Strengthen community engagement to conserve Ganges River Dolphin (*Platanista gangetica*) through a participatory-based approach in the Koshi River, Eastern Nepal

Final update Report January 2026

Supported By: The Rufford Foundation www.rufford.org @ruffordgrants

Implemented By: Himalayan Nature (हिमालयन नेचर) Himalayan Conservation & Research Institute

Final Update Report

ACTIVITIES COMPLETED

1. Post-monsoon Survey
    1.1 Water Sampling and Analysis
    1.2 Prey Species (Fish) Survey
    1.3 Dolphin Survey and Threat Assessment
2. Conservation Outreach Program
    2.1 School Awareness Program
    2.2 Community Awareness Program
3. Distribution of Educational Materials (posters, brochures, story books)
4. Monitoring of River Dolphin habitat by the River Guard
5. Media Coverage
6. Equipment Support from Idea Wild

Background

The River Dolphin conservation project, funded by The Rufford Foundation and being implemented by Himalayan Nature in collaboration with Koshi Tappu Wildlife Reserve (KTWR), National Trust for Nature Conservation (NTNC), buffer zone users committee, river-dependent communities, CBOs and schools, particularly at the upstream and downstream of the Koshi River. The main objectives of the project are:

- To update data on dolphin populations and existing threats, along with assessing water quality and prey availability in the Koshi River.
- To train and mobilize 10 members from river-dependent communities as River Guards for regular monitoring and dolphin conservation efforts.
- To engage 2,000 students and 1,000 community members through participatory conservation outreach programs.

Progress Report:

1. Post-Monsoon Survey

1.1. Water Sampling and Assessment

To collect the water sample, the previously used methodology was followed, where a water sample was taken from previously identified sites. A total of 28 sampling points, spaced at intervals of at least 2 km, were established, and water samples were collected accordingly from Chatara Dham to Gobargada, near the international border with India. For the physicochemical parameter, in-situ determination was carried out using multi-meter test kits (WagTech), which include temperature, pH, Dissolved Oxygen (DO), conductivity and Total Dissolved Solid (TDS) while for the Phosphorous, Free Co2, Potassium and Nitrate, 500 ml of water sample was collected from each sampling site at a depth of about 0.5 m.

Photograph: Research team collecting water samples from different sampling point from Koshi River

Table: Different parameters of water sampled from the Koshi River

	Water Quality Assessment (Post-Monsoon) of Koshi River (River Dolphin) _2025								
Code	Temp (°C)	pH	Electrical Conductivity (µS)	TDS (ppm)	Dissolved Oxygen (mg/L)	Phosphorous (mg/L)	Free CO_2(mg/L)	Potassium (mg/L)	Nitrate (mg/L)
KR1	16.2	8	146	65	8.89	0.026	6.6	10.8	0.486
KR2	15.1	8.5	150	83	8.11	0.06	35.2	13	0.705
KR3	15.6	8.4	147	73	7.89	0.026	13.2	13.1	0.108
KR4	17.6	8.2	144	73	8.65	0.037	33	13.5	1.403
KR5	17.9	8.2	144	72	7.39	0.084	19.8	10	0.166
KR6	17.8	8.4	146	75	8.61	0.057	35.2	12.1	0.521
KR7	16.6	8.3	159	80	7.78	0.067	52.8	13.8	0.097
KR8	16.4	8.3	164	82	7.42	0.163	83.6	13.2	0.36
KR9	16.4	8.1	159	80	7.66	0.168	13.2	12.9	0.395
KR10	17.4	8.2	164	73	7.21	0.057	17.6	13.3	0.005
KR11	15.6	7.5	161	70	8.03	0.037	30.8	11.3	0.246
KR12	16.1	8.1	148	92	7.64	0.08	22	14.7	0.292
KR13	15.8	7.4	143	53	9.23	0.071	48.4	11.6	0.601
KR14	15.8	8.3	186	70	9.59	0.059	19.8	12	0.269
KR15	16.3	8.2	139	49	8.33	0.015	13.2	11.3	0.406
KR16	16.4	8.3	161	65	7.75	0.033	55	12.8	0.189
KR17	16.5	7.5	107	51	8.87	0.045	15.8	9.89	0.231
KR18	16.2	7.8	123	88	7.23	0.201	21.4	12.55	0.099
KR19	16.1	7.3	154	71	6.12	0.032	18.91	14.02	0.187
KR20	16.2	7.2	149	73	9.05	0.195	22.67	10.96	0.753
KR21	17.1	7.8	142	85	9.36	0.068	31.02	11.22	1.203
KR22	17.2	8	135	52	7.68	0.096	14.72	11.35	0.451
KR23	16.9	7.6	139	69	8.53	0.154	16.95	10.87	1.67
KR24	16.7	7.7	158	75	7.42	0.117	21.21	10.39	1.43
KR25	16.8	7.3	184	83	8.01	0.043	29.46	9.91	0.96
KR26	15.9	8.1	177	78	7.69	0.078	34.58	9.49	0.67
KR27	16.3	7.8	165	77	8.41	0.008	30.28	10.61	0.83
KR28	16.6	7.9	121	68	8.08	0.301	28.68	14.83	0.56

1.1.1. Water Temperature: Water temperature is a fundamental driver of aquatic ecosystem health, as it directly influences the metabolism, growth, reproduction, distribution, and survival of aquatic organisms, while also regulating dissolved oxygen levels and overall biological productivity. An assessment of water temperature across 28 sampling points (KR1–KR28) in the Koshi River indicates relatively cool and stable thermal conditions. Recorded temperatures range from a minimum of 15.1 °C at KR2 to a maximum of 17.9 °C at KR5, with most values concentrated between 16.0 °C and 17.0 °C. This indicates uniform thermal conditions along the surveyed stretch, suggesting minimal influence from thermal pollution, industrial discharge, or abrupt hydrological alterations during the sampling period.

From a spatial perspective, slightly lower temperatures (15.1–15.8 °C) were observed at sampling points such as KR2, KR3, KR11, KR13, and KR14, while marginally higher temperatures (17.0–17.9 °C) were recorded at KR4, KR5, KR6, KR10, KR21, and KR22. Sampling points around KR15–KR25, where temperatures generally ranged from 16.3 °C to 16.9 °C, can be considered thermally optimal, representing stable and favorable conditions for most freshwater aquatic organisms. No abrupt temperature spikes or declines were observed, indicating the absence of localized thermal pollution or extreme environmental stress during the sampling period.

Photograph: Project volunteer performing laboratory analysis of the sampled water collected from the Koshi River

Ecologically, the observed temperature range is highly suitable for cold-water species, as well as aquatic invertebrates that require well-oxygenated water. Cooler temperatures enhance dissolved oxygen solubility, support efficient metabolic functioning, and promote balanced ecological interactions. Such conditions are particularly important for spawning, early life stages, and sustaining prey availability for higher trophic organisms. Conversely, temperatures significantly higher than this range could reduce oxygen availability and impose thermal stress; however, no such risk is evident in the Koshi River.

In terms of regulatory context, Nepal's national water quality guidelines (MoPE) emphasize the maintenance of natural temperature regimes and note that temperatures above 25 °C may stress cold-water species. Similarly, international guidelines, including those of the USEPA, recommend keeping freshwater temperatures below 20–25 °C to protect aquatic life, particularly during sensitive life stages. The temperatures recorded across all sampling points (15.1–17.9 °C) are well below these national and international thresholds, indicating full compliance and ecologically favorable conditions.

Overall, the temperature profile of the river across KR1–KR28 reflects a healthy, stable, and ecologically supportive thermal regime. These conditions are conducive to sustaining aquatic biodiversity, supporting sensitive species, and maintaining overall river health.

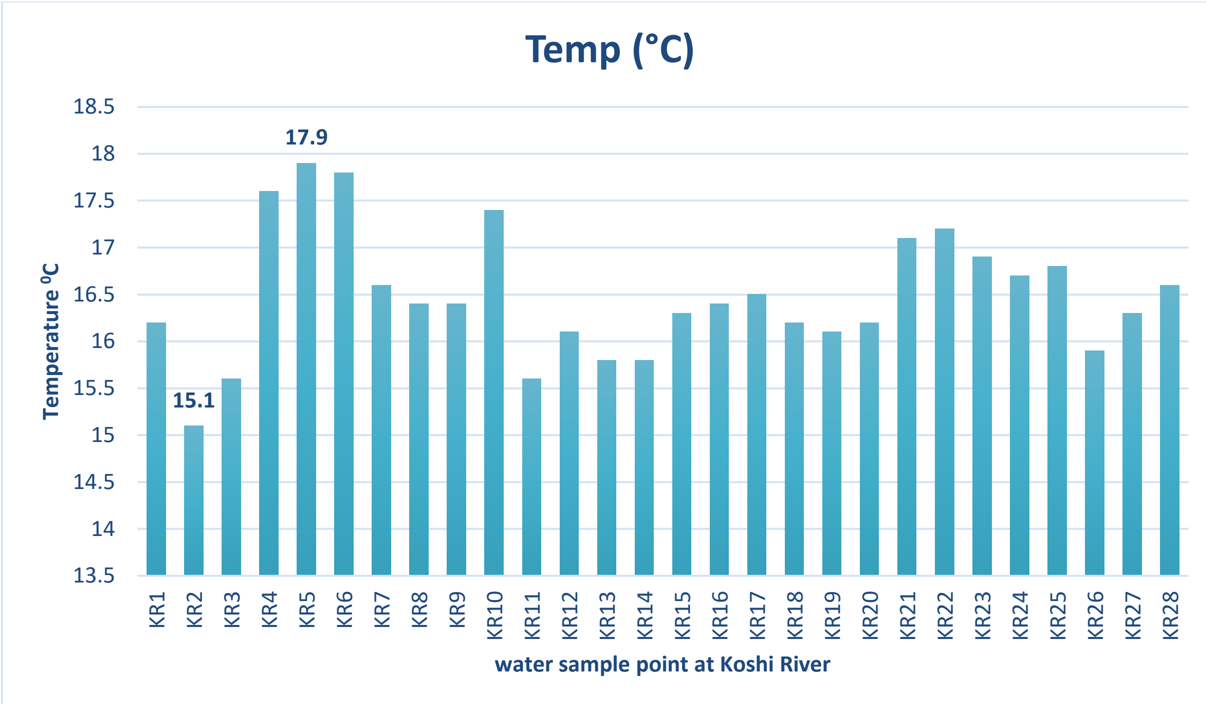


Fig: Graph illustrates the data of temperature sampled at 28 different sampling points of the Koshi Rivers

1.1.2. pH: The pH of the Koshi River, measured across 28 sampling points (KR1–KR28), ranged from 7.2 at KR20 to 8.5 at KR2, indicating that the river is generally slightly alkaline. Most sampling points recorded pH values between 7.5 and 8.5, which falls within the optimal range for freshwater aquatic life, supporting the growth, metabolism, and reproduction of fish, invertebrates, and microbial communities. The slightly higher pH values observed in several points, such as KR2, KR3, and KR6, are likely influenced by natural minerals in the riverbed, including calcium carbonate, and the photosynthetic activity of aquatic plants. Conversely, lower pH values at points such as KR19, KR20, and KR25 suggest localized influences such as organic matter decomposition or minor inflows of acidic water, which could require monitoring to prevent future acidification. Maintaining a stable pH is crucial for the river's ecosystem, as it affects nutrient cycling, chemical solubility, and overall biodiversity. Deviations from the optimal pH range can disrupt metabolic processes, reduce reproductive success, and potentially decrease species richness. The data reflect a river environment that is largely conducive to sustaining healthy aquatic life, with minor variations highlighting the need for targeted observation in certain areas to ensure long-term ecological balance.

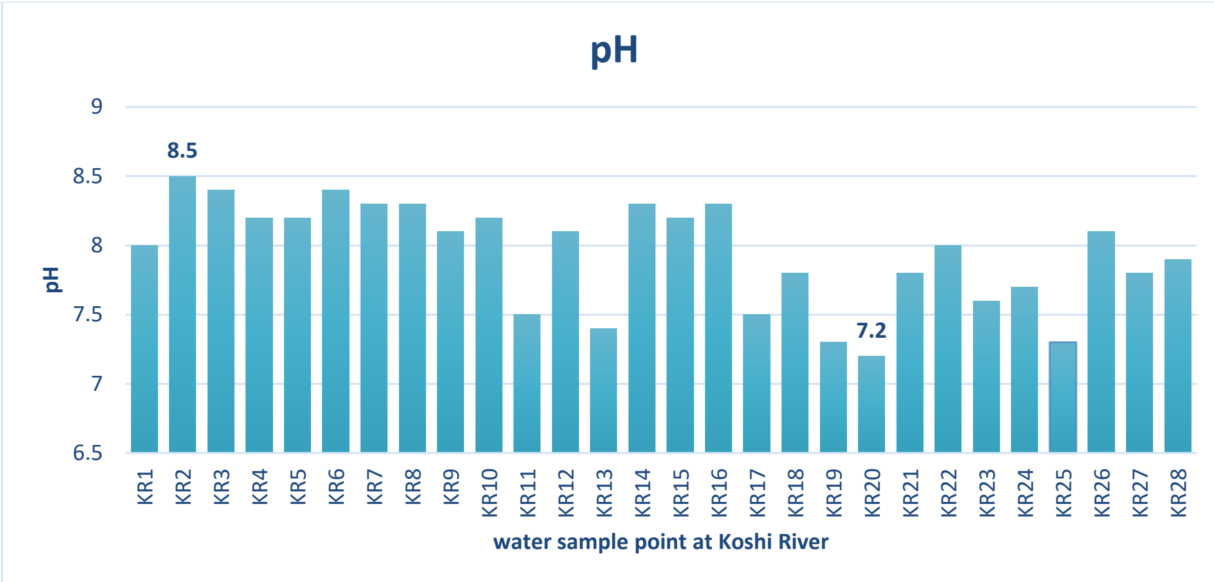


Fig: Graph illustrates the data of pH sampled at 28 different sampling points of the Koshi Rivers

1.1.3. Electric Conductivity: Electrical conductivity (EC) is an important indicator of water quality, reflecting the concentration of dissolved ions that influence aquatic ecosystem health. EC of the Koshi River, measured across 28 sampling points (KR1–KR28), ranged from a lowest value of 107 µS at KR17 to a highest value of 186 µS at KR14, indicating a moderate variation in the ionic content of the river water. Most sampling points recorded EC values between 140–165 µS, which can be considered an optimum range for freshwater ecosystems, reflecting a balanced presence of dissolved salts and minerals essential for aquatic life. Higher EC values, such as those observed at KR14 (186 µS), KR25 (184 µS), and KR26 (177 µS), suggest localized increases in dissolved ions, possibly due to natural mineral leaching, agricultural runoff, or effluent discharge. Conversely, lower EC values, such as at KR17 (107 µS), KR18 (123 µS), and KR28 (121 µS), may indicate dilution zones, possibly from tributary inflow or rainfall, resulting in relatively lower concentrations of dissolved salts.

Photograph: Project volunteer performing laboratory analysis of the sampled water collected from the Koshi River

Electrical conductivity is a critical indicator of water quality because it reflects the concentration of ions such as calcium, magnesium, sodium, and potassium, which are vital for metabolic processes, osmoregulation, and overall health of aquatic organisms. Within the optimum range, EC supports healthy physiological functioning of fish, invertebrates, and microorganisms and ensures stable nutrient cycling in the ecosystem. However, unfavorable conditions, such as excessively high EC, can increase water salinity, which may stress or even kill sensitive species by disrupting osmotic balance, reducing reproduction rates, and altering species composition. Extremely low EC, on the other hand, can indicate nutrient-poor conditions, limiting growth of phytoplankton and other primary producers, ultimately affecting the food web.

The data indicate that most parts of the Koshi River maintain a moderate and stable ionic content, suggesting good water quality conducive to aquatic biodiversity, while monitoring localized variations is important for sustaining ecosystem stability and biodiversity.

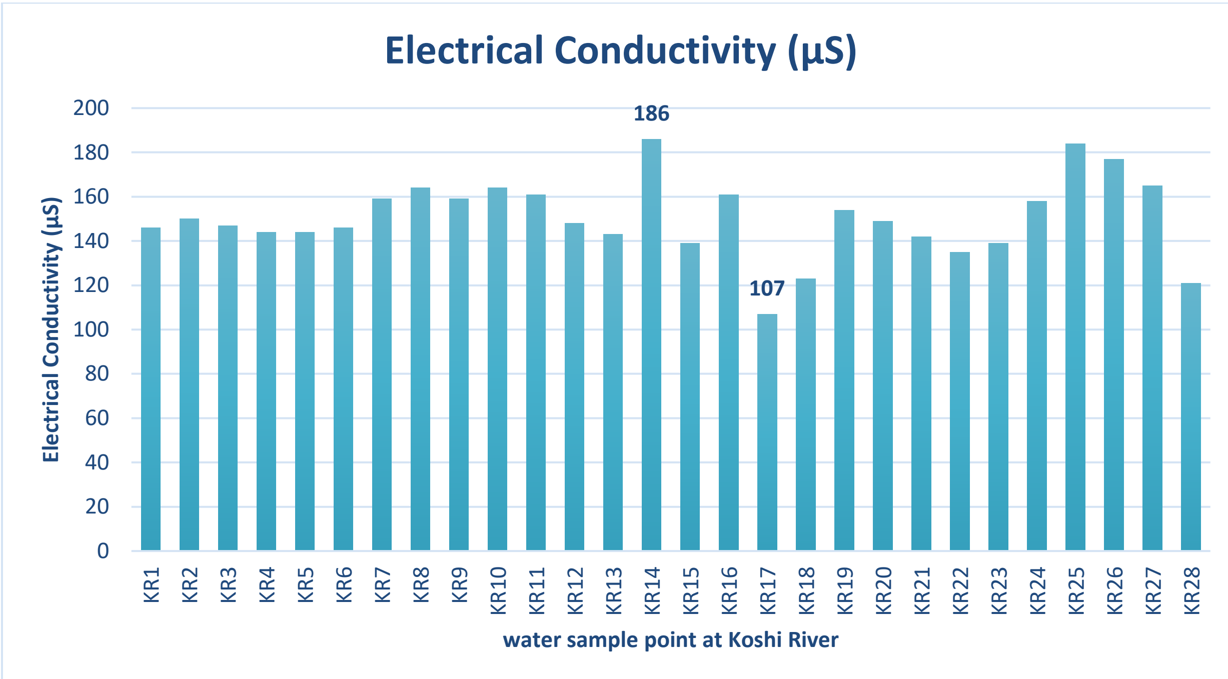


Fig: Graph illustrates data of electrical conductivity sampled at 28 different sampling points of the Koshi Rivers

1.1.4. Total Dissolved Solids (TDS): TDS indicate the concentration of dissolved substances in water, including minerals, salts, and organic matter, which can affect aquatic life and water quality. TDS in the Koshi River, measured across 28 sampling points (KR1–KR28), ranged from a lowest value of 49 ppm at KR15 to a highest value of 92 ppm at KR12, indicating moderate variation in dissolved mineral content along the river. Most sampling points recorded TDS values between 65–83 ppm, which can be considered an optimum range for freshwater ecosystems, supporting healthy aquatic life by providing essential minerals such as calcium, magnesium, potassium, and sodium without causing stress. Higher TDS values, such as those at KR12 (92 ppm), KR18 (88 ppm), and KR21 (85 ppm), may reflect localized contributions from natural mineral leaching, agricultural runoff, or urban effluents. Conversely, lower TDS values, like KR15 (49 ppm), KR17 (51 ppm), and KR22 (52 ppm), could indicate areas of dilution from tributaries, rainwater, or upstream flow, resulting in temporarily lower mineral availability.

TDS is a crucial water quality parameter because it reflects the total concentration of dissolved ions and nutrients necessary for aquatic organisms. Within the optimum range, TDS helps maintain osmotic balance, supports metabolic processes, and ensures the availability of essential nutrients for fish, invertebrates, and primary producers, thereby sustaining overall ecosystem productivity. However, unfavorable TDS levels can have negative impacts: excessively high TDS may increase water salinity, causing physiological stress, reducing reproductive success, and potentially leading to a decline in sensitive species. Extremely low TDS can result in nutrient-deficient waters, limiting the growth of aquatic plants and microorganisms, which can disrupt food chains and reduce biodiversity. Overall, these data indicate that the Koshi River largely maintains TDS within a moderate and healthy range, suggesting good water quality and favorable conditions for aquatic life.

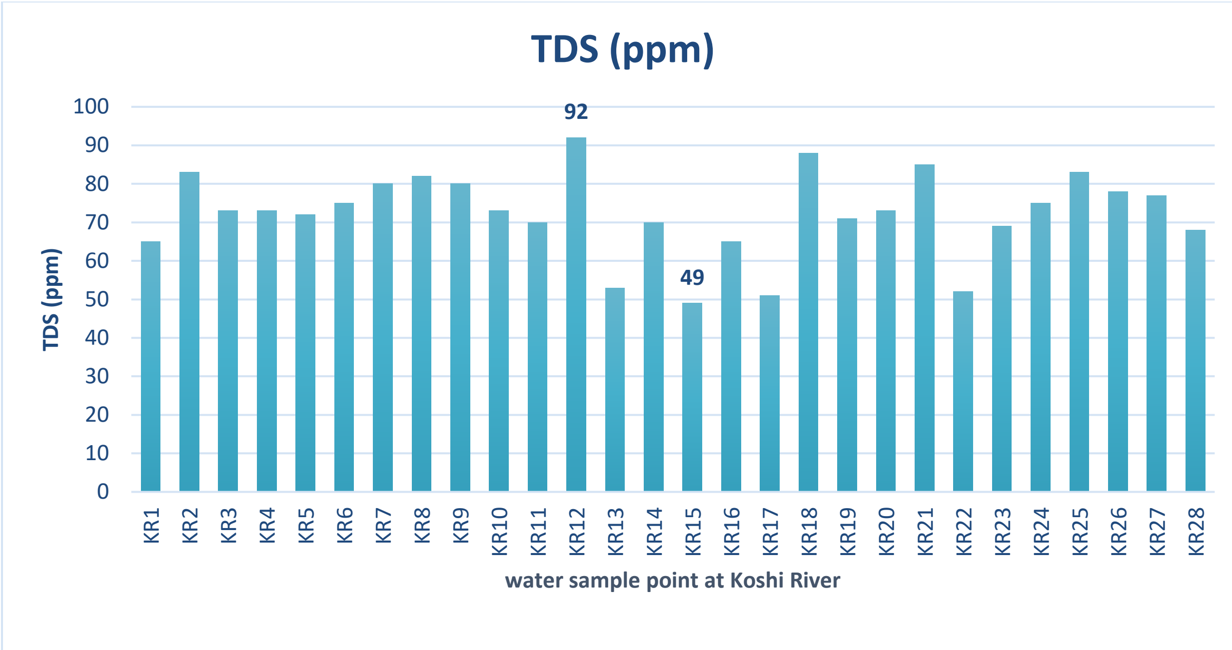


Fig: Graph illustrates the data of TDS sampled at 28 different sampling points of the Koshi Rivers

1.1.5. Dissolved Oxygen (DO): The DO levels in the Koshi River, measured across 28 sampling points (KR1–KR28), ranged from a lowest value of 6.12 mg/L at KR19 to a highest value of 9.59 mg/L at KR14, showing significant spatial variation in oxygen availability. Most sampling points recorded DO concentrations between 7–9 mg/L, which can be considered an optimum range for freshwater ecosystems. This range supports healthy respiration, metabolism, and growth of fish, invertebrates, and microbial communities, and is generally indicative of good water quality. Higher DO values, such as at KR13 (9.23 mg/L), KR14 (9.59 mg/L), KR20 (9.05 mg/L), and KR21 (9.36 mg/L), are likely influenced by well-aerated water conditions, increased photosynthetic activity from aquatic plants, or cooler water temperatures that promote oxygen solubility. In contrast, lower DO values, observed at KR16 (6.75 mg/L) and KR19 (6.12 mg/L), could result from organic pollution, high biochemical oxygen demand (BOD), elevated water temperatures, or reduced water flow, which can lead to oxygen depletion.

Dissolved oxygen is one of the most critical parameters for aquatic life because it is essential for cellular respiration in fish, invertebrates, and aerobic microorganisms. Adequate DO levels support proper metabolic functioning, growth, reproduction, and survival, while lower DO might cause hypoxia, leading to stress, reduced reproductive success, and mortality of sensitive species. It can also disrupt the decomposition of organic matter, nutrient cycling, and overall ecosystem balance. Overall, the DO levels are favorable and indicate a generally healthy river system capable of supporting diverse aquatic life in the Koshi River.

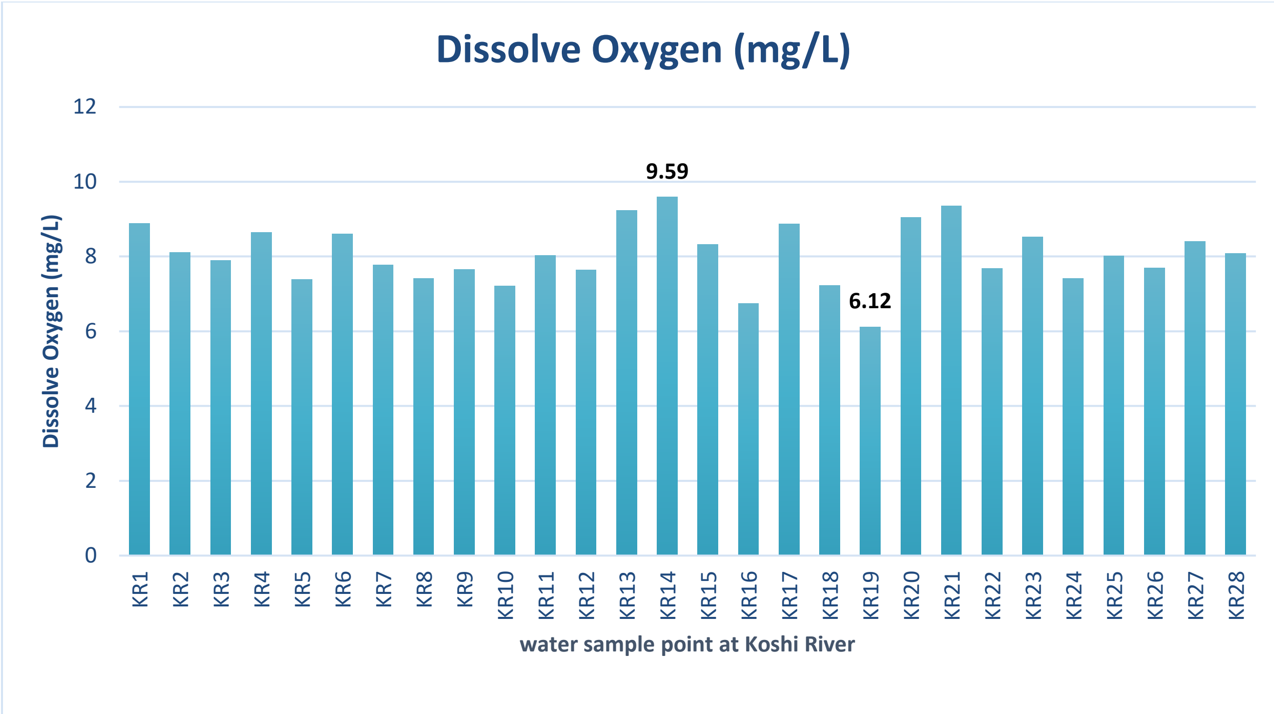


Fig: Graph illustrates the data of dissolved oxygen sampled at 28 different sampling points of the Koshi Rivers

1.1.6. Free Carbon Dioxide (CO2): The free carbon dioxide (CO_2) concentration across the 28 sampling points shows considerable variation, ranging from a low of 6.6 mg/L at KR1 to a very high value of 83.6 mg/L at KR8, with other elevated values recorded at KR16 (55 mg/L), KR7 (52.8 mg/L) and KR13 (48.4 mg/L). Lower values (around 6–15 mg/L) observed at sites such as KR1, KR3, KR9 and KR15 are generally favourable for aquatic life, as free CO_2 at this level supports photosynthesis and does not interfere with fish respiration. However, moderately high concentrations (20–40 mg/L), recorded at many stations (e.g., KR2, KR4, KR6, KR11, KR21, KR26 and KR27), may begin to stress fish and invertebrates by affecting their acid–base balance and reducing the efficiency of oxygen uptake through gills. Very high concentrations above 50 mg/L, particularly at KR7, KR8 and KR16, can be harmful over prolonged exposure, potentially causing respiratory distress, reduced growth and increased mortality, especially if dissolved oxygen is low. Elevated CO_2 levels are commonly associated with the decomposition of organic matter, high microbial respiration, poor water circulation, stagnant conditions and night-time dominance of respiration over photosynthesis. In terms of standards, most international water quality references and aquaculture guidelines indicate that natural, unpolluted surface waters typically contain less than 10–20 mg/L free CO_2, and concentrations above this range suggest deteriorating ecological conditions. Although specific national or international regulatory limits for free CO_2 are rarely defined, values exceeding 20–30 mg/L are generally considered undesirable for sustaining healthy aquatic ecosystems, and concentrations above 60 mg/L indicate poor water quality with likely negative impacts on aquatic species.

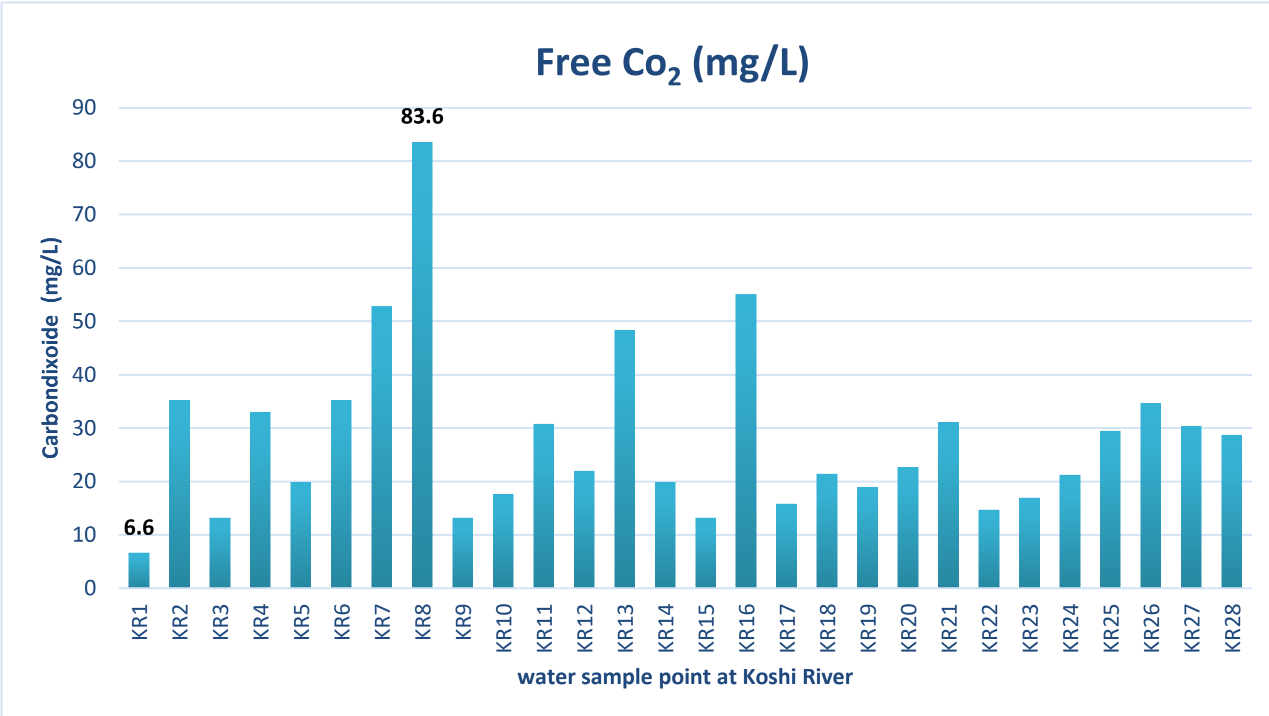


Fig: Graph illustrates the data of free Co_2 sampled at 28 different sampling points of the Koshi Rivers

1.1.7. Potassium: Potassium is an essential macronutrient naturally present in surface waters and plays an important role in plant growth and ionic balance in aquatic ecosystems. In the present dataset, potassium concentrations across the 28 sampling points show a relatively narrow range, varying from a minimum of 9.49 mg/L at KR26 to a maximum of 14.83 mg/L at KR28, with most values clustering between about 10 and 14 mg/L. The comparatively lower values observed at sites such as KR17 (9.89 mg/L), KR25 (9.91 mg/L) and KR26 (9.49 mg/L) are typical of natural waters and are generally favorable for aquatic organisms, as potassium at low to moderate levels supports physiological functions of aquatic plants and algae. However, higher concentrations recorded at KR12 (14.7 mg/L), KR19 (14.02 mg/L) and KR28 (14.83 mg/L) may indicate enrichment from external sources such as agricultural runoff (fertilizers), domestic wastewater discharge, soil leaching or mineral weathering in the catchment. Although potassium is less toxic, while elevated levels can contribute indirectly to water quality degradation by stimulating excessive growth of algae and aquatic plants, which may later lead to oxygen depletion during decomposition and negatively affect fish and invertebrates. Most national and international water quality guidelines do not prescribe a strict limit for potassium for aquatic life, as it is not considered highly toxic; however, typical background levels in unpolluted freshwater are generally reported to be below about 10 mg/L, and concentrations above this may suggest anthropogenic influence. Therefore, the potassium levels observed in this study indicate generally moderate concentrations, with some sites showing slightly elevated values that may reflect nutrient inputs and warrant attention due to their possible indirect impacts on aquatic species and ecosystem balance.

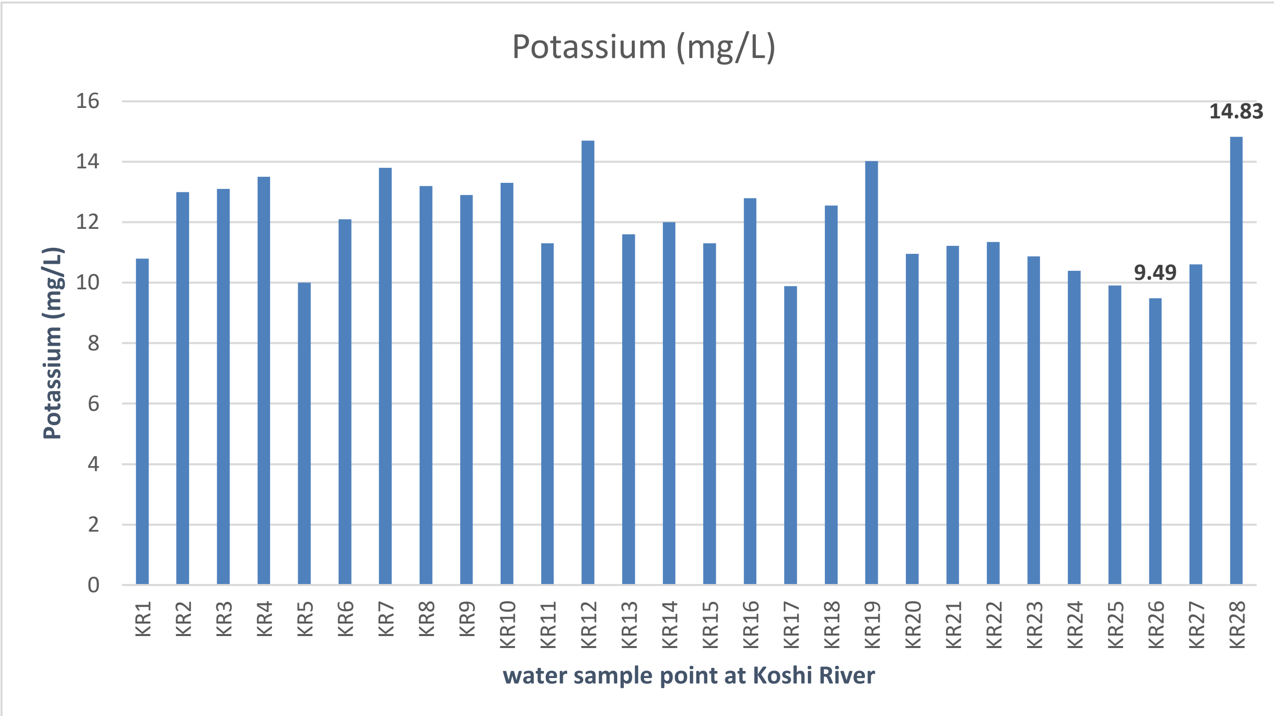


Fig: Graph illustrates the data of potassium sampled at 28 different sampling points of the Koshi Rivers

1.1.8. Phosphorus: Phosphorus is an essential nutrient in aquatic ecosystems, required for the growth of phytoplankton and aquatic plants, but excessive amounts can rapidly degrade water quality by promoting eutrophication. In the present dataset, phosphorus concentrations vary widely across the 28 sampling points, ranging from 0.008 mg/L at KR27 to 0.301 mg/L at KR28. Low concentrations observed at sites such as KR27 (0.008 mg/L), KR15 (0.015 mg/L), and KR1/KR3 (0.026 mg/L) are generally favorable for aquatic ecosystems, as they limit excessive algal growth and help maintain adequate dissolved oxygen levels. Moderate values (around 0.03–0.08 mg/L), recorded at many stations (e.g., KR4, KR6, KR10, KR14 and KR26), indicate some nutrient enrichment but may still support balanced biological productivity. In contrast, high concentrations at KR8 (0.163 mg/L), KR9 (0.168 mg/L), KR18 (0.201 mg/L), KR20 (0.195 mg/L), KR23 (0.154 mg/L) and especially KR28 (0.301 mg/L) pose a serious risk to aquatic life by stimulating algal blooms and excessive growth of aquatic weeds; subsequent decomposition of this biomass can reduce dissolved oxygen, leading to fish stress or mortality and overall loss of biodiversity. Elevated phosphorus levels are commonly associated with anthropogenic inputs such as agricultural runoff containing fertilizers, domestic sewage discharge, detergents, livestock waste, and erosion of phosphorus-rich soils in the catchment area. As per several international and national water quality guidelines recommend very low phosphorus concentrations to prevent eutrophication; for example, widely used international references (such as USEPA and WHO-based lake and river protection criteria) suggest that total phosphorus in surface waters should generally be below about 0.05 mg/L, and ideally below 0.02 mg/L in rivers and streams to maintain good ecological status. Therefore, while some sampling points show concentrations within or close to desirable limits, several locations exceed these guideline values, indicating nutrient pollution and a potential threat to aquatic species and ecosystem health.

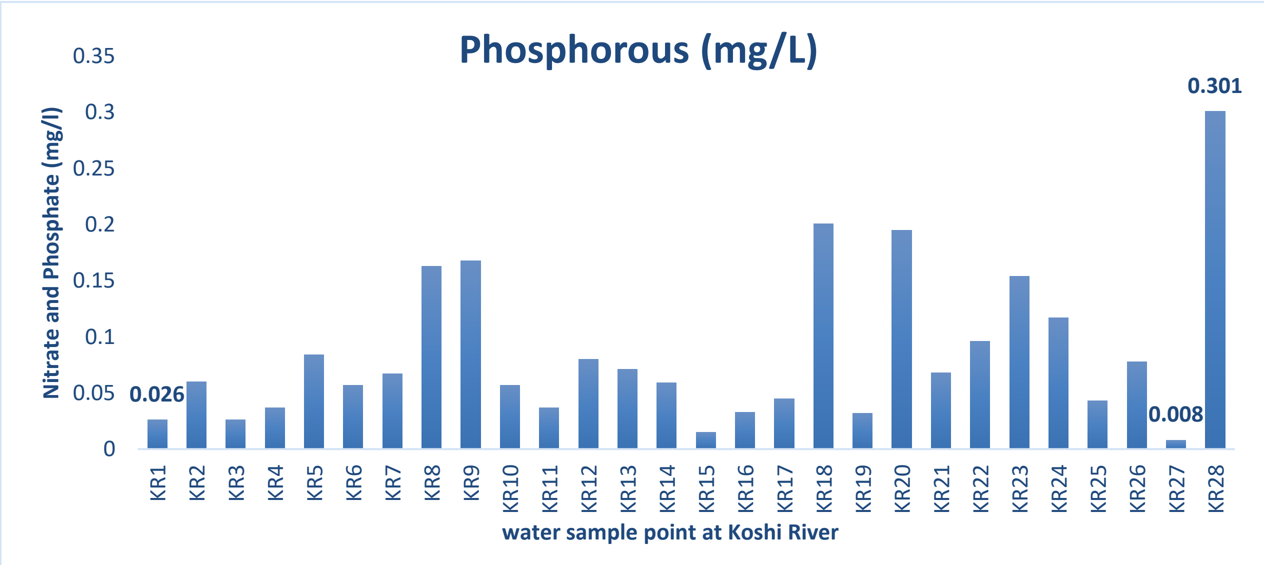


Fig: Graph illustrates the data of phosphorus sampled at 28 different sampling points of the Koshi Rivers

1.1.9. Nitrate: Nitrate is a major form of dissolved inorganic nitrogen in surface waters and is an essential nutrient for aquatic plants and phytoplankton; however, elevated concentrations are a key driver of nutrient pollution and eutrophication. In the present dataset, nitrate concentrations across the 28 sampling points range from a very low value of 0.005 mg/L at KR10 to a maximum of 1.67 mg/L at KR23. Low concentrations observed at sites such as KR10 (0.005 mg/L), KR7 (0.097 mg/L), KR3 (0.108 mg/L) and KR18 (0.099 mg/L) are generally beneficial for maintaining good water quality, as they limit excessive algal growth and help sustain balanced aquatic communities. Moderate values (around 0.2–0.7 mg/L), recorded at many locations (e.g., KR1, KR6, KR11, KR13, KR14 and KR28), indicate some degree of nutrient input but are not immediately harmful to most aquatic organisms. In contrast, comparatively higher nitrate levels at KR4 (1.403 mg/L), KR21 (1.203 mg/L), KR23 (1.67 mg/L) and KR24 (1.43 mg/L) suggest localized nutrient enrichment, which can stimulate algal blooms and aquatic weed proliferation. Elevated nitrate concentrations are typically linked to agricultural runoff containing nitrogen fertilizers, leaching from livestock waste, domestic sewage discharge, and surface runoff from settlements, as well as oxidation of organic nitrogen in the catchment. With regards to standards, international and national guidelines primarily address nitrate in drinking water, with a commonly accepted limit of 50 mg/L as nitrate (≈10 mg/L as nitrate-N) recommended by WHO and adopted by many countries. For the protection of aquatic life, much lower concentrations are desirable, and many ecological assessments consider levels below about 1 mg/L indicative of relatively unpolluted conditions.

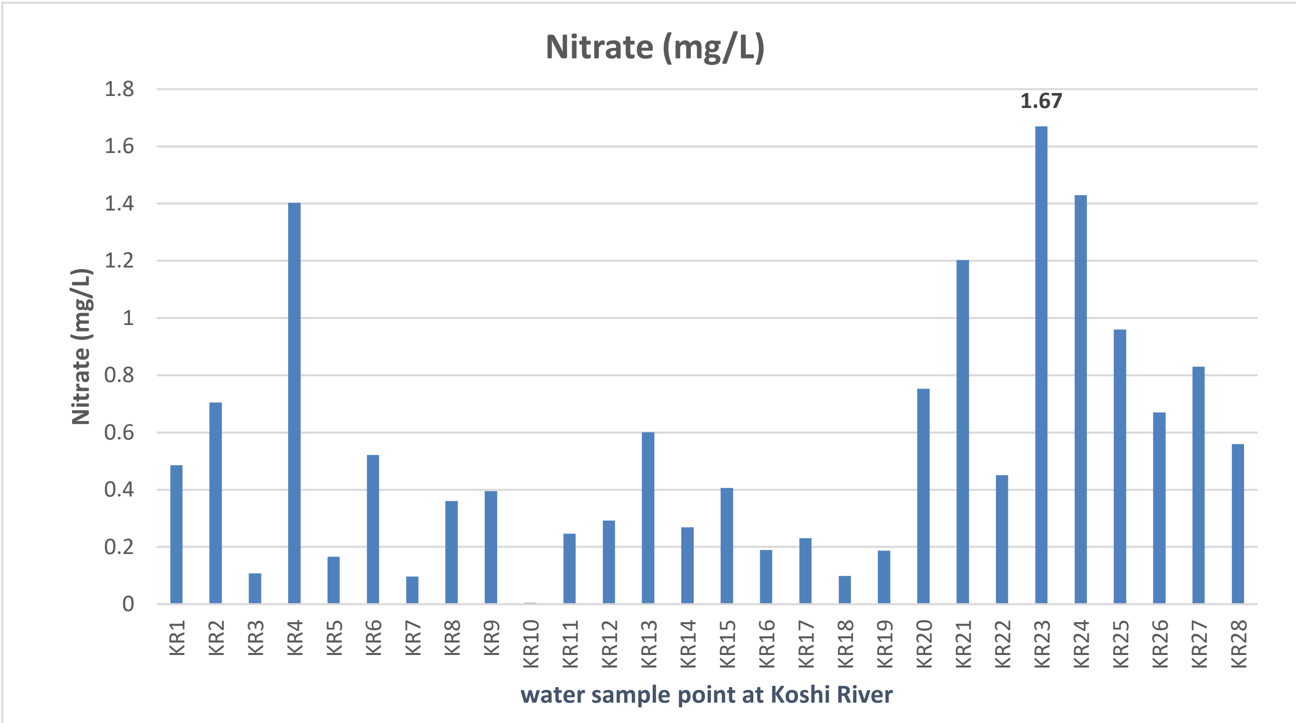
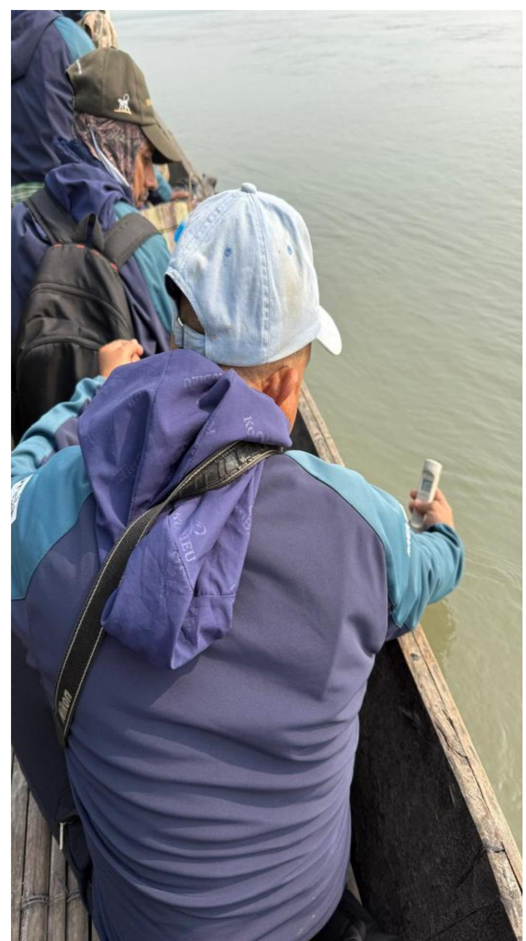


Fig: Graph illustrates the data of nitrate sampled at 28 different sampling points of the Koshi Rivers





1.2. Prey Species (Fish) Survey

A fish survey was carried out along both the upper and lower parts of the Koshi River. Given that fish constitute the primary food source for River Dolphin, assessing fish diversity and abundance provides vital insights into habitat suitability, ecological health, and potential threats to dolphin populations. The survey adopted a purposive sampling approach, wherein ten permanent sampling plots were strategically selected to represent diverse habitat types along the river stretch. Site selection was guided by ecological criteria such as variation in depth, flow regime, substrate composition, and riparian features, thereby enhancing the likelihood of capturing a wide array of fish species.

A highly effective aspect of this survey was the engagement of trained River Guards as local resource persons/fishermen, where their traditional knowledge on fish and water will be an asset to the survey, while possessing in-depth ecological knowledge of fish fauna in the Koshi River. Their familiarity with local fish names, habitat associations, and behavioral patterns significantly strengthened the efficiency and accuracy of the survey.

Fish sampling was conducted using a variety of locally accessible and traditional fishing methods, including gill nets (mesh size 0.1–2.5 cm), cast nets (4–7 mm), hook lines, and indigenous fish traps known as Dadiya. To maximize species detection, sampling was conducted across multiple time periods—cast nets, hook lines, and traps were deployed in the early morning and late afternoon, while gill nets were set in the evening and retrieved the following morning. Each site was surveyed for five consecutive days to ensure consistency and comparability. All fishing activities adhered to the catch-and-release protocol in compliance with the Department of National Parks and Wildlife Conservation (DNPWC) guidelines. Captured fish were quickly rinsed, photographed for morphological documentation, and released back to their habitat.

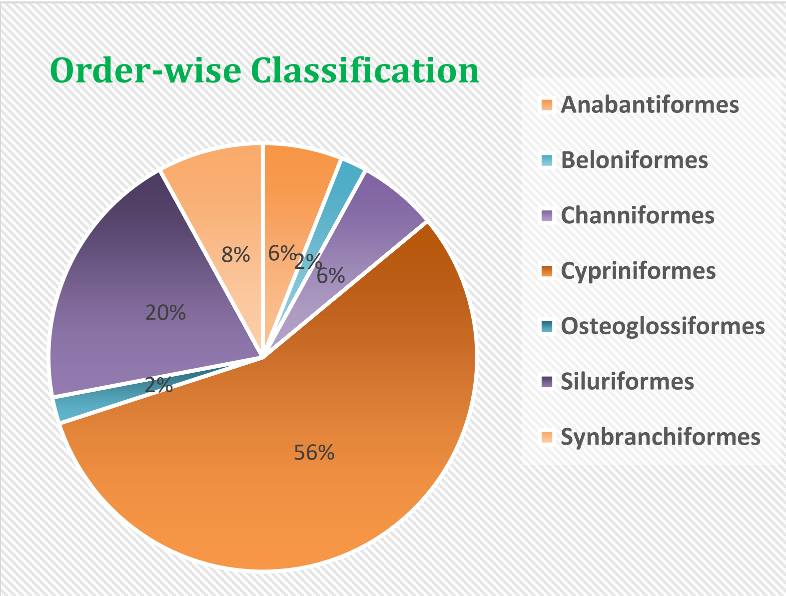
Fish identification was carried out initially with assistance from local experts and was later verified using standard references, including Shrestha (1981, 1994, 2019), Jayaram (2013), and Jhingran & Talwar (1991). The survey documented a total of 35 fish species across the ten sites, highlighting the ecological richness and prey availability within the Koshi River system at the time of study. These findings are critically important for dolphin conservation, as they provide a baseline for monitoring changes in prey abundance and help identify areas of high ecological value that may require enhanced protection. A total of 50 species has been recorded during the survey, with detailed information provided in the table below:

Table: Taxonomical Classification of Fish Species from Koshi River

S.N	Scientific Name	Order	Family	Genus	Species
1	*Acanthocobitis botia*	Cypriniformes	Nemacheilidae	*Acanthocobitis*	*botia*
2	*Anabas testudineus*	Anabantiformes	Anabantidae	*Anabas*	*testudineus*
3	*Aspidoparia morar*	Cypriniformes	Cyprinidae	*Aspidoparia*	*morar*
4	*Barilius bendelisis*	Cypriniformes	Cyprinidae	*Barilius*	*bendelisis*
5	*Bagarius bagarius*	Siluriformes	Sisoridae	*Bagarius*	*bagarius*
6	*Barilius vagra*	Cypriniformes	Cyprinidae	*Barilius*	*vagra*
7	*Barilius guttatus*	Cypriniformes	Cyprinidae	*Barilius*	*guttatus*
8	*Badis badis*	Anabantiformes	Badidae	*Badis*	*badis*
9	*Barbonymus gonionotus*	Cypriniformes	Cyprinidae	*Barbonymus*	*gonionotus*
10	*Botia lohachata*	Cypriniformes	Botiidae	*Botia*	*lohachata*
11	*Clupisoma montana*	Siluriformes	Ailiidae	*Clupisoma*	*montana*
12	*Cabdio morar*	Cypriniformes	Cyprinidae	*Cabdio*	*morar*
13	*Chagunius chagunio*	Cypriniformes	Cyprinidae	*Chagunius*	*chagunio*
14	*Channa orientalis*	Channiformes	Channidae	*Channa*	*orientalis*
15	*Cirrhinus mrigala*	Cypriniformes	Cyprinidae	*Cirrhinus*	*mrigala*
16	*Cyprinus carpio*	Cypriniformes	Cyprinidae	*Cyprinus*	*carpio*
17	*Chaca chaca*	Siluriformes	Chacidae	*Chaca*	*chaca*
18	*Channa marulius*	Channiformes	Channidae	*Channa*	*marulius*
19	*Channa punctatus*	Channiformes	Channidae	*Channa*	*punctatus*
20	*Clarias batrachus*	Siluriformes	Clariidae	*Clarias*	*batrachus*
21	*Eutropiichthys vacha*	Siluriformes	Schilbeidae	*Eutropiichthys*	*vacha*
22	*Glyptothorax telchitta*	Siluriformes	Sisoridae	*Glyptothorax*	*telchitta*
23	*Garra annandalei*	Cypriniformes	Cyprinidae	*Garra*	*annandalei*
24	*Heteropneustes fossilis*	Siluriformes	Heteropneustidae	*Heteropneustes*	*fossilis*
25	*Hypophthalmichthys nobilis*	Cypriniformes	Cyprinidae	*Hypophthalmichthys*	*nobilis*

26	*Hypophthalmichthys molitrix*	Cypriniformes	Cyprinidae	*Hypophthalmichthys*	*molitrix*
27	*Lepidocephalus guntea*	Cypriniformes	Cobitidae	*Lepidocephalus*	*guntea*
28	*Lepidocephalichthys guntea*	Cypriniformes	Cobitidae	*Lepidocephalichthys*	*guntea*
29	*Labeo boga*	Cypriniformes	Cyprinidae	*Labeo*	*boga*
30	*Labeo rohita*	Cypriniformes	Cyprinidae	*Labeo*	*rohita*
31	*Labeo pangusia*	Cypriniformes	Cyprinidae	*Labeo*	*pangusia*
32	*Labeo bata*	Cypriniformes	Cyprinidae	*Labeo*	*bata*
33	*Labeo calbasu*	Cypriniformes	Cyprinidae	*Labeo*	*calbasu*
34	*Lepidocephalichthys guntea*	Cypriniformes	Cobitidae	*Lepidocephalichthys*	*guntea*
35	*Mystus tengara*	Siluriformes	Bagridae	*Mystus*	*tengara*
36	*Macrognathus aral*	Synbranchiformes	Mastacembelidae	*Macrognathus*	*aral*
37	*Macrognathus pancalus*	Synbranchiformes	Mastacembelidae	*Macrognathus*	*pancalus*
38	*Mastacembelus armatus*	Synbranchiformes	Mastacembelidae	*Mastacembelus*	*armatus*
39	*Monopterus cuchia*	Synbranchiformes	Synbranchidae	*Monopterus*	*cuchia*
40	*Nandus nandus*	Anabantiformes	Nandidae	*Nandus*	*nandus*
41	*Notopterus notopterus*	Osteoglossiformes	Notopteridae	*Notopterus*	*notopterus*
42	*Puntius terio*	Cypriniformes	Cyprinidae	*Puntius*	*terio*
43	*Puntius conchonius*	Cypriniformes	Cyprinidae	*Puntius*	*conchonius*
44	*Pachypterus atherinoides*	Siluriformes	Schilbeidae	*Pachypterus*	*atherinoides*
45	*Puntius sophore*	Cypriniformes	Cyprinidae	*Puntius*	*sophore*
46	*Salmophasia bacaila*	Cypriniformes	Cyprinidae	*Salmophasia*	*bacaila*
47	*Tor putitora*	Cypriniformes	Cyprinidae	*Tor*	*putitora*
48	*Tor tor*	Cypriniformes	Cyprinidae	*Tor*	*tor*
49	*Wallago attu*	Siluriformes	Siluridae	*Wallago*	*attu*
50	*Xenentodon cancila*	Beloniformes	Belonidae	Xenentodon	cancila

The table presents a comprehensive taxonomic classification of 50 fish species recorded from the Koshi River during the post-monsoon survey. The assemblage reflects a high degree of ichthyofaunal diversity dominated primarily by the order Cypriniformes, represented by major carps (Labeo, Cirrhinus, Tor), minor barbs (Puntius, Barilius), and loaches (Acanthocobitis, Lepidocephalichthys). Following this order Siluriformes forms the second most prominent group, comprising ecologically and economically important catfishes such as Bagarius bagarius, Wallago attu, Clarias batrachus, Mystus tengara, and Glyptothorax telchitta, which are well adapted to fast-flowing, turbid, and bottom-dominated habitats of the river system. Predatory and air-breathing fishes belonging to Channiformes and Anabantiformes, including several Channa species and Anabas testudineus, reflect the presence of diverse microhabitats such as floodplains, marginal wetlands, and low-oxygen environments. Additionally, the occurrence of Synbranchiformes (spiny eels and swamp eels), Osteoglossiformes (Notopterus notopterus), and Beloniformes (Xenentodon cancila) further demonstrates habitat heterogeneity ranging from deep channels to vegetated shallows.



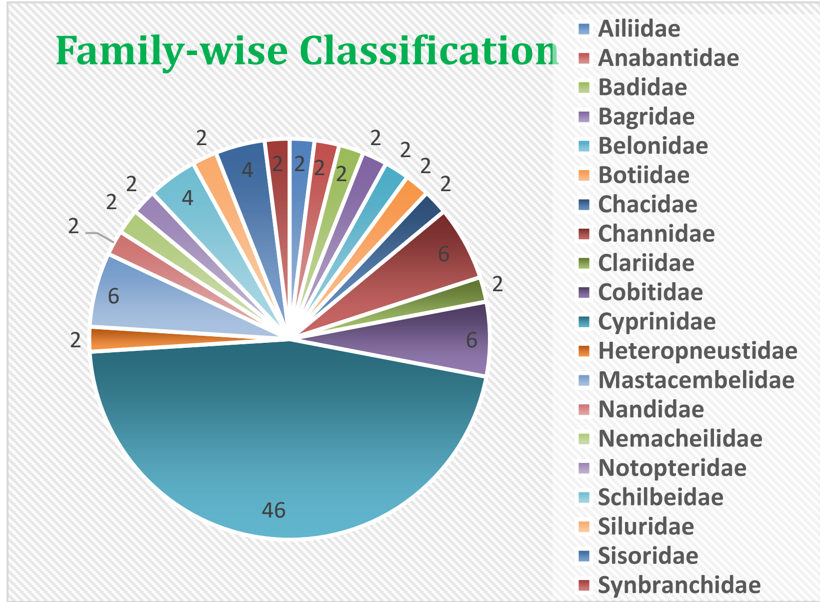


Fig: Order-wise and Family-wise data disaggregation of fish species recorded in the Koshi River during the Post-monsoon Survey

The chart highlights the order-wise composition of ichthyofaunal diversity, showing a clear dominance pattern and the ecological roles played by each group in the aquatic ecosystem. Cypriniformes constitute the largest share, accounting for 56% of the total ichthyofaunal assemblage, indicating favorable conditions for carps, minnows, and loaches, which thrive across diverse habitats. Ecologically, Cypriniformes play a crucial role in maintaining food-web stability, as many species function as primary or secondary consumers feeding on algae, detritus, and small invertebrates and their abundance reflects healthy substrates, sufficient oxygen, and nutrient-rich waters Siluriformes represent the second most abundant order, contributing 20%. This group, comprising catfishes, is ecologically significant due to its benthic nature. Siluriformes often occupy bottom habitats where they contribute to nutrient recycling by feeding on detritus, benthic invertebrates, and organic matter. Their presence indicates varied microhabitats, such as deep pools and organic-rich substrates, adding structural complexity to the ecosystem. Synbranchiformes account for 8% of the total composition. These eel-like fish are well known for their tolerance to low-oxygen conditions and their ability to survive in marginal or seasonally stressed habitats. Ecologically, their presence indicates habitat heterogeneity, including swampy or slow-moving sections, and they contribute to ecosystem resilience by persisting under fluctuating environmental conditions where other fish groups may decline. Both Anabantiformes and Channiformes each contribute 6% to the ichthyofaunal diversity. Anabantiformes, which include labyrinth fishes, are ecologically important due to their air-breathing capability, allowing them to survive in oxygen-poor waters, reflecting stagnant or slow-flowing microhabitats. Channiformes (snakeheads) are top or mid-level predators and play a vital role in regulating prey populations, thereby maintaining trophic balance within the aquatic ecosystem. Beloniformes and Osteoglossiformes each account for 2%, making them the least represented orders, while Beloniformes are surface-dwelling, linking surface and pelagic food chains and Osteoglossiformes are evolutionarily ancient, enhancing phylogenetic diversity and conservation value. Overall,

the order-wise distribution reflects a diverse, functionally complex, and ecologically resilient fish community, dominated by Cypriniformes but supported by other orders that contribute to nutrient cycling, habitat utilization, and ecosystem stability.

The post-monsoon survey of the Koshi River recorded a diverse ichthyofaunal assemblage, showing clear variations in family-wise abundance. Cyprinidae dominated the fish community, comprising 46% of the total, indicating favorable conditions for carps, minnows, and related species. Their dominance reflects the river's nutrient-rich waters, suitable substrates, and stable habitats, making them vital for maintaining primary and secondary consumer roles in the food web. Families such as Cobitidae, Channidae, and Mastacembelidae each contributed 6%, highlighting the presence of loaches, snakeheads, and spiny eels, which occupy benthic and predatory niches, regulate prey populations, and enhance ecosystem balance. Moderately represented families, including Schilbeidae and Sisoridae (4% each), are important for scavenging and benthic feeding, contributing to nutrient cycling and maintaining habitat heterogeneity. Several families like Ailiidae, Anabantidae, Badidae, Bagridae, Belonidae, Botiidae, Chacidae, Clariidae, Heteropneustidae, Nandidae, Nemacheilidae, Notopteridae, Siluridae, and Synbranchidae, each accounted for 2%, indicating specialized or less abundant species that occupy unique ecological niches, such as surface-dwelling, air-breathing, or stress-tolerant habitats, thus supporting overall ichthyofaunal diversity and ecological resilience. These data indicate a functionally diverse and ecologically balanced fish community, dominated by Cyprinidae but supported by various benthic, predatory, and specialized families, reflecting the river's dynamic post-monsoon environment and its capacity to sustain high ichthyofaunal diversity.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1.3. Dolphin survey and threat assessment

As per the scheduled activity, a post-monsoon dolphon survey and threat assessment were conducted along the Koshi River. The survey covered the upper river section from Rajabas to the Koshi Barrage and the lower section from the Koshi Barrage to Gobargada of the Koshi River. The main objective of the survey was to assess the current status and distribution of the River Dolphin, while also documenting habitat conditions and human-induced threats affecting their survival. To ensure consistency and reliability, the survey followed previously used survey methods for consistency and comparison i.e. boat-based and shore-based survey techniques.

The boat-based survey was carried out using a team of seven surveyors, including members from the River Guard and citizen scientists. The survey focused on ecologically important river features such as deep pools, river bends, and confluence areas, where dolphins are known to occur more frequently. During each sighting and along survey transects, standardized data sheets were used to record key parameters, including habitat type, water depth, distance from the riverbank, sighting distance, and any observed illegal or harmful activities.

In addition, a shore-based survey was conducted in the Koshi Barrage area, where dolphin movement is often concentrated. A total of 10 observers were stationed at 200-meter intervals for two consecutive days. Observers systematically recorded dolphin surfacing behavior, group size, and human disturbances using the same standardized data formats to maintain data accuracy and comparability.

By combining data from both survey approaches, a total of 19 Ganges River Dolphins were recorded, including 17 adults and 2 sub-adults. All individuals were observed downstream of the Koshi Barrage. Despite extensive survey efforts, no dolphins were detected in the upstream section, which is consistent with findings from previous monitoring surveys, indicating a continued restriction of dolphin distribution to the lower river section. Having said this, two dolphins sighting was recorded at two locations i.e. Madhuban and Borabadh, both at the upper section of the Koshi barrage, which remains a key finding from the River Guard group.

Alongside dolphin monitoring, a comprehensive threat assessment was conducted throughout both river sections. Several threats identified in earlier surveys were again recorded, but with increased in their intensity and frequency. Key threats observed during this survey included:

- Increasing illegal fishing activities, often involving larger groups and the frequent use of destructive fishing methods such as the use of electric current and fish poisoning
- Expansion of agriculture along riverbanks, including land encroachment, high-capacity water pumping, and excessive use of chemical fertilizers, contributing to habitat degradation
- Unmanaged waste dumping, particularly plastic waste such as single-use bottles and household garbage etc.
- Intensive human disturbances, including the operation of high-speed jet boats, water-based recreation, bathing, washing clothes, and loud noise.

Table: Recorded threats during the survey at the Koshi River

S.N	GPS Coordinate		Types of Threats
	Northing	Easting	
1	26.848660	87.1505565	Water Diversion
2	26.77744	87.090840	Land Encroachment for agricultural purpose
3	26.752500	87.073135	Land Encroachment for agricultural purpose
4	26.699742	87.082164	Illegal Fishing
5	26.7185791	87.095450	Waste Dumping
6	26.709227	87.085890	Waste Dumping
7	26.770224	87.124779	Human Disturbance (use of jet engine boat, loud music, etc)
8	26.528567	86.921915	Human Disturbance (Bathing, washing clothes)
9	26.495183	86.917559	Land Encroachment for agricultural purpose
10	26.478511	86.897028	Illegal Fishing
11	26.470394	86.884750	Illegal Fishing
	26.524104	86.924075	Illegal Fishing






Project team, as well as Key Stakeholders and River Guard/Citizen Scientists involved in River Dolphin survey (boat-based and shore-based surveys) and threat assessment in both upper and down sections of the Koshi River

Photographs: Recorded threats during the threat assessment (Agricultural and farming activities near the Koshi River, Confiscated fishing gear and Illegal fishing activities, human disturbance including: bathing and washing, use of high-speed jet

2. Conservation Outreach Program:

For the conservation outreach program, an array of activities has been tailored, including: school and community awareness programs, development of IEC materials, art competitions, and drama for dolphin conservation.

2.1. School Awareness Program

Acknowledging the positive roles of school awareness programs in improving knowledge, understanding and attitude toward River Dolphin and the broader aquatic ecosystem, evidence-based awareness sessions were continued in schools located near the Koshi River. During this reporting period, 14 school awareness programs were successfully conducted, reaching approximately 831 students, including 357 males (42.96%) and 474 females (57.04%). This wide outreach highlights the program's strong engagement with young learners in riverine communities.

The primary objective of the awareness program was to provide students with basic yet meaningful information on River Dolphins, focusing on their ecological significance, conservation status, existing threats, and the role of youth in safeguarding river ecosystems. To ensure effective learning, a multi-method and interactive approach was adopted. Sessions combined presentations with visual learning tools such as documentaries and animated videos related to dolphins and the aquatic ecosystem. These methods helped uphold students' interest and attention for approximately 1.5 hours. Each session also included an interactive Q&A segment, allowing students to actively engage, clarify concepts and deepen their understanding. All awareness sessions were delivered by trained citizen scientists and River Guard members, ensuring that information was both accurate and grounded in local conservation experience.

The table below summarizes the outcomes of the School Awareness Program on River Dolphin conservation conducted in 14 schools located in the Koshi River area, where pre- and post-assessment surveys were administered to evaluate changes in students' knowledge and awareness. The assessments were designed to evaluate changes in students' baseline knowledge and awareness before the intervention and the level of understanding achieved after the awareness sessions

Table: Result of pre- and post-program effectiveness survey of school awareness program

School Awareness Program-Koshi on the River Dolphin				
S.N	**Name**	**Pre-Assessment (%)**	**Post-Assessment (%)**	**Averaging (%)**
1	Shree Karna Ghanta Basic School	7.95	96.59	88.64
2	Shree Janata Higher Secondary School	7.40	87.32	79.92
3	Shree Aadarbhut School	7.42	88.04	80.62
4	Shree Jalpa Basic School	4.90	85.17	80.28
5	Shree Gyan Jyoti Secondary School	9.64	92.01	82.37
6	Shree Rastriya Basic School	7.80	90.38	82.58
7	Shree Mahendra Secondary School	10.80	87.12	76.33
8	Shree Suryodaya Basic School	9.42	91.40	81.98
9	Nepal Rastriya Basic School	6.73	72.02	65.29
10	Kosi Bird Observatory	5.45	89.77	84.32
11	Basantaritu Secondary School	3.27	88.85	85.58
12	Madarassa Nurul Iman Basic School	3.66	89.28	85.62

13	Dhanjit Aadharbhut Bidhyalaya	5.11	85.23	80.11
14	Janak Secondary School	4.63	77.19	72.56
Averaging		**6.73**	**87.17**	**80.44**

At the outset, students demonstrated very limited information/knowledge regarding the River Dolphin, with scores ranging from 3.27 to 10.80 and an overall average pre-assessment score of 6.73. This clearly indicates that prior to the intervention, students had minimal exposure to information about River Dolphins, their habitat, and the importance of aquatic ecosystem conservation, underscoring the need for targeted school-based awareness initiatives in riverine communities.

Following the awareness sessions, the post-assessment showed a substantial and consistent improvement across all schools, with scores ranging from 72.02 to 96.59, with an overall average post-assessment score of 87.17. Several schools achieved post-assessment scores above 90, reflecting strong comprehension and retention of key conservation messages. The significant increase from pre- to post-assessment scores demonstrates the effectiveness of the program in enhancing students' knowledge and awareness.

Overall, the program has proven to be highly effective in engaging young learners and strengthening conservation awareness at the grassroots level as well as enhancing students' knowledge, awareness, and attitudes toward River Dolphin conservation and aquatic ecosystem protection. These results strongly support the continuation and expansion of sustainable strategy for building long-term conservation stewardship among young learners in the Koshi River region.

Photographs: The project team facilitated a school-level awareness program in different schools located near the Koshi River

2.2. Community Awareness Program

The Koshi River supports the lives and livelihoods of millions of people, with river-dependent and farming communities relying heavily on its resources for their daily sustenance. Despite this dependence, these communities have often been overlooked in conservation efforts, which has contributed to unsustainable use of river resources and negative impacts on aquatic life, particularly the endangered River Dolphin. Limited awareness of the ecological importance of dolphins and other aquatic species has further compounded these challenges. Recognizing these gaps, we implemented a series of community awareness programs specifically targeting river-dependent, ethnic, and farming communities to promote conservation knowledge and sustainable practices.

A total of 208 participants attended the programs, including 115 males (55.29%) and 93 females (44.71%), representing communities most closely interacting with the river ecosystem. Program locations were carefully selected based on the community's reliance on riverine resources, particularly fishing and agriculture, ensuring relevance and impact. The sessions covered key topics, including the ecological significance of River Dolphins, current threats and conservation challenges, relevant national laws, and the roles and responsibilities of communities in protecting these species. By addressing local needs and cultural contexts, the program encouraged active engagement, ownership, and long-term commitment to conservation.

Table: Results of pre- and post-program effectiveness survey of community awareness program

Community Awareness Program at Koshi River Dolphin				
S.N	**Name**	**Pre-Assessment (%)**	**Post-Assessment (%)**	**Averaging (%)**
1	Jamuwai	14.49	85.51	71.02
2	Bich Paani	12.73	77.82	65.09
3	Surkrabare Tole	10.10	75.76	65.66
4	Koshi Katan	15.54	85.34	69.79
5	Borabadh	11.50	81.82	70.32
6	Hanuman Nagar	28.18	88.64	60.45
7	Joginiya	21.21	82.68	61.47
	Averaging	**16.25**	**82.51**	**66.26**

The community awareness program on River Dolphins along the Koshi River has led to a remarkable increase in conservation knowledge among participants. According to the table, the average awareness levels in the awareness program remain an impressive 66.26%. Pre-assessment results showed a low level of knowledge among participants, with an overall average score of 16.25%. After the program, post-assessment scores increased significantly, reaching an overall average of 82.51%, reflecting substantial learning gains. Communities such as Jamuwai and Borabadh showed the highest gains, and even areas with initially low awareness, like Surkrabare Tole, achieved substantial improvement. Higher pre-assessment communities, including Hanuman Nagar and Joginiya, also exhibited notable progress, highlighting the program's overall effectiveness. The success of this initiative shows that targeted community awareness programs can significantly strengthen local understanding and stewardship of river ecosystems. By fostering responsible resource use, empowering communities, and encouraging active participation in conservation, the program lays a foundation for long-term protection of River Dolphins in Koshi. The results also suggest strong potential for upscaling similar interventions to other river-dependent communities, ensuring broader, sustainable impacts for both local livelihoods and aquatic biodiversity.

Photograph: Community awareness program conducted at different settlements, prioritizing farmers, river-dependent communities of the Koshi

3. Distribution of Educational Materials (posters, brochures, story books):

A set of educational materials, including posters, brochures, and storybooks, was created and shared with schools and community groups to raise awareness about the River Dolphin. These resources were specifically designed with children in mind, using colorful illustrations, simple language, and storytelling techniques to make learning both enjoyable and memorable. By presenting information about the River Dolphin's ecology, threats, and conservation in an accessible and engaging way, these materials captured the curiosity of young minds and encouraged them to connect with the natural world around them. By reaching children early, the initiative not only educates but inspires the next generation to care for Nepal's rivers and wildlife. Teachers and community members have also benefited, gaining clear guidance on how to support conservation efforts in their daily activities. Beyond raising immediate awareness, these materials are intended to have a lasting effect, continuing to educate and inspire future generations. By embedding conservation knowledge into the local community and fostering early environmental stewardship, this approach not only strengthens collective ownership of protection efforts but also builds a foundation for sustainable behavior and long-term care of Nepal's River Dolphins.

Photographs: Educational Materials (brochures and storybooks) developed under the River Dolphin were distributed at different schools, and the community

Photographs: Community people, youths and students are reading the educational materials related to River Dolphins

4. Monitoring of River Dolphin habitat by the River Guard:

The River Guard (RG) played a key role in the regular monitoring of River Dolphin habitats in the Koshi River over nine months. Through systematic bi-monthly field visits, totaling 18 events in collaboration with key stakeholders. These regular field engagements ensured consistent observation of dolphins, river conditions, and prevailing threats, while strengthening coordination among conservation partners.

During each visit, the RG collected essential ecological and threat-related data, including dolphin sightings, habitat characteristics and human-induced pressures like fishing, point source pollution, habitat disturbance etc. Threats were documented by type, location, and severity, along with any immediate or preventive actions taken by the River Guard, supporting timely and informed conservation responses

Alongside monitoring, the RG actively engaged local communities and youths/students by sharing information on River Dolphins through educational materials. These interactions raised awareness of the species' ecological value and legal protection, encouraged responsible river use, and promoted community involvement in conservation efforts.

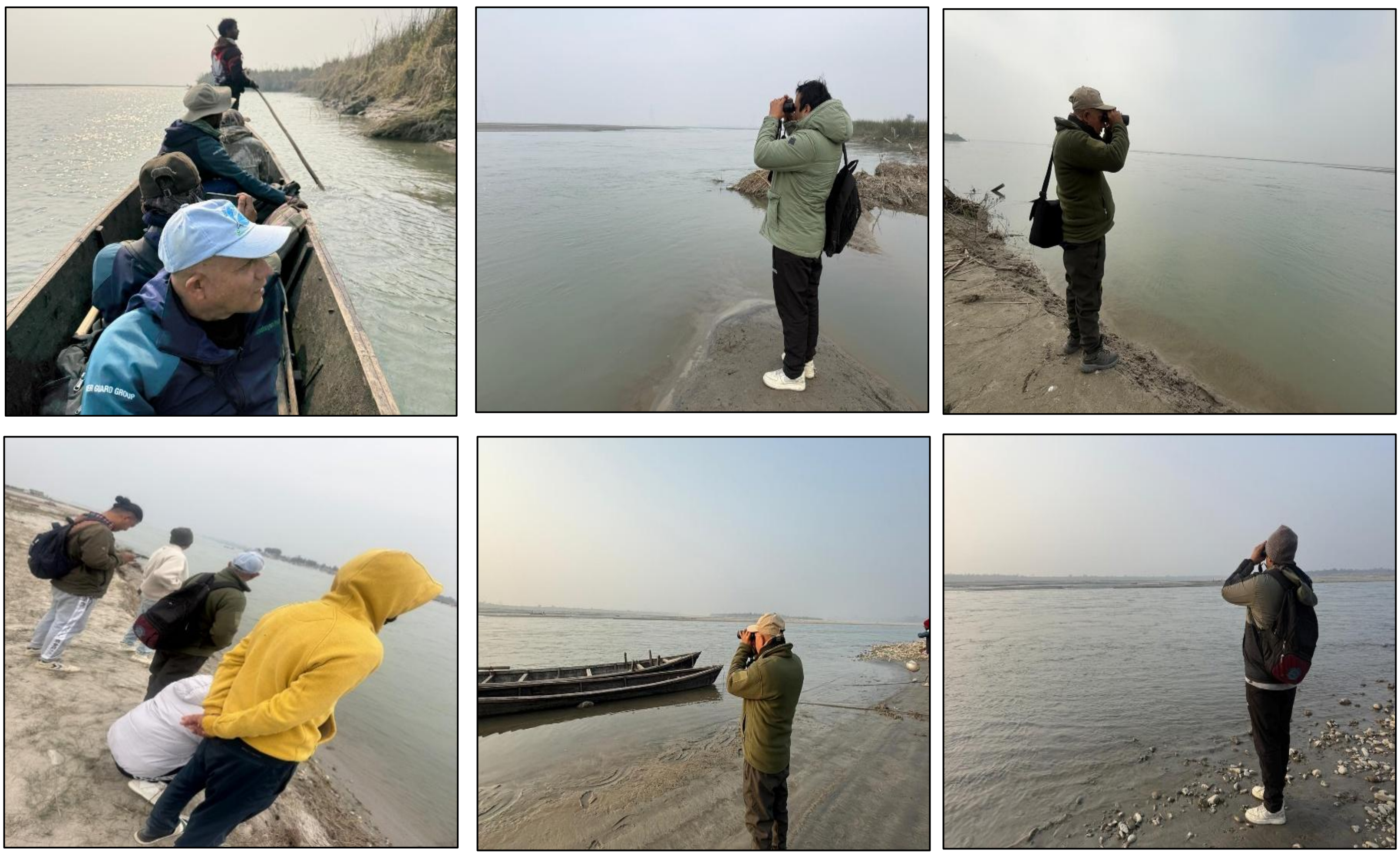
A key outcome of this initiative was the confirmation of River Dolphin presence in the upper stretch of the Koshi River at Borabadh (26.771026N, 87.124466E), approximately 35–40 km upstream of the Koshi Barrage. This marks the second confirmed record in the upper section during the project period, following an earlier sighting at the Madhuban areas, and provides important insights into dolphin distribution and movement.

Overall, the regular monitoring conducted by the RG has generated valuable ecological and threat data demonstrating the importance of sustained, community-linked efforts in guiding effective conservation planning and contributing to the long-term protection of River Dolphins in the Koshi River.






Photographs: Project team and River Guard (RG) members regularly monitor the River Dolphin in the Koshi River, distribute educational materials to community people, students and youths and raise awareness about the River Dolphin



5. Media Coverage

The Project Lead has shared valuable insights on two online news platforms, Gorkhapatra Online Media and Nano News, highlighting the River Dolphin, its historical presence, interactions with local communities, current status, conservation challenges and opportunities, and relevant legislative measures. Additionally, an update on recent dolphin sightings in the Madhuban and Borabadh areas of the upper Koshi River. The link to this news is shared as below;

- *https://gorkhapatraonline.com/news/187793*
- *https://www.facebook.com/reel/2260141084840000*

The use of local online media support to disseminate important information about the River Dolphin. Utilizing local online media is highly effective for raising awareness among a broad audience, particularly local communities that are directly connected to the river ecosystem. By making people aware of the ecological and cultural importance of River Dolphins, such coverage encourages local engagement and fosters a sense of responsibility toward their conservation. The news stories help highlight the species' profile, the reason for its decline, and the need for protective measures, anticipated to motivate individuals and communities to contribute to conservation initiatives at the local level. Furthermore, media outreach strengthens collaboration with authorities, researchers, and conservation organizations, ensuring that updated information informs decision-making and conservation planning.

Through continued engagement with local media, the project aims to enhance public understanding of dolphin ecology, promote local stewardship, and reinforce the importance of River Dolphins conservation both within communities and at a regional level. Such media-driven awareness is an essential tool to support long-term conservation efforts and strengthen the species' protection across its natural habitat.

२ माघ २०८२, शुक्रबार

गोरखापत्र

E-Paper | Old E-paper

सूर्य अस्तसँगै बोराबाँधमा डल्फिनको दृश्यावलोकन

बोराबाध क्षेत्रबाट सप्तकोशी नदीमा देखिएको सौंस (डल्फिन) । तस्बिर : बाबुराम कार्की

गोरखापत्र अनलाइन | २९ पुस २०८२, मङ्गलबार | ३ दिन पहिले

शेयर गर्नुहोस: | फन्ट परिवर्तन गर्नुहोस: अ अ अ

बाबुराम कार्की

वराहक्षेत्र, पुस २९ गते । नेपालका नदिनालाहरुमा कम मात्रमा देखिँदै आएको सौंस (डल्फिन) सप्तकोसी नदीको सूर्य अस्तक्षेत्र बोराबाँध क्षेत्रमा देखिन थालेपछि सौंस हेर्न आन्तरिक पर्यटकहरु बोराबाध आउने गरेका छन् । गत मङ्सिरबाट सूर्य अस्तको दृश्य अवलोकन गर्ने स्थानका रुपमा परिचित बनेको बोराबाँध क्षेत्रबाट सौंस देखिन थालेपछि आन्तरिक र बाह्य पर्यटकहरुको भिड बढ्न थालेको छ ।

गङ्गाको बाघ भनेर चिनेने सौंस (डल्फिन) धेरै वर्षपछि वरेजभन्दा २० किलोमिटर उत्तर सप्तकोसी नदीको बोराबाँध क्षेत्रमा देखिँदै आएको डल्फिन संरक्षणमा काम गर्दै आउनुभएको लभ केसीले बताउनुभयो । उहाँका अनुसार जलीय स्तनधारी जन्तुहरूमध्ये सङ्कटापन्न आवस्थापा रहेको सौंस कोसी वरेजको दक्षिणी क्षेत्रदेखि वराहक्षेत्र मन्दिरको सप्तकोशी नदी क्षेत्रमा देखिएको इतिहास छ । धेरै वर्षदेखि नदेखिएको सौंस पछिल्लो एक महिनादेखि बोराबाँध क्षेत्रमा देखिन थालेको हो ।

सप्तकोशी नदीकिनार क्षेत्रबाट देखिने सूर्यास्तको दृश्य, बालुवाका कण र पानीमा पर्ने सूर्यका किरणका मनमोहक दृश्यसँगै पर्यटकहरु बोराबाँधमा सौंस हेर्न आउने गरेको स्थानीय चरा तथा वन्यजन्तु संरक्षणकर्मी विमल तिम्सिनाले बताउनुभयो ।

स्वच्छ बग्ने पानीको जलकुण्डमा मात्र पाइने सौंसको सङ्ख्या केहि वर्षदेखि घट्दै गइरहेको बताइएको छ । नेपालको कोशी, कर्णाली र नारायणी नदीमा मात्रै पाइने दुर्लभ गङ्गेटिक प्रजातिका सौंस (डल्फिन) को सङ्ख्या घटिरहेको केसीको भनाइ छ । डल्फिन मासिँदै गए जलिय पारिस्थितिक प्रणालिमा असर पुग्ने संरक्षणकर्मी लभ केसीले बताउनुभयो । नदीको प्राकृतिक संरचना नै बिग्रिँदै जाने र जलिय जैविक विविधतामा असर पुग्ने उहाँको भनाइ छ ।

हिन्दु धर्मको महाभारत ग्रन्थमा पनि सौंसलाई मत्स्यकन्या उलुपीको नामबाट वर्णन गर्दै यसको सिकार गर्न नहुने उल्लेख गरिएको छ । जलप्राणी सौंसलाई संरक्षण गर्न सबै सरोकार निकाय लाग्नुपर्ने संरक्षणकर्मी केसी बताउनुहुन्छ ।

दुई दशक अघिसम्म बराहक्षेत्र मन्दिरको पश्चिमपट्टिको कोशी नदीको भुमरी र कोशी ब्यारेज क्षेत्रमा सौंस सहजै देख्न सकिन्थ्यो । २०६५ सालमा कोशी फुटेपछि कोशी ब्यारेजभन्दा उत्तर नदी क्षेत्रमा सौंस कमै मात्रामा देखा पर्ने गरेको बताइएको छ ।

ताजा

- नेपाली कांग्रेसको सभापति गगन थापा : आयोगले दियो विशेष महाधिवेशनलाई मान्यता
- सहकारीमा भएको बेथिति सम्बन्धी छानबिन गर्न जाँचबुझ आयोग गठन
- सल्यानमा ३९ नाल भरुवा बन्दुक बरामद
- बङ्गलादेशको आवासीय भवनमा आगलागी, छ जनाको मृत्यु, १३ घाइते
- चीन–क्यानाडा सम्बन्ध सुधारको सङ्केत
- चीन–क्यानाडा सम्बन्ध सुधारको सङ्केत
- कांग्रेस केन्द्रीय समिति छिटो अद्यावधिक गर्न गगन समूहको माग
- कांग्रेस आधिकारिकता विवाद : दुवै पक्षको निर्वाचन आयोगमा प्रदर्शन
- मन्त्रिपरिषद्को बैठक सिंहदरबारमा
- लामिछानेको मुद्दा फिर्ता गर्ने निर्णयमा बारको आपत्ति
- कास्कीका तीनै क्षेत्रमा निर्वाचन अधिकृत कार्यालय स्थापना

लोकप्रिय

- पैसा थुप्रिँदा फेरि घट्यो ब्याजदर
- सङ्कटमा स्वास्थ्य बिमा कार्यक्रम
- मुख्यमन्त्री आचार्यद्वारा बाहकुन्ने दह र बराह मन्दिर अवलोकन
- सेवा ढोग लाग्दै पुर्खाको आशीर्वाद ग्रहण
- तारेभीरमा 'रक क्लाइम्बिङ'
- रचनात्मक झिल्कादेखि व्यावसायिक उद्यमसम्म

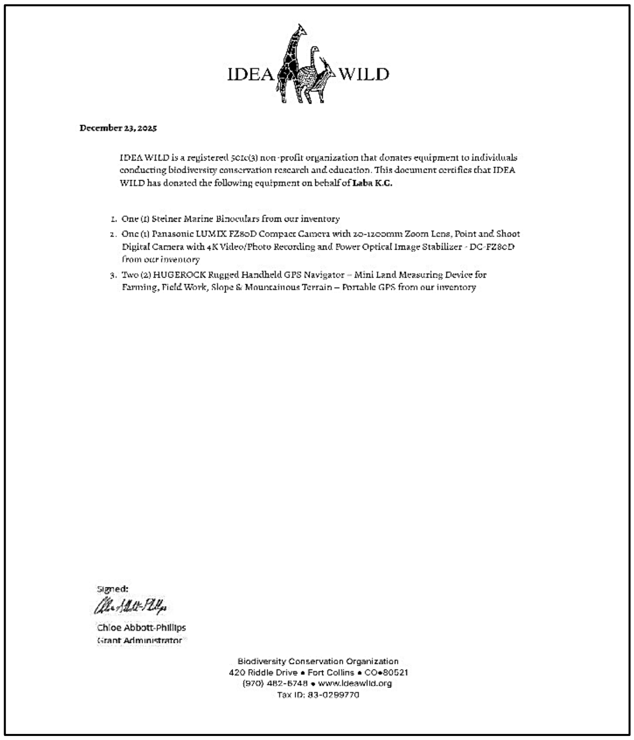
Photograph: River Dolphin recorded at the Borabadh, upper section of Koshi River

6. Equipment Support from Idea Wild

The Idea Wild organization has generously provided essential field equipment to strengthen the River Dolphin Conservation Project. The package includes

- Steiner Marine Binoculars (N=1 unit),
- Panasonic LUMIX FZ80D compact digital camera (N=1 unit),
- HUGEROCK rugged handheld GPS navigators (N=2 units).

These tools are highly valuable for field surveys, allowing the research team and particularly the River Guard group members to accurately locate and monitor river dolphins, document their behavior and habitat, and assess threats such as human disturbance or habitat degradation. By equipping the River Guard group with these tools, the project strengthens on-ground conservation efforts, promotes systematic research, and enhances the capacity to collaborate with other organizations for the protection of river dolphins and the broader aquatic ecosystem.



IDEA WILD

December 23, 2025

IDEA WILD is a registered 501c(3) non-profit organization that donates equipment to individuals conducting biodiversity conservation research and education. This document certifies that IDEA WILD has donated the following equipment on behalf of **Laba K.C.**

1. One (1) Steiner Marine Binoculars from our inventory
2. One (1) Panasonic LUMIX FZ80D Compact Camera with 20-1200mm Zoom Lens, Point and Shoot Digital Camera with 4K Video/Photo Recording and Power Optical Image Stabilizer - DC-FZ80D from our inventory
3. Two (2) HUGEROCK Rugged Handheld GPS Navigator – Mini Land Measuring Device for Farming, Field Work, Slope & Mountainous Terrain – Portable GPS from our inventory

Signed:

Chloe Abbott-Phillips
Grant Administrator

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