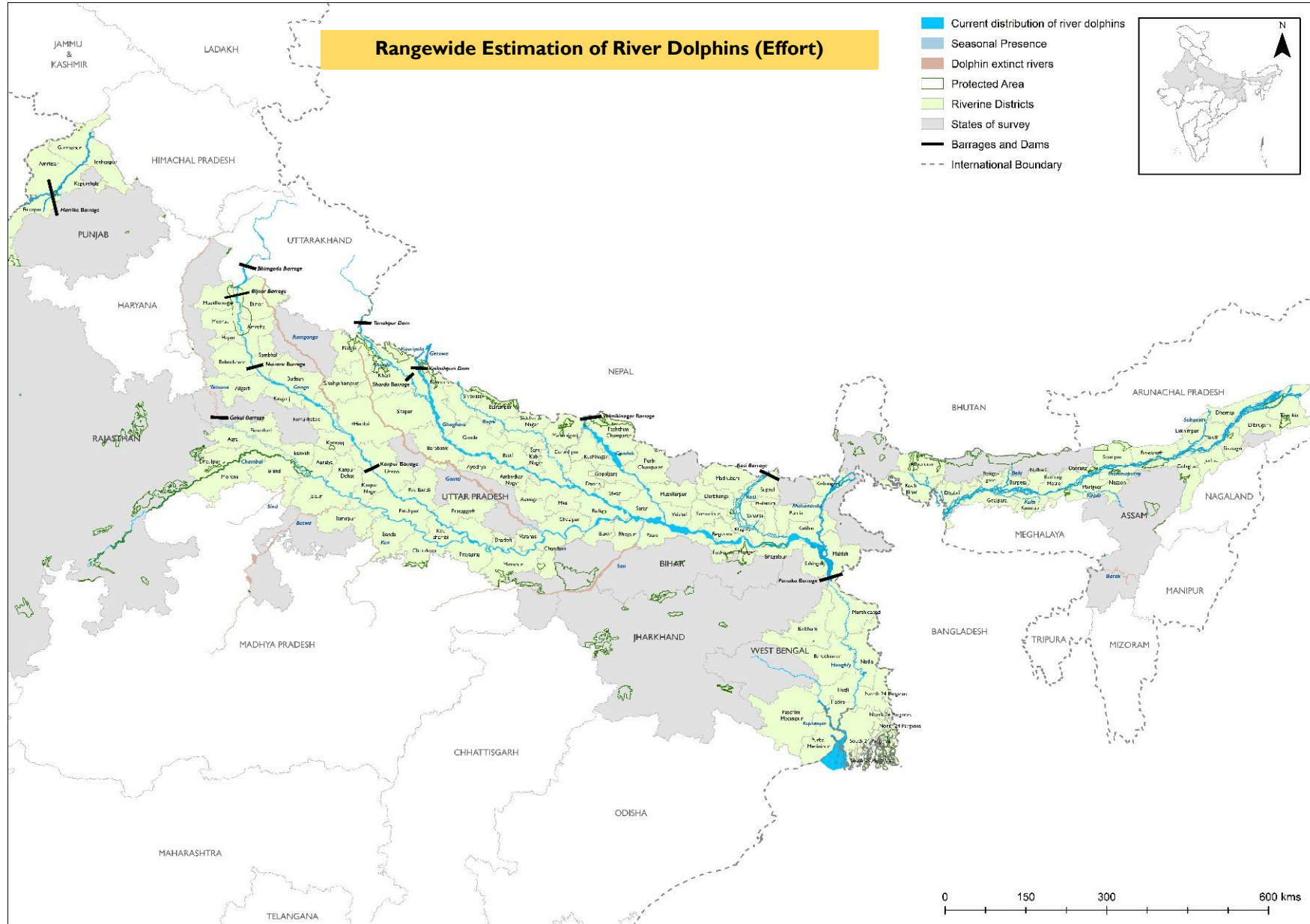
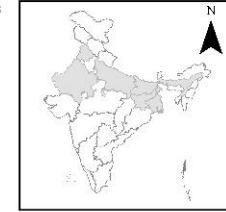




Figure 2: Cover Page of Field guides in different Language

Range-wide River dolphin estimation was carried out in 8 states of River dolphin ranges namely Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Rajasthan, Assam and West Bengal and for Indus River dolphin in Punjab (Table 1, Fig 1)

Table 1: Total effort (River wise)

River	Stretch	Distance surveyed (In Km)
Ganga	Bijnor- Narora	183
	Narora-Kanpur	365
	Kanpur -Vindychal	378
	Vindyachal - Chausa	260
	Chausa – Manihari	546
	Manihari- Rajmahal	59
	Rajmahal -Farakka Barrage	41
	Farakka Barrage-Dimond harbour	483
	Diamond Harbour-Ganga Sagar	39
	Farakka Barrage- Nimtita (India-Bangladesh border)	21
Chambal	Nagar- Panchnada	242
Sharada	Naujhala naktaha mayapurighat (Lagabhaga)- Sharda-Ghagra confluence (Srirampurva)	246
Yamuna	Yamuna setu (Etawah)-Sangam (prayagraj)	536
Rapti	Rapti Barrage-Rapti-Ghaghra Confluence	532
Geruwa	Amba- Kailashpur Dam	17
Kaudiyala	Kauriala ghat - Kauriala - Girwa confluence	13

River	Stretch	Distance surveyed (In Km)
Ghaghara	Kailashpuri Dam- Revalganj	626
Gandak	Valkiminagar Barrage to Gandak-Ganga Confluence	317
Mahananda	Haptia Bridge to Rajmahal	187
Kosi	Kosi Barrage (near Indo-Nepal border) - Kosi-Ganga confluence (Kursela)	242
Rupnarayan	Bandar-Gadiara	79
Mundeswari	Gorurghat - Bakshi	7
Bakshi canal	Shaifon - Bakshi	6
Shilawati	Ghatal - Bandar	6
Dwarakeshwar	Singhapur - Bandar	4
Torsa	Purba Kathalbari-Jhaljhali	55
Kaljani	Bhuchunjhari-Deucharua	21
Churni	Ranaghat - Mangaldeep	10
Haldi	Teropakhyaghat-Haldia	19
Sunderbans	Sunderbans tiger reserve and Sunderbans biosphere reserve	1524
	Ganga	7064
Brahmaputra	Bhupen Hazarika Setu-Hatsingimari (India-Bangladesh border)	885
Subansri	Chauldhowaghat - Jamagurighat	91
Kulsi	Kukurmara - Nagarbera	61
Beki	Beki road bridge(Sabhog)-Sonabari (Beki-Brahmaputra Confluence)	45
Kapili	Chapormukh(Kolong -Kapili confluence)- Kajoli Chowki	91
Barak	Sonabari (Assam-Manipur border)- Rajartila(Indo-Bangladesh Border)	92
	Brahmaputra	1265
Beas (Indus River Dolphin)	Sri Hargovindpur-Harika	101
	Beas	101
	Grand total (in Km)	8430

Associated Fauna survey for the bird species of concern, gharial, muggers, otter, turtle in the 8 states main channels and the tributaries of Brahmaputra and Hooghly was carried out

1. Both on field and online training and workshops were carried out for the state forest staffs, partner NGOs and institutions to participate in the range wide estimation exercise.



Figure 3: Training in Punjab



Figure 4: Training in Bijnor (Uttar Pradesh)



Figure 5: Training in Kanpur (Uttar Pradesh)



Figure 6: Training in Buxar (Bihar)



Figure 7: Training in Patna (Bihar)



Figure 8: Training in Sahibganj (Jharkhand)



Figure 9: Training in Farakka (West Bengal)



Figure 10: Training in Kolkata (West Bengal)



Figure 11: Training in Assam



Image 12: Surveys in different rivers.



Image 13: Survey team doing Independent double observer for counting dolphin in Ganga River.

Plankton samples were collected during range wide exercise and the analysis is on-going.



Figure 14: While collecting Plankton samples

e-DNA samples were collected during range wide exercise and the analysis is ongoing



Figure 15: While collecting e- DNA data

Habitat data collection along with the water quality assessment was carried out in all the 8 states



Figure 16: While collecting water quality data

Acoustic data collection using A-Tags and F-PODs were carried out along with the dolphin abundance estimation for correcting for the unavailability bias

Second phase dolphin survey in the tributaries of Ganga and Brahmaputra has been completed with a total effort of 3453 km with 19 tributaries of Ganga and 4 tributaries of Brahmaputra. 1524km in Indian Sunderbans and 92km of Barak river in Assam was also completed during 2nd phase.

Intensive site monitoring for prey resource, water quality and acoustic monitoring of Ganges dolphins ongoing.



Figure 17: While collecting fish samples, fish market and fisher questionnaire survey

Outputs and Outcomes:

- A total of ~8430 km of survey was carried out in the 8 states for estimating the population of Ganges River dolphin and Indus River dolphins in India
- The estimation of other associated biodiversity was also carried out
- A total of ~355 people were trained for the Ganges River dolphin estimation exercise, equipment handling and associated fauna estimation.

Milestone:

First time a pan India survey was carried out for estimating the Ganges and Indus river dolphin population in its current distribution range in India.