









WATER QUALITY MONITORING •

AND ENVIRONMENTAL AWARENESS
AT CORBETT TIGER RESERVE AND
RAJAJI NATIONAL PARK

**EIACP NEWS LETTER 2024-25 (I)** 

**UTTARAKHAND POLLUTION CONTROL BOARD** 



# INTRODUCTION

Wildlife Week was started in 1952 with the aim of raising awareness among the public about important measures for the protection of wildlife life. Against this backdrop, the Indian government has created an Indian Wildlife Council that is committed to raising awareness of the conservation of wildlife.

Wildlife Week is celebrated every year from 2 to 8 October in India. The main objective of this campaign is to promote the conservation and protection of animal life. It teaches people about the animal's life and encourages them to save a large number of animals by not killing them for their own food or for other purposes.

The 2024 theme for the wildlife week, "Connecting People and Planet: Exploring Digital Innovation in Wildlife Conservation", recognizes the impact of digital interventions on ecosystems and communities in an increasingly connected world.

## Wildlife Management

The state of Uttarakhand is renowned for its unique biodiversity. Due to geographic and climatic diversity in different areas of the state different forest types are found spanning from the Himalayas to the plains of the Terai. Due to biodiversity present in state 12 percent of total geographical area is protected areas which includes 6 National Park, 7 Wildlife Sanctuary, 4 Conservation Reserve & 1 Biosphere Reserve, (Table-1). Uttarakhand is home to rare species of plants and animals too, many of which are protected by sanctuaries and reserves.

In the uttarakhand state, 102 mammals, 600 of birds, 19 amphibians, 70 reptiles and 124 species of fish are found. In these above mentioned species there exists globally endangered species which consists of tiger (Panthera tigers), Asian elephant (Elephus maximus), Guldar (Panthera pardus), Musk deer (Moschus chrysogaster), snow leopard (Panthera uncial), Monal (Lophophorus impejanus) etc.











Table-1:- Description of National Park/Wildlife Sanctuary/Conservation Reserve/Biosphere Reserve

National Parks									
S.No.	Protected Area	Area (Km²)	Inauguration Year						
1	Corbett National Park	520.82	1936						
2	Nanda Devi National Park	624.60	1982						
3	Valley of Flowers National Park	87.50	1982						
4	Rajaji National Park	820.42	1983						
5	Gangotri National Park	2390.02	1989						
6	Govind National Park	472.08	1990						
Wildlife Sanctuary									
1	Govind wildlife sanctuary	485.89	1955						
2	Kedarnath wildlife sanctuary	975.20	1972						
3	Askot wildlife sanctuary	599.93	1986						
4	Sonanadi wildlife sanctuary	301.18	1987						
5	Binsar wildlife sanctuary	47.07	1988						
6	Mussoorie wildlife sanctuary	10.82	1993						
7	Nandhaur Wildlife Sanctuary	269.95	2012						
Cons	ervation Reserve								
1	Jhilmil Jheel Conservation Reserve	37.84	2005						
2	Aasan Wetland Conservation Reserve	4.44	2005						
3	Pawalgarh Conservation Reserve	5.82	2012						
4	Nainadevi Himalayan Bird Conservation Reserve	91	2015						
Biosp	here Reserve								
1	Nanda Devi Biosphere reserve	630.33	1982						

Source: https://forest.uk.gov.in/wildlife-management

#### **Activities Performed by UKPCB During Wildlife Week**

Demarcating its limits and providing a protective barrier for the wildlife within. The rivers' presence helps in minimizing human-wildlife conflicts by providing a physical barrier that restricts human encroachment into the park. It allows the animals to move freely within their natural habitat and contributes to their conservation efforts. In the year 2023, on the occasion of Wildlife Week Uttarakhand Pollution Control Board (UKPCB) has initiated Water Quality Monitoring at different locations of Corbett Tiger Reserve/ Rajaji National Park. The rivers act as natural boundaries for the park,



UKPCB also organised Environmental Awareness Programme at Rajaji National Park, Motichur, Haridwar & Corbett Tiger Reserve at Nainital. The main purpose of awareness is to educate Forest guards, other employees of the park and tourist about Environment Conservation, Mission Life Activities and were requested not to use Single Use Plastic.

### Rivers Around Rajaji National Park & Corbett National Park

The Rajaji National Park is bisected by the river Ganges and also fed by numerous Wild Brook s forming its life line. (https://www.rajajinationalpark.co.in/)

Ramganga River is the Lifeline for Corbett National Park. It collects water from the Palain, Mandal and Sonanadi rivers during this run through the park and finally drains into River Ganga near Farrukhabad in Uttar Pradesh. The Kosi is a perennial river that servers major portion of the Corbett's wild as the Corbett wild use the Kosi river to quench their thirst. Eastern periphery of the park is fed by Kosi that flows from Mohan till Ramnagar via Dhikuli. Though, the Kosi does not enter the park boundary. River Sonanadi is gorgeous river is the significant tributary of Ramganga River. The river has been named after the Sonanadi wildlife Sanctuary that adjoins Corbett National Park and held as an crucial part of Corbett Tiger Reserve. It enters the Corbett from the North-West direction and merges into the Ramganga River at its reservoir. River Sot' is the local name for a seasonal stream. While traveling across the park you may cross several of these bouldery dry streams. Though most of them appear dry and lifeless, they are very important for Sot or seasonal stream the Park ecology. Animals depend on these sots for their drinking water requirements for a good part of the year. There are some sots in Corbett that are perennial, important ones being Paterpani, Laldhang, Kothirao, Jhirna, Dhara and Garjia.

#### Source: https://www.corbetttigerreserve.in/river-of-corbett.php

In this sequence, Surface & Ground Water samples were collected for Water Quality analysis from various locations.

S.No.	Sampling Location Type of Sample						
Corbett Tiger Reserve							
1.	Borewell, Near Camp Office, Jhirna Range	Ground Water					
2.	Leldhang River, Jhirna Range	Surface Water					
3.	Jhirna River, Jhirna Range	Surface Water					
4.	Kothiro River, Jhirna Range	Surface Water					
Rajaji National Park							
5.	River- Motichur Raw	Surface Water					
6.	Water Pond Chhatarsal	Surface Water					
7.	Koyalpura Nalla	Surface Water					



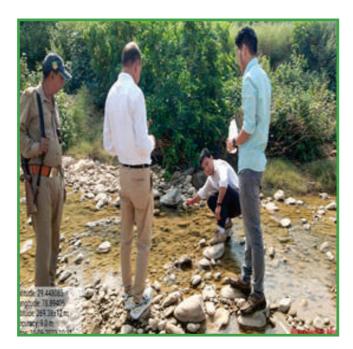
The data of such water quality is compared with designated best use criteria as given by Central Pollution Control Board. This is given as under:-

# Results of Water Quality Monitoring at Corbett Tiger Reserve and Rajaji National Park Sample collection date 08.10.2023

S. No.	Parameters	River- Motichur Raw, Rajaji National Park, Motichur Range	Water Pond Chhatarsal, Motichur Range, Rajaji National Park	Koyalpura Nalla, Rajaji National Park, Motichur Range	Borewell at Jhirna Rest House, Corbett National Park, Ramnagar, Nainital	D/s of Jhirna River, Jhirna Range, Corbett National Park, Ramnagar, Nainital	D/s of Laldhang River, Jhirna Range, Corbett National Park, Ramnagar, Nainital	D/s of Kothiro River, Jhirna Range, Corbett National Park, Ramnagar, Nainital		
1	Colour (Hazen)	<10	10	10	Colourless	Colourless	Colourless	Colourless		
2	Odour	Odourless	Odourless	Not Specific	Odourless	Odourless	Odourless	Odourless		
3	Weather	Clear	Clear	Clear						
4	Temp (°c)	23	26	25	19	19	22	26		
5	рН	8.33	7.81	6.55	7.69	7.47	7.21	7.33		
6	TDS (mg/L)	110	80	46	126	91	97	102		
7	EC (µs/cm)	167	122	71	180	130	140	140		
8	DO (mg/L)	7.6	6.2	5.6		7.8	8.2	7.2		
9	Chloride (mg/L)	9.0	10.0	10.0	9.0	6.0	5.0	9.0		
10	Total Hardness (mg/L)	91	63	39	126	110	94	121		
11	Calcium Hardness (mg/L)	68	47	26	82	78	64	85		
12	Magnesium Hardness (mg/L)	23	16	13	44	32	30	36		
13	Total Alkanity (mg/L)	90	68	42	114	102	78	110		
14	BOD (mg/L)	1.7	2.2	2.8	1.0	1.0	1.0	1.2		
15	COD (mg/L)	6.0	5.0	5.0	BDL	BDL	BDL	BDL		
16	TC (MPN/100ml)	94	140	280	<1.8	27	21	47		
17	Faecal Coliform (MPN/100ml)	70	94	220	<1.8	22	17	40		
18	Faecal Streptococcus (MPN/100ml)	6.8	9.2	21	<1.8	<1.8	<1.8	<1.8		
19	Nitrate (mg/L)	0.18	0.18	0.27	0.02	0.05	0.03	0.04		
20	Nitrite (mg/L)	0.02	0.03	0.03	0.01	ND	ND	ND		
21	Sulphate (mg/L)	4.11	4.47	15.76	28.31	31.24	18.36	22.15		
22	Phosphate (mg/L)	0.002	0.07	0.002	0.09	0.02	0.07	0.11		
23	Fluoride (mg/L)	0.17	0.19	0.22	0.12	0.07	0.08	0.04		
24	Sodium (mg/L)	15.6	10.2	25.5	5.1	5.6	6.2	6.4		
25	Potassium (mg/L)	3.8	2.3	5.9	2.3	2.6	3.1	2.9		
26	Sodium Absorption Ration (SAR)	0.70	0.55	1.77	0.2	0.23	0.28	0.25		
	ignated-Best-Use (DBU) ter Quality Class.	В	В	В	-	A	A	A		
Designated Best Use Criteria										
Drink	gnated-Best-Use king Water Source without entional treatment but disinfection	Class of water  A	Criteria  Total Coliforms Organism MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20C 2mg/l or less							
	poor bathing (Organised)	В	Total Coliforms Organism MPN/100ml shall be 50 or less pH between 6.5 and 8.5 Dissolved Oxygen 6mg/l or more Biochemical Oxygen Demand 5 days 20C 2mg/l or less							

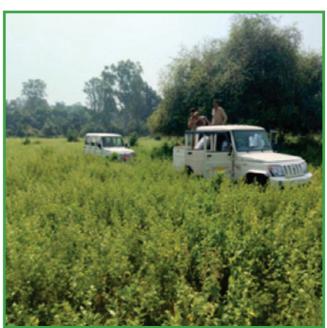


#### Water Quality Sampling at Rajaji National Park and Corbett Tiger Reserve









### Awareness Session at Corbett Tiger Reserve and Rajaji National Park

Regional Offices Dehradun and Roorkee organized an Awareness Session at Rajaji National Park and Regional Offices Kashipur and Haldwani organized Awareness Session at Corbett Tiger Reserve during Wildlife Week 2023. Target Group for the session was Forest Officials and Tourists. They were informed about Best Practices for Environment Protection and Mission Life.





#### Rajaji National Park







# गोष्ठी में कूड़ा निस्तारण को लेकर किया मंथन



राध्यकाल्याः ग्राजानी टाइगर रिजर्ण की मंत्रीकृत रेज में पर्यावरण जान जागरकाकाल कार्यकार का अस्पीत्रण पित्रण प्रमाः जिसस्में प्रभावकाल प्रदूषण निर्मात्रण जीत के अधिकारियों में मोत्रीचृत रेज का अम्रण किया और कहा विभिन्न क्यांचे से पानी के रीपाल लिए। वहीं कृत्या निरस्ताल की रोपाल भी रहान मंत्रण किया प्रमाः रीपालर को जीतें के अधिकारियों ने कन कार्यान मंत्रण की से स्वाचित विभिन्न की विकास की जीतें के अधिकार स्वाच्या स्वाच्या स्वाच्या की से स्वाच्या की स्वाच्या की स्वाच्या की प्रकाद स्वाच्या की से स्वाच्या स्वाच्या संस्था की विकास की सीत्रण की रोपाल कार्या संस्था कि साम प्रमोगरण प्रदूषण की रोपाल साम संस्था

मोतीचूर रेंज में घर्यावरण जन जागरूकता को लेकर गोष्ठी आयोजित

#### अधिकारियों ने लिए पानी के सेंपल

# Corbett Tiger Reserve















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