# BIRD IDENTIFICATION AND BASIC ORNITHOLOGY

# **PROGRESS REPORT 2020**

(11:26 January, 2020)

ENVIS Centre on Himalayan Ecology, GBPNIHE, Kosi-Katarmal, Almora

















Submitted to

ENVIS Secretariat, MoEF&CC New Delhi, Govt. Of India

#### Banner for bird identification and basic ornithology course





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#### **Background**

Green skills contribute to preserving or restoring environmental quality for sustainable future and include jobs that protect ecosystems and biodiversity, reduce energy and minimize waste and pollution. In line with the Skill India Mission of Hon'ble Prime Minister, Ministry of Environment, Forest & Climate Change (MoEF&CC) utilizing the vast network and expertise of ENVIS Hubs/RPs spread across India, and has taken up an initiative for skill development in the environment and forest sector to enable India's youth to get gainful employment and/or self-employment, called the Green Skill Development Programme (GSDP).

In recent years, nature based tourism has gained popularity all over the globe owing to its ability to connect the tourists with the elements of nature and at the same time brings income to the local communities that are engaged in catering the needs of the tourist. Among others (plant, insects, mammals, etc), one of these elements are Birds. Bird watching (Birding) tourism has been referred to as a growing multi-billion dollar ecotourism industry. Millions of peoples around the world set out to catch glimpses of colour strokes and plumage of birds. Considering this huge influx of tourists to get a glimpse or to understand the interaction of birds with its surroundings, trainings courses are required to acquaint local people with the knowledge and ability to entertain the nature loving tourists, so that they can make their living out of it. Considering the above, a certificate course was designed by the ENVIS Centre of GBPNIHE on Bird Identification and Basic Ornithology under GSDP and the programme was organized from 11<sup>th</sup> to 26<sup>th</sup> January, 2020. The objectives of the training programme were:

- (i) To develop the skill of trainees in identifying birds.
- (ii) To acquaint the trainees with the experiences and learning of entrepreneurs in the field of bird watching and nature based tourism so that they can get inspired to adopt bird-watching/nature based tourism as a livelihood option.
- (iii) To groom the skills of the trainees towards bird/nature interpretation.
- (iv) To lay emphasis on how bird tourism can be seen as a livelihood option and is linked to biodiversity conservation and management.

#### Approach and methodology towards development of course materials

For bird identification, "A field guide to Birds of the Indian Subcontinent" by Richard Grimmett, Carol Inskipp and Tim Inskipp was provided to all the trainees. The purpose of providing field guide was to help the trainees understand small details needs to be noticed while identifying birds. The course material was developed in a way that it would help the trainees even after the training is over. It included presentations, documentaries, and publications on birds. Field visits were organized every day so that the purpose of the training course does not lag behind. Every day in the evening a session was conducted on highlight of the day (w.r.t. birds) and bird checklist preparation, which was later compiled. Thus a complete checklist of birds recorded during the training was compiled and attached in Table-4.

# Advertisement, course modules and selection of trainees

The course was advt. in local Amar Ujala news paper based on this 61 application were received. The training modules were finalized by scientist, experts and recourse person in Table-1. The trainees were selected 15 out of 61 applicants to this course based on their profile and evidence of their qualification, birding experience and willingness through telephonic interview. This training course was joined by 17 candidates across Uttarakhand, U.P. State. A brief profile of the trainees and resource persons is given in Table 2 &3.



**Table- 1.** Training modules for the course

| Sr. No | Name of the topic   | No of hours |
|--------|---|-------------|
| 1.     | Introduction to the course  | 6           |
| 2.     | Bird evolution and history  | 6           |
| 3.     | Bird classification and diversity   | 6           |
| 4.     | Adaptation in birds   | 6           |
| 5.     | Birds and their habitats  | 6           |
| 6.     | Bird behaviour  | 6           |
| 7.     | How to observe birds  | 6           |
| 8.     | Bird identification   | 6           |
| 9.     | Birds and humans  | 6           |
|        | - Birds in culture  |             |
|        | - Bird as resource  |             |
| 10.    | Threats to the bird   | 6           |
| 11.    | Bird conservation   | 6           |
| 12.    | Bird diversity of India and threatened birds of India, birds in state symbols | 6           |
| 13.    | Bird tourism as a livelihood  | 6           |
| 14.    | Importance of Ecological notes and site specific observations                 | 4           |
| 15.    | Essentials of bird watching across different clientele                        | 4           |
| 16.    | Value chain in bird tourism   | 8           |
| 17.    | Bird watching ethics  | 4           |
| 18.    | Mapping a bird trail  | 8           |
| 19.    | Preparation of a bird watching calendar                                       | 8           |
| 20.    | Global, National and regional Bird Conservation Network                       | 4           |
| 21.    | Basics of Instrumentation- Binocular; Spotting scope; GPS; Camera             | 6           |
| 22.    | Bird Photography: Tricks and techniques                                       | 6           |
| 23.    | Basics of IT skills   | 6           |
|        | - Introduction to Smartphone and its application in bird                      |             |
|        | watching  |             |
|        | - Use of Google earth   |             |
| 24.    | Field visit to  | 16          |
|        | - Visit to forest   |             |
|        | - Visit to wetland  | 0           |
| 25.    | Examination/ Feedback   | 8           |
| 26.    | Closing ceremony (Certificate distribution)                                   | 4.001       |
|        | Total   | 160 hrs.    |

Table- 2. Selected traniees for bird identification and basic ornithology course

| SN  | Name of Trainee         | Gender/<br>Category | Qualificatio<br>n | Unique ID        | Mobile no./<br>E-mail                            | Address  |
|-----|-------------------------|---------------------|-------------------|------------------|--|--|
| 1   | Amardeep Singh<br>Sethi | M/ Gen              | Masters           | AMAR0405198<br>5 | 9837622499<br>internetpointrmr@g<br>mail.com     | Near Hanuman Mandir<br>Bambagher Ramnagar<br>Nainital                |
| 2   | Mahendra Singh<br>Pawar | M/ Gen              | Masters           | MAHE0507198<br>2 | 9410717789<br>pawarcorbett@gmail<br>.com         | Kamala- Narayan<br>Sadan,<br>Pampapuri, Ramngar<br>Distt<br>Nainital |
| 3   | Himanshu Tiruwa         | M/ SC               | Bachelors         | HIMA14091991     | 9927077937<br>himanshutiruwa90@<br>gmail.com     | Tiruwa Niwas Sai<br>Dham<br>Colony Chilkiya<br>Ramnagar<br>Nainital  |
| 4   | Bhaskar Sati            | M/ Gen              | 12 <sup>th</sup>  | BHAS02021992     | 9456175972<br>bhaskarsati0492@g<br>mail.com      | Village- Kyari,Post-<br>Ramnagar,Tehsil-<br>Ramnagar, Nainital       |
| 5   | Manisha Bisht           | F/ Gen              | Masters           | Mani14121992     | 8449911274<br>bishtmanisha396@g<br>mail.com      | Department of Zoology, D.S.B.Campus, Kumaun University, Nainital     |
| 6   | Prakash Chandra<br>Sati | M/ Gen              | Bachelors         | PRAK30121988     | 9411773223<br>pcsati2008@gmail.c<br>om           | Village - Kyari khan,<br>post office-Ramnagar,<br>district- Nainital |
| 7   | Bipin Chandra<br>Joshi  | M/ Gen              | Masters           | BIPI01011970     | 9758006110<br>joshi.binsar@gmail.co              | Vill and PO Sunoli,<br>Almora  |
| 8   | Prakash arya            | M/ SC               | Bachelors         | Prak17071994     | 7895684329<br>Prakash.arya.65.pa@<br>gmail.com   | Vill-matena, P.Odeenapani, Almora                                    |
| 9   | Deepak Pandey           | M/ Gen              | Intermediate      | Deep20061984     | 9690161859<br>deepak20.p@gmail.c<br>om           | House No. 28<br>Madhuwan,<br>Cheenakhan, Almora                      |
| 10  | Ashish Kumar<br>Arya    | M/ Gen              | Masters           | Ashi13101997     | 8755322345<br>ashishtyagi.gkv@gm<br>ail.com      | Department of Zoology<br>Gurukal<br>Kangri University,<br>Haridwar   |
| 11  | Sanju Negi              | M/ OBC              | Intermediate      | SANJ03101996     | 9719278606<br>Sanjuharidwar01@g<br>mail.com      | Chilla Forest Colony,<br>P/O Chilla Colony,<br>Dist- Pauri Garhwal   |
| 12  | Pankaj Singh Negi       | M/ OBC              | Metric            | PANK03071993     | 9536925844<br>pnkj61@gmail.com                   | Khand Gaon 2<br>Raiwala, Dehradun                                    |
| 13  | Rajender Singh<br>Jaira | M/ Gen              | Bachelors         | RAJE20061991     | 7017699552<br>rajenderjaira777777<br>7@gmail.com | Village - Naya<br>Laldhang Firojpur,<br>Kashipur (U.S.N.)            |
| 14  | Vikash Kumar<br>Maurya  | M/ OBC              | Intermediate      | Vika15061997     | 8887282574<br>vikash8423857607@<br>gmail.com     | 81/60 nayapura stanley<br>road, Prayagraj                            |
| 15. | Vinay Singh             | M                   | Masters           | Vina02091993     | 9997539723<br>singhvinay.vs93@g<br>mail.com      | Department of Zoology, D.S.B. Campus, Kumaun University, Nainital    |

# **Resource persons**

Considering the depth of the course module and the diversity of the topics to be covered, 5 internal and 8 external resource people were finalized. List of resource persons is given in Table 3

Table- 3. Resource persons/ Expert details for bird identification and basic ornithology course

| S.<br>No. | Resource Person/ Expert/Instructor Name with Designation | Centre Name/ Contact Detail   |
|-----------|--|---|
| 1.        | Dr. G.C.S. Negi<br>Scientist-G, Coordinator ENVIS        | GBPNIHE, Almora, Uttarakhand<br>9411105170<br>negigcs@gmail.com                       |
| 2.        | Dr. G.S. Rawat<br>WII, Dehradun                          | Former Director, Wildlife Institute of India (WII), Dehradun, Uttarakhand 09412053542 |
| 3.        | Mr. Himanshu Bangri<br>Divisional Forest Officer (DFO)   | Nainital, Uttarakhand<br>08050888515  |
| 4.        | Mr. B.S. Bisht Freelance Wildlife Expert                 | Ramnagar, Nainital, Uttarakhand<br>9837042189<br>rainbowbachi@gmail.com               |
| 5.        | Dr. K.K. Joshi<br>Associate Professor                    | Graphic Era University, Dehradun<br>09412903496                                       |
| 6.        | Mr. Rajesh Bhatt<br>Bird Expert                          | Ramnagar, Nainital, Uttarakhand<br>07983923719  |
| 7.        | Mr. Naveen Upadhaya<br>Expert in Eco-Tourism             | Camp Hornbill, Kyari, Ramnagar, Nainital, Uttarakhand                                 |
| 8.        | Dr. Ravindra Joshi<br>Freelance Fauna Expert             | Almora, Uttarakhand<br>9456105533<br>rhinoraboo@yahoo.com                             |
| 9.        | Mr. Ravi Pathak<br>Research Scholar                      | GBPNIHE, Almora, Uttarakhand<br>8755238650<br>ravi0pathak@gmail.com                   |
| 10        | Mr. Pooran Joshi<br>Freelance Bird Watcher               | Pangoot, Nainital, Uttarakhand<br>097565440772  |
| 11        | Mr. Himanshu Joshi<br>Freelance Expert                   | Dharanaula, Almora, Uttarakhand<br>09568837974  |
| 12        | Dr. Mahesha Nand Programme<br>Officer                    | ENVIS, GBPNIHE, Almora, Uttarakhand<br>9627785457<br>maheshlyf87@gmail.com            |
| 13        | Mr. Vipin Chandra Sharma Information Officer             | ENVIS, GBPNIHE, Almora, Uttarakhand<br>9720335427<br>deepudun28@gmail.com             |

## **Launching of GSDP course**



## **Inauguration of the course**



# Session-1 Inauguration of bird identification and basic ornithology course

# **Experts and chief guest**

Dr. G.S. Rawat, Former Director, Wildlife Institute of India, Dehradun

Dr. R.S. Rawal, Director, GBPNIHE, Kosi- Katarmal, Almora

Dr. G.C.S. Negi, Coordinator, ENVIS, GBPNIHE, Kosi- Katarmal, Almora

Mr. B.S. Bisht, Freelance Bird Specialist, Ramnagar, Nainital

# **Bird diversity**



# **Programme schedule for inaugural function 11 January 2020**

| 10:00-10:30 AM   | Arrival of Participants & Registration; Welcome Tea       | ENVIS Centre / Institute Lobby                         |
|------------------|---|--|
| 10:30 -10:35 AM  | Lighting of Lamp<br>(Conference Hall)                     | Guests on Dias   |
| 10:35-10:45 AM   | Welcome Address & About GSDP<br>Course                    | Dr. G.C.S. Negi  |
|                  |   | Coordinator ENVIS, GBPNIHESD                           |
| 10.45-11:00 AM   | Introduction of Trainees                                  | Selected GSDP trainees                                 |
| 11.00 - 12.30 PM | Lead Lecture by Chief Guest (Bird                         | Dr. G.S. Rawat, Former Director,                       |
|                  | Habitats in the Western Himalaya & their Conservation)    | Wildlife Institute of India, Dehradun                  |
|                  | ,   | (Assisted by Dr. Azaz Ahmad, WII)                      |
| 12.30-12.45 AM   | Bird Watching for Self                                    | Mr. B.S. Bisht, Freelance Bird                         |
|                  | Employment  | Specialist, Ramnagar                                   |
| 12:45-12:50 PM   | Felicitation of Guests/ Release of ENVIS Publication      | Director, GBPNIHESD                                    |
| 12.50-1.00 PM    | Remarks   | Dr. R.S. Rawal, Director,                              |
| 12.50 1.00 114   | Kemarks   | GBPNIHESD  |
| 1.00 PM          | Vote of Thanks  | Dr. Mahesha Nand                                       |
|                  |   | ENVIS, GBPNIHESD                                       |
| 1.00 PM          | Lunch   | Institute Canteen                                      |
| 2:00-3.00 PM     | Lecture by Resource Person                                | Mr. B.S. Bisht, Freelance Bird<br>Specialist, Ramnagar |
| 3.00 - 5.00 PM   | Bird Diversity in Surya Kunj / Bird<br>Photography Basics | Dr. Ravindra Joshi/ Ravi Pathak/<br>Kuldeep Joshi      |
| 6.00-8.00        | Expectations of Trainees/<br>Feedback                     | NILC, GBPNIHESD  |

# Programme schedule (12 -27 January 2020)

| DAY- 2 (12 January 2020)   | Resource Persons   |  |  |  |  |
|--|--|--|--|--|--|
| <ul> <li>Departure from Kosi-Katarmal to Kyari (Distt. Nainital)</li> <li>Training course ethics/Do's &amp; Don'ts during the training course (bird watching ethics)</li> <li>Class room lecture (Introduction of birds &amp; evolution history/ Instrumentation in bird watching/Ethnoornithology, birds as folk medicine, ornamental birds, etc.)</li> <li>Ecotourism, home stays and bird watching for self employment</li> <li>Trainee's interaction / Feedback / Creativity</li> </ul>                                  | Sri B.S. Bisht Dr. Ravindra Joshi Mr. Ravi Pathak Mr. Rajesh Bhatt Mr. Navin Upadhyay ENVIS Staff  |  |  |  |  |
| <b>DAY-3 (13 January 2020)</b>   |  |  |  |  |  |
| <ul> <li>Connecting with nature (motivational talk/Yoga etc.)</li> <li>Bird watching (Different habitats/Wetlands- Tumaria pond/ Forests/ Shrubland/Grassland/Agriculture etc.)</li> <li>Class room lecture (Birds of India/Himalaya/Uttarakhand- Birds classification &amp; diversity / threatened birds, Bird as important ecological component)</li> <li>Bird watching (Different habitats/ecological notes on birds)</li> <li>Bird of the day / Bird games</li> <li>Trainee's interaction / Feedback</li> </ul>          | Dr. G.C.S. Negi<br>Sri B.S. Bisht<br>Dr. Ravindra Joshi<br>Mr. Ravi Pathak<br>Sri Rajesh Bhatt<br>Mr. Navin Upadhyay<br>ENVIS Staff  |  |  |  |  |
| ·  |  |  |  |  |  |
| bay I (1 I sandary 2020)   |  |  |  |  |  |
| <ul> <li>Connecting with nature (motivational talk/Yoga etc.)</li> <li>Bird watching (Different habitats/ Wetlands/ Forests/<br/>Shrubland/Grassland/Agriculture etc.)</li> <li>Address to trainees by DFO, Ramnagar</li> <li>Class room lecture (Bird habitats/ Adaptation in birds/Threats to birds &amp; conservation/birds in state symbols)</li> <li>Bird watching (Different habitats/ Bird watching calendar)</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul> | DFO Ramnagar<br>Sri B.S. Bisht<br>Dr. Ravindra Joshi<br>Mr. Ravi Pathak<br>Mr. Navin Upadhyay<br>Sri Rajesh Bhatt<br>ENVIS Staff   |  |  |  |  |
| Day-5 (15 January 2020)  |  |  |  |  |  |
| <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching (Different habitats/ Wetlands/ Forests/<br/>Shrubland/Grassland/Agriculture etc.)</li> <li>Class room lecture (How to observe birds/Bird census methods/ habitat ecology)</li> <li>Bird watching (Different habitats)</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>  | Sri B.S. Bisht Dr. Ravindra Joshi Dr. Kamal Joshi Mr. Ravi Pathak Sri Ajay Sharma Sri Rajesh Bhatt ENVIS Staff   |  |  |  |  |
|  | <ul> <li>Departure from Kosi-Katarmal to Kyari (Distt. Nainital)</li> <li>Training course ethics/Do's &amp; Don'ts during the training course (bird watching ethics)</li> <li>Class room lecture (Introduction of birds &amp; evolution history/ Instrumentation in bird watching/Ethnoornithology, birds as folk medicine, ornamental birds, etc.)</li> <li>Ecotourism, home stays and bird watching for self employment</li> <li>Trainee's interaction / Feedback / Creativity</li></ul> |  |  |  |  |

| Day-6 (16 January 2020)  |   |  |  |  |  |  |
|--|---|--|--|--|--|--|
| 6.00-7.00 AM<br>8.30-1.30 PM<br>2.30- 5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM                    | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching (Visit to Corbett National Park/Barrage area of Ramaganga River)</li> <li>Class room lecture (Bird behaviour/ Food habit-Fruigivorous, Grainivorous, Piscivorous, Insectivorous, Nectivorous, Scavangers, Bird of prey etc.) Food guild, competition etc.)</li> <li>Bird of the day / Bird games/Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>          | Sri B. S. Bisht Dr. Ravindra Joshi Mr. Ravi Pathak Sri Rajesh Bhatt Sri Navin Upadhyay ENVIS Staff |  |  |  |  |
|  | Day-7 (17 January 2020)   |  |  |  |  |  |
| 6.00-7.00 AM<br>8.30 AM<br>10.30 - 1.30 AM<br>2.30- 5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM      | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Departure to Syat village camp</li> <li>Class room lecture (Bird identification/Bird and humans culture/Bird Resources)</li> <li>Bird watching (Different habitats/ Wetlands/ Forests/ Shrubland/Grassland/Agriculture etc.)</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>  | Sri B. S. Bisht Sri Rajesh Bhatt Dr. Ravindra Joshi Mr. Navin Upadhyay Mr. Ravi Pathak ENVIS Staff |  |  |  |  |
|  | Day -8 (18 January2020)   |  |  |  |  |  |
| 6.00-7.00 AM<br>8.30-1.30 PM<br>2.30-5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM                     | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching (Bird tourism as a livelihood/Value chain in Bird Tourism)</li> <li>Bird watching (Bor-Haripur Water Body / Corbett Village-Chunakhan)</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>  | Sri B.S. Bisht Sri Rajesh Bhatt Dr. Ravindra Joshi Mr. Ravi Pathak ENVIS Staff                     |  |  |  |  |
|  | Day -9 (19 January 2020)  |  |  |  |  |  |
| 6.00-7.00 AM<br>8.30-11.30 AM<br>1.30 - 2.30 PM<br>2.30- 5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM | <ul> <li>Connecting with nature (motivational talk/Yoga etc.)</li> <li>Bird watching (Different habitats/ Wetlands/ Forests/<br/>Shrubland/Grassland/Agriculture etc.) - Pawalgarh Reserve</li> <li>Class room lecture (Bird trail mapping/Essentials of bird watching to different clientele)</li> <li>Bird watching (Different habitats/contd.)</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul> | Sri B.S. Bisht Sri Rajesh Bhatt Dr. Ravindra Joshi Mr. Ravi Pathak ENVIS Staff                     |  |  |  |  |
| 400 00000  | Day -10 (20 January 2020)   |  |  |  |  |  |
| 6.00-7.00 AM<br>8.30-11.30 AM<br>1.30 - 2.30 PM<br>2.30- 5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching (Different habitats/ Wetlands/ Forests/<br/>Shrubland/Grassland/Agriculture etc.)</li> <li>Lecture (Bird adaptation, migration, life cycle etc.)</li> <li>Bird watching (Different habitats/contd.)</li> <li>Bird of the day / Bird games / Creativity</li> </ul>   | Sri B.S. Bisht Sri Rajesh Bhatt Dr. Ravindra Joshi Mr. Ravi Pathak ENVIS Staff                     |  |  |  |  |

|   | Tueineele interestien / Feedback   |   |  |  |  |
|---|--|---|--|--|--|
|   | Trainee's interaction / Feedback   |   |  |  |  |
|   |  |   |  |  |  |
| Day -11 (21 January 2020)   |  |   |  |  |  |
| 6.00-7.00 AM<br>8.30-11.30AM<br>1.30 - 2.30 PM<br>2.30- 5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching (Different habitats/ Wetlands/ Forests/<br/>Shrubland/Grassland/Agriculture etc.)</li> <li>Lecture (Bird adaptation, migration, life cycle etc.)</li> <li>Bird watching (Different habitatscontd.)</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul> | Sri B.S. Bisht Sri Rajesh Bhatt Dr. Ravindra Joshi Mr. Ravi Pathak ENVIS Staff                  |  |  |  |
|   | Day-12 (22 January 2020)   |   |  |  |  |
| 7.00 AM   | <b>Departure for Pangot/Kilbury</b> (Nainadevi Bird Sanctuary, Nainital)   |   |  |  |  |
| 9.30 - 5.00 PM<br>5.00 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM                                       | <ul> <li>Bird watching at Pangot/Kilbury/Kunjakharak</li> <li>Tourism based on bird watching</li> <li>Departure to Kosi-Katarmal, Almora</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>   | Sri B. S. Bisht Sri Pooran Joshi Dr. Ravindra Joshi Mr. Ravi Pathak ENVIS Staff                 |  |  |  |
|   | Day-13 (23 January 2020)   |   |  |  |  |
| 6.00-7.00 AM<br>7.00-8.30 AM<br>9.30-11.30 AM   | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching in GBPIHED Campus/Suryakunj     Basics of IT skills - use of smart phone/google for bird     watching, Global, National and regional bird conservation     networks.</li> </ul>  | Mr. T. Kapoor,<br>Buransh, Kausani<br>Dr. R. Joshi<br>Sri B. S. Bisht<br>Mr. Ravi Pathak        |  |  |  |
| 11.30-1.00<br>2.00-5.30 PM<br>5.30 - 7.00 PM<br>8.30-9.30 PM                                      | <ul> <li>Bird photography techniques</li> <li>Bird watching in GBPIHED Campus/Suryakunj/Katarmal</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>   | Mr. Kuldeep Joshi<br>ENVIS Staff  |  |  |  |
|   | Day-14 (24 January 2020)   |   |  |  |  |
| 6.00-7.00 AM<br>8.30-6.00 PM<br>6.30 - 7.00 PM<br>8.30-9.30 PM                                    | <ul> <li>Connecting with nature (motivational talk/Yoga)</li> <li>Bird watching and listing of birds at Binsar Wildlife<br/>Sanctuary/trekking to Dhaulcheena / Cultural visit to Almora</li> <li>Bird of the day / Bird games / Creativity</li> <li>Trainee's interaction / Feedback</li> </ul>   | Dr. G.C.S. Negi Dr. Ravindra Joshi Mr. Ravi Pathak Mr. B.S. Bisht Mr. Kuldeep Joshi ENVIS Staff |  |  |  |
| Day-15 (25 January 2020)  |  |   |  |  |  |
| 6.00-7.00 AM<br>9.00-6.00 PM<br>6.30 - 7.00 PM  | <ul> <li>Connecting with nature (motivational talk/Yoga)         Lecture on Bird watching for tourism / Green skilling for self-employment     </li> </ul>   | Dr. G.C.S. Negi<br>Mr. B.S. Bisht<br>Dr. Ravindra Joshi   |  |  |  |
| 8.30-9.30 PM  | Bird watching and listing of birds/Work on learning module  Bird of the day / Bird games / Creativity  Trainee's interaction / Feedback  | Mr. Ravi Pathak<br>ENVIS Staff  |  |  |  |
|   | Day-16 (26 January 2020)   |   |  |  |  |

9.30-10.30 AM

10.30-11.30 AM Participation in Flag Hoisting / Plantation on Republic Day at Institute, Cleanliness drive (Institute campus)
Work on learning module, Valedictory Session
Presentation by Trainees, Certificate distribution ceremony

Dr. G.C.S. Negi Dr. Ravindra Joshi Mr. Ravi Pathak ENVIS Staff ENVIS Staff

# Day-01 (Inauguration: 11<sup>th</sup> January, 2020) Session-1

The inauguration of the 15 days training programme was started with lighting of the lamp by the chief guest Dr. G.S. Rawat, Former Director, Wildlife Institute of India, Dehradun along with Dr. R.S. Rawal, Director, GBPNIHE and Dr. G.C.S. Negi, Coordinator, ENVIS-GBPNIHE. Dr. G.S. Rawat appreciated the efforts of the Institute in organizing this training programme aimed at building green skill of the unemployed youth to enable them for self-employment in the field of Bird watching tourism.

**Dr. G.C.S. Negi** welcomed the chief guest and introduced briefly on the Green Skill Development Programme of the ENVIS Secretariat, MOEF&CC. He mentioned the role of GSDP in building the capacity of unemployed youth of the nation so that they can adopt the learning and skills developed during these kind of training courses. He also briefed about the programme schedule to all the audience. After the welcome address all the trainees and resource persons gave their brief introduction, so that everyone knows whom they are going to interact during the training. The trainees were encouraged to share their motivation to join the course and their views on how it would help them in building their carrier in the field of bird tourism.

Chief guest of this programme, **Dr. G.S. Rawat** in his address, explained about the diversity and distribution of birds in the world, India and the Himalaya region. He also explained how birds have evolved from their reptilian ancestors over the period of time and became one of the most fascinating and important component of nature. He shared a study conducted by WII, Dehradun that concludes the interdependence of variety of trees and one single species of hornbill i.e. Great Hornbill, with the trainees. The presentation was followed by a brief introduction of a flash player based software that has compilation of 200 bird calls, by **Mr. Aizaz Hussain**, Sr. Researcher WII, Dehradun.

**Dr. R.S. Rawal** in his remarks shared his experiences with the trainees. He asked the trainees to appreciate nature and its components, then only they can understand the nature better. Giving his remarks on the address by the chief guest, he said that we have made a good start for

understanding bird and their behaviour, which will further help the trainees during the complete training programme.

**Mr. Bacchi Singh Bisht**, Freelance Birding Expert, Ramnagar (Corbett National Park Landscape), shared his experiences of how bird watching can become a source of income if done with sincerity and hard work. He encouraged the trainees to become a nature lover to be able to interpret birds in a better way. At the end of the inaugural session vote of thanks was proposed by Dr. Mahesh Nand, Programme Officer, ENVIS, GBPNIHE.



# Session- 2 & 3

Following the inauguration session two more sessions were organized: (i) Bird diversity in 'Surya-Kunj' (an ex-situ conservation site of GBPNIHE) and (ii) Basic bird photography techniques. First session on bird diversity of 'Surya-Kunj' was taken up by **Dr. Ravindra K Joshi**, Freelance Wildlife Expert, Almora and **Mr. Ravi Pathak**, Sr. Research Scholar, GBPNIHE. During their session they gave information about the bird diversity in 'Surya-Kunj'. They also explained how an ex-situ conservation site for plants has accommodated/ provided forage and nesting



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grounds for over 160 species of birds in past about two decades in the GBPNIHE Campus. In another session on basic bird photography techniques, **Mr. Kuldeep Joshi**, Senior researcher of GBPNIHE delivered a presentation. He explained the trainees how light plays a major role in photography and what technicalities one should keep in mind while photographing birds. The day concluded with pre-training feedback from the trainees and a briefing on the programme by the ENVIS team for the next 10 days.



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As bird identification is a rather field based exercise, it was thought for the upcoming 10 days the training will be organized in two different places (Kyaari and Syaat) in Ramnagar, Nainital Uttarakhand (Corbett National Park Landscape). Keeping that in mind the second day of the training started with travel to Kyaari village (Camp Hornbill). On the way to Kyaari, a visit was organized to the Jim Corbett Museum at Choti Haldwani. There the trainees were provided with the information on Jim Corbett (a celebrated conservationist) and his life in Uttarakhand.

In the evening, after reaching Kyaari, a brief introduction of Kyaari village was shared by **Mr.**Naveen Upadhyay, Owner (Camp Hornbill), Kyaari. Mr. Upadhyay (an entrepreneur in field of nature tourism) also shared his experience on nature tourism and entrepreneurship while taking on 'Ecotourism, home stays and bird watching for self-employment'. He gave a tour of his camp, which was managed by him and his team for over 20 years. The whole camp was designed in such a way that it served as an ecosystem in itself. The whole setup created by Mr. Upadhyay and his team was in itself a model for developing an entrepreneur business.

After that a session on 'Basics of Instrumentation- Binocular; Spotting scope; GPS; Camera' and 'Bird as an important ecological component' was conducted by Resource Person Dr. Ravindra K. Joshi, Mr. Ravi Pathak and Mr. Bacchi Singh Bisht. In this session trainees were introduced to various instruments used in bird watching and the way they are used. The ecological importance of birds as a seed disperser, pollinator, pest control agent and scavenger was shared with the trainees. The ambience of these session was made interactive, so that the trainees can also share their observations.



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Day -03 (13 January, 2020) Connecting with nature at Camp Hornbill, Kyaari, Ramnagar, Nainital



The day started with a session on 'Connecting with nature (Yoga and motivational talk)' by Mr. Bacchi S. Bisht which acted as a source of energy for all the trainees throughout the day. Realizing its value, the start of every day of the training was scheduled with this session. After a short breakfast the trainees were taken on a trail by all the resource persons and ENVIS team members present, led by Mr. Naveen Upadhyay, Mr. B.S. Bisht and Dr. Ravindra Joshi. Before starting for the trail the trainees were made aware of the ethics related to bird watching. During the trail walk trainees were asked to take notes on the colour, shape, beak shape, feet shape, call, habitat, food of the bird they observe. During the trail the team of trainees observed many birds,

some of which are:
Spangled Drongo,
Stork billed
Kingfisher,
Common

Kingfisher, Great
Hornbill, Chestnut
bellied Rockthrush,
White capped water
Redstart, etc. and
one rarely seen bird
in western
Himalayan region
i.e. Black throated
sunbird.



## Session-2

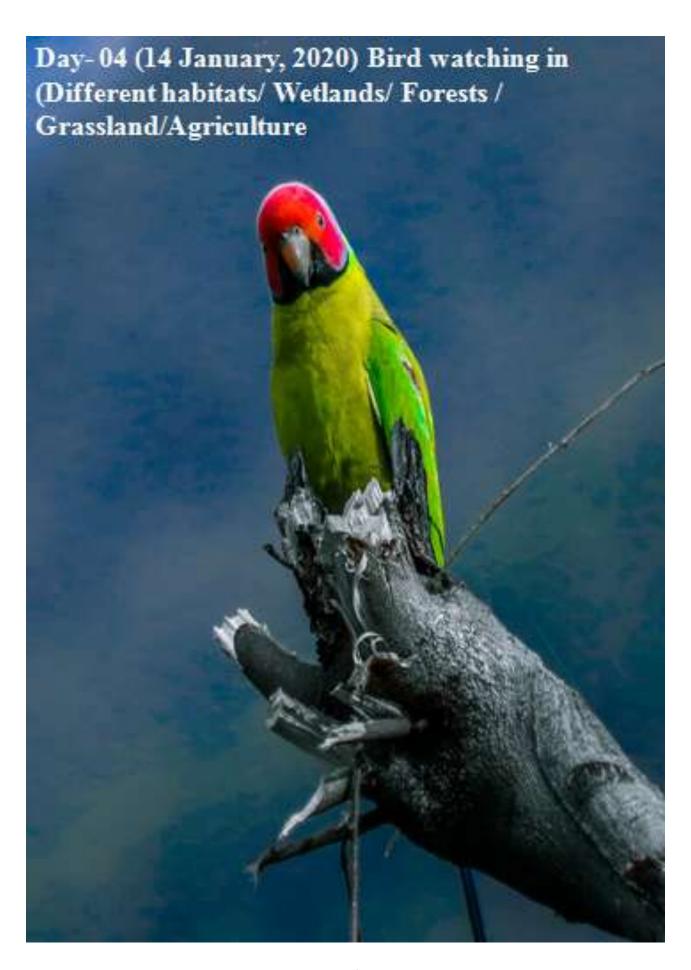
After the trail walk was completed and lunch was served, a classroom session was conducted by Dr. G.C.S. Negi ENVIS Coordinator, who explained the trainees about how the forests change once we move from lower elevation to higher elevation so does the wildlife and birds due to changing food guild. He also described how these forests are inhabited by various faunal elements. He emphasized on knowing the habitats of the birds or any other animal group to better understand their interdependence and prepare detailed notes on bird habitats.



Mr. Rajesh Bhatt, Bird Expert, Ramnagar, Nainital, in his session familiarized the trainees with birds, their history and evolution. He described how birds evolved from reptiles and also briefed about *Archaeopteryx:* a connecting link between Birds and Reptiles. He also explained how birds are a part of our life and how they play a role of a motivator in the life of those who are keen enough to observe them.



In the evening session, Dr. K.K. Joshi, Assistant Professor, Graphic Era University, Dehradun gave his lecture on 'Bird census techniques' and 'Bird habitats'. He explained how to count birds in various habitats. Various methods (point count, transect walk, etc.) of bird census were discussed in the session. Bird diversity was also discussed by Dr. Joshi in various habitats (wetland, forest, riverine, countryside, open areas, scrubland, etc.). He said that counting birds is also necessary as it is the prerequisite for planning any conservation efforts.



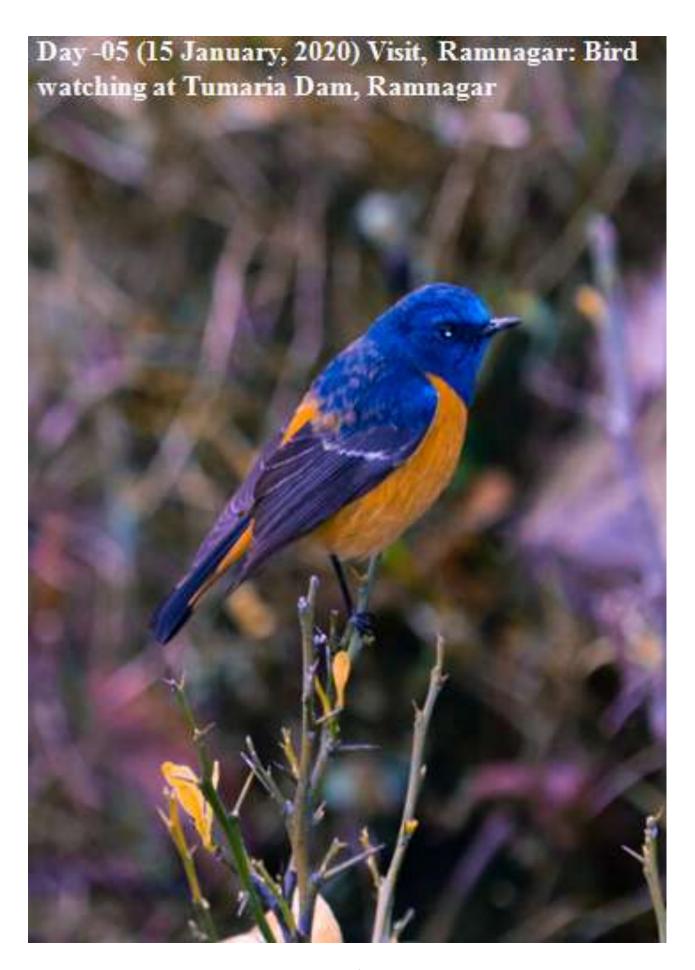
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In the morning session **Dr. K.K. Joshi**, gave field demonstration on how to census birds. The exercise was done by dividing the trainees into two groups. Trainees conducted the field census for the birds taking note of the lecture by Dr. Joshi. During the field survey birds were counted after identifying the species. The exercise was designed so that the trainee's skills can be developed for generating scientific databases. Some of the birds that were recorded during the survey were Yellow Bellied Fantail, Small Niltava, Crested Kingfisher, Common Kingfisher, Himalayan Bulbul, Black Bulbul, Rufous Bellied Eagle etc.



## **Session-2**

In the evening session Mr. Ravi Pathak acquainted the trainees with the factual information on Bird diversity and Bird Identification keys. He explained various terminologies used for birds (bird plumage details, bird topography) and how they are useful for bird identification. He also told trainees that all the common names of the birds are more or less derived on the basis of colour, shape (beak, feet, body parts), feeding habit, etc. He emphasized on the importance of observing the details of the birds before reaching to any conclusion regarding bird identification. Dr. Ravindra K. Joshi, Mr. Bacchi S Bisht, Mr. Rajesh Bhatt, other resource persons and all the trainees then also shared their experiences.



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#### Session-1&2

The day started with scheduled yoga and motivation talk session. Followed by which a trip was scheduled to Tumaria Dam (a wetland site) and Kosi river barrage at Ramnagar. In the forenoon session Tumaria dam was surveyed for aquatic and wetland birds and in the evening session nearby areas of Kosi river barrage that represents both riverine and wetland were surveyed.



Some of the birds that were recorded from Tumaria dam were Asian pied Starling, Brahminy Starling, Grey Hornbill, Common Pochard, Red crested Pochard, Black Kite, Red naped Ibis, Black headed Gull, Palla's Gull, Great Cormorant, Indian Cormorant, Goosander, etc. The dam provided suitable habitat for water, water-dependent and terrestrial birds. During survey around Kosi river barrage various birds were recorded. Some of them were Ruddy Shelduck, Indian pond Heron, Common Sandpiper, Great Egret, River Lapwing, Red crested Pochard, Little Egret, etc.



The day concluded with the review of the day by all the trainees and resource persons. Checklist was also prepared for the day(Annexure III). A unique observation was made by one team of resource persons while heading back to camp from Tumaria dam. They observed a Rufous treepie feeding on the abandoned beehive on the tree of *Bombax ceiba* (Semal).





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The start of the, like any other day, started with a trail walk in nearby forest and riverine areas. During the trail walk various relations and components of ecology were described by Dr. Ravindra Joshi, Mr. Naveen Upadhyay, Mr. Rajesh Bhatt and Mr. Bachhi S Bisht to the trainees. Habit and habitat of Tiger was also described by Mr. Naveen Upadhyay and one of the participant Mr. Himanshu Tirua.



After the trail walk a session on Acts and Laws related to birds and animals were explained to the trainees by Divisional Forest Officer (DFO) of Ramnagar division Mr. Himanshu. He made the trainees familiarize with various laws and acts i.e. Wildlife Protection Act, Indian Biodiversity Act, National Green Tribunal etc. Apart from that he also described how birds are categorized under various schedules (Schedule I to V) under Wildlife Protection Act, for the conservation of the birds. He also explained about human wildlife conflict and how it is being resolved in response to the queries of the trainees. The trainees thanked DFO, Ramnagar for sparing his time to share his knowledge on the topic.

#### Session-2

After this session a detailed session on threat to birds was taken up by Dr. Ravindra Joshi. In this interactive session Dr. Joshi tried to explain different kind of threats (Habitat loss, forest fire,

habitat fragmentation, hunting, climate change, land-use change) pointed out by the trainees. He conveyed the massage that after this training we all should focus on providing solutions for threats, so that the birds can be better conserved.

The day concluded with feedbacks and check list preparation of bird recorded on the day and preparation for departing to Syaat village camp for the next five days.





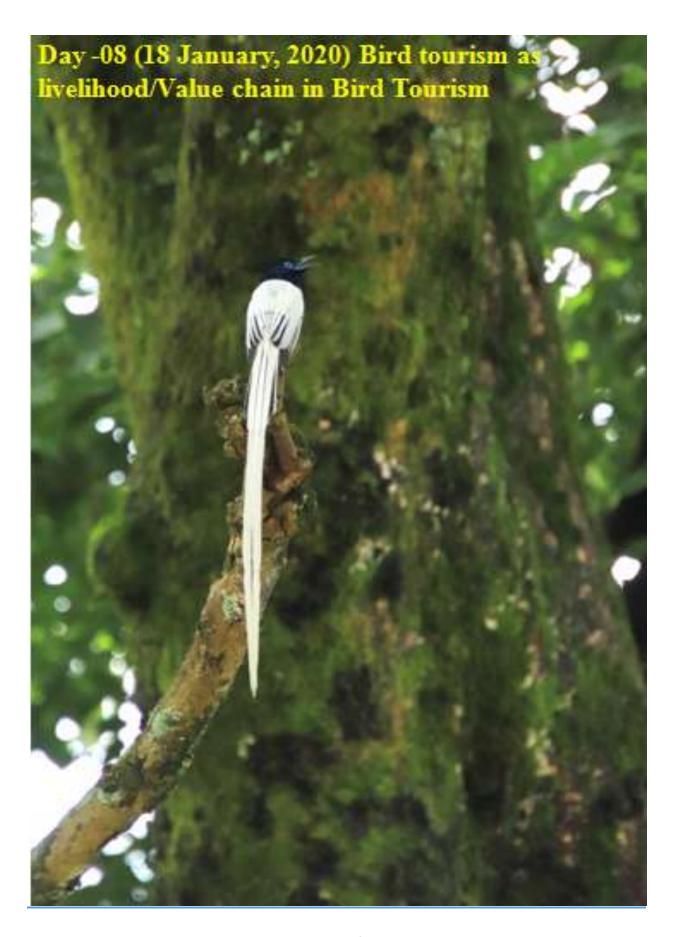
The day started with routine Yoga and motivation talk session by Mr. Bisht. Following which a field trip to nearby stream named "Khichdi" was scheduled. During the field visit, all the trainees were requested to give emphasis on the detailed notes (Shape, size, colour, wing pattern, tail pattern, feeding behaviour, flight pattern or any other behaviour they can observe) on the birds they record. During the survey they recorded Redshank, Common Sandpiper, Common Kingfisher, etc. Apart from the bird survey a cleanliness drive was performed in the vicinity of Camp Hornbill before departing for Syat Village camp.



### **Session-2**

After the field activity all the trainees and resource persons had breakfast and were headed to Syaat village camp near Kotabagh, which was 20 km from Kyaari. On reaching Syaat Village camp Mr. Alok Malhotra, Owner, Syaat Village camp, welcomed all the trainees and resource persons. Due to heavy rain and bad weather condition, no session could be scheduled that day after lunch.





The start of the day was with Yoga and motivational talk by Mr. Bisht. The post breakfast session was scheduled for trail walk in Syaat village for bird identification and habitat notes. The trail was 8 kms. The trail included village, forest, and agricultural landscape. Various birds associated with varying habitats present in the trail were recorded during the trail. Some of them are, Golden fronted leafbird, Orange bellied leafbird, Alexandrine Parakeet, Crimson Sunbird, Black Drongo, Greater Yellownape Woodpecker, Lesser Flameback Woodpecker, Greater Flameback Woodpecker, Spotted Owlet, etc. During the trail trainees were made familiarized with terms (Homeostasis, rete merabili, etc.) that are associated with adaptation in birds.



Trainees interacted with village residents as well and one of the villagers, expert shared his knowledge on birds and other activities he is indulged in, like, Vermicomposting, Organic farming, etc. He also explained how he started doing these allied forms of agriculture. Trainees were overwhelmed by his dedication and thanked him for all the knowledge he shared.



Then all the trainees and resource persons visited Camp Kyaari-Syaat of Wildrift (an adventure and nature tourism company). Here they had tea and saw how the camp was made. The camp

provided ambience for all kind of clientele. There a session was taken up by Dr. Pradeep Mehta, Senior Researcher, GBPNIHE on plant - bird association that coincides with flowering, fruiting and seed dispersal in plants/ forests. He explained the interrelationship of plant and birds and different elevations.



While heading back to the camp a brief visit to the plastic waste management centre was organized. Experts explained how they are separating plastic from the waste and using it as source of livelihood for local women group, who are making various products (rugs, bags, sheets, etc.) out of it.



#### **Session-2**

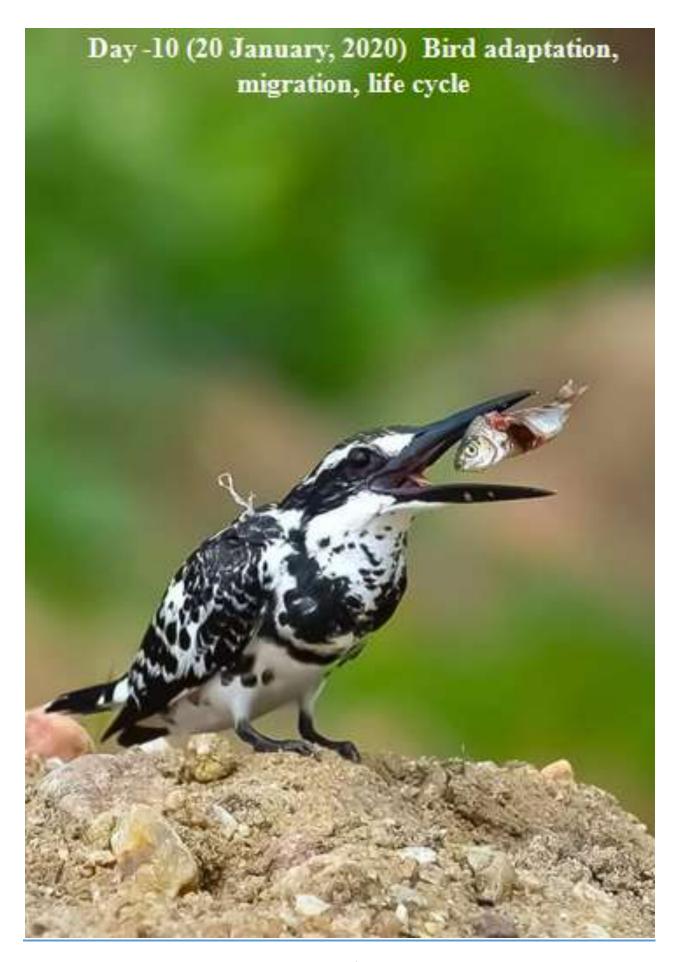
After reaching camp Syaat, a post lunch session was scheduled in which Mr. Ravi Pathak acquainted the trainees with the knowledge on bird behaviour and birds in state-symbols. He explained bird behaviour by giving example of some of the birds. He explained the fooling predator behaviour of red wattled lapwing, Mimicking behaviour of Racket tailed Drongo, Nesting behaviour of Baya Weaver, feeding behaviour of various waterbirds like flamingos, Avocets, Pelicans, Spoonbills, etc. Then he gave a talk on birds in state symbol. The talk was scheduled to get the trainees familiarize with the state birds of Indian states and why they are chosen to be state symbols.



### Session-1&2

After breakfast the team of trainees and resource persons headed to Bor and Haripura Reservoir. The reservoir which is primarily build for irrigation purposes now have become a tourist attraction as it accommodates many of the migrating birds in winters and other resident bird all over the year. The birds that were seen during the visit were: Ruddy Shelduck, Little Grebe, Great crested Grebe, Palla's gull, Brown headed gull, Asian pied starling, Purple heron, Common moorhen, Cotton pygmy goose, Bronze winged Jacana, etc. Many of the birds observed there were different from that seen in Tumaria reservoir as the area of this reservoir is more as compared to Tumaria.





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### Session-1&2

The early morning safari to the Corbett tiger reserve was one of the important parts of this training. Director of the Institute Dr. R.S. Rawal and Coordinator of ENVIS centre of the Institute, Dr. G.C.S. Negi joined the team for these training course components. They encouraged everyone to observe each and every elements of nature for building skill in nature interpretation. Inside the Corbett Park beside birds, habitats of other animals especially mammals (Tiger, Elephants, Spotted Deer, Sambhar, etc.) were also observed by the trainees. This in-situ conservation site for wildlife in itself was a lesson for the trainees as to how this particular method of conservation adds beauty to nature based tourism. The varying habitats of the tiger reserve not only help in conservation of tigers, but also a wide range of floral and faunal elements. The encroachment of *Lantana camara*an invasive species has created problem for tigers as they prefer grasslands to be there as hunting grounds. The tour guides shared their knowledge of the field about tiger and other wildlife elements. They explained how they estimate the probability of spotting a tiger by observing the calls and movements of birds and other animals.



The way the guides tour entertained the trainees, even when a tiger was not spotted was a great learning. They showed how observing various forms of natural elements closely can help you make the observations of nature and make the safari interesting. Although the group was not able to spot the tiger but glimpses of Spotted Deer, Barking Deer, Stork Billed Kingfisher, Changeable Hawk Eagle, Ggreat Hornbill, Oriental Pied Hornbill and the floral elements made the safari a good experience. Also the ... marks, droppings, call and scratches on tree trunks by tiger and other wild animals were explained and interpreted among the trainees and the tour guides. After the safari the group was headed to Camp Hornbill, Kyaari, where Dr. Rawal,

Director GBPNIHE addressed the trainees and emphasized on learning with nature by feeling and connecting with it. He said that it is not possible to get attached or connected with nature just during the training for that we have to spend time with nature to better understand its dynamics. Dr. Negi also requested trainees to be keen to learn all that is being communicated to them, then only the connection with nature and the connect with birds and their behaviour would be established.



In the post lunch session the team headed to Pawalgarh Wildlife Sanctuary, where they observed many bird species and their behaviour. The team was led by Dr. Negi, Coordinator ENVIS and Resource Person, Dr. Joshi, Mr. Bisht, Mr. Bhatt, Mr. Upadhyay and Mr. Ravi Pathak. A survey of birds was done along a stream in Pawalgarh, where the team observed birds like, Brown Fish Owl, Pied Kingfisher, Gray headed Canary Flycatcher and many other species of birds. But, what was interesting was the fishing behaviour of Pied Kingfisher. The Kingfisher hovered above the water body to find fish. Once it sets the target then it jumps down to the water to catch its prey. This behaviour of the species was explained to the trainees in the classroom lectures and here they shaw it live. That was a good experience for all the trainees as well as the resource persons. From there the team headed back to camp Syaat, where they gave their feedback on the day activities.





### **Session-1**

It was the last day of the camp at syaat village, so a bird rich trek was identified by the participants and the resource persons. The treks were 2 kms in length and have varied habitats (human habitation, agricultural fields, forests, scrubs and water channels). Some of the birds that were seen during the trek were White rumped Munia, Scaly breasted Munia, Mountain Hawk Eagle, Common green Magpie, Crested Bulbul, Black hooded Oriole, Verditer flycatcher, Golden fronted Leaf bird, Plum headed Parakeet, Collared falconet, etc.



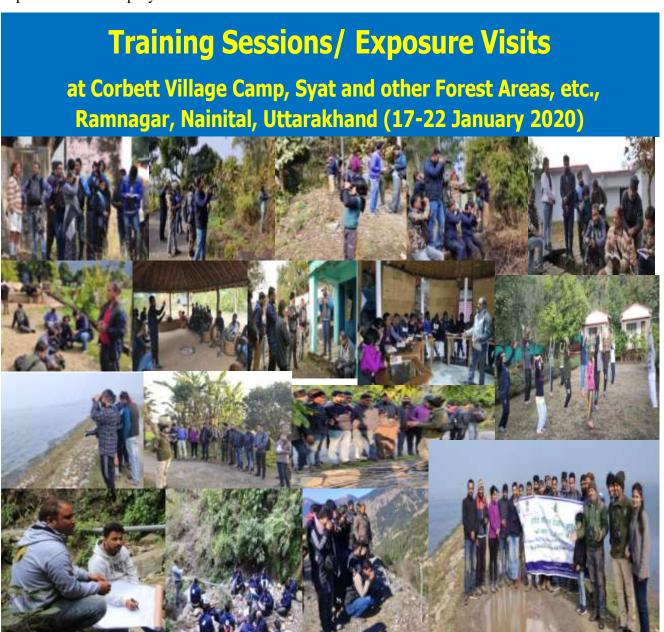
What was interesting was the sighting of White-rumped Munia. Referring to the field guide by Grimmett et al., 2016, Dr. Joshi explained everyone that the White-rumped Munia had its former range in the foothills of Himalayas and its sighting here was something that is not common. He further added that the field guide is not just for identification, it has the distribution map of the birds as well. So we have to carefully observe such sightings that are rare and need to document them with photographic proof. Considering the sighting of this particular bird Dr. Joshi explained how ecological notes and site specific observations are an important part in bird watching. He also explained about the food guild (variety of diet) in birds. He asked the participants to take notes on the food guild of the birds they see and by doing so they can prepare a calendar of available food base for different birds in their area year - around, which will help them interpret birds in a better way to the tourists and connect variety of birds with nature.

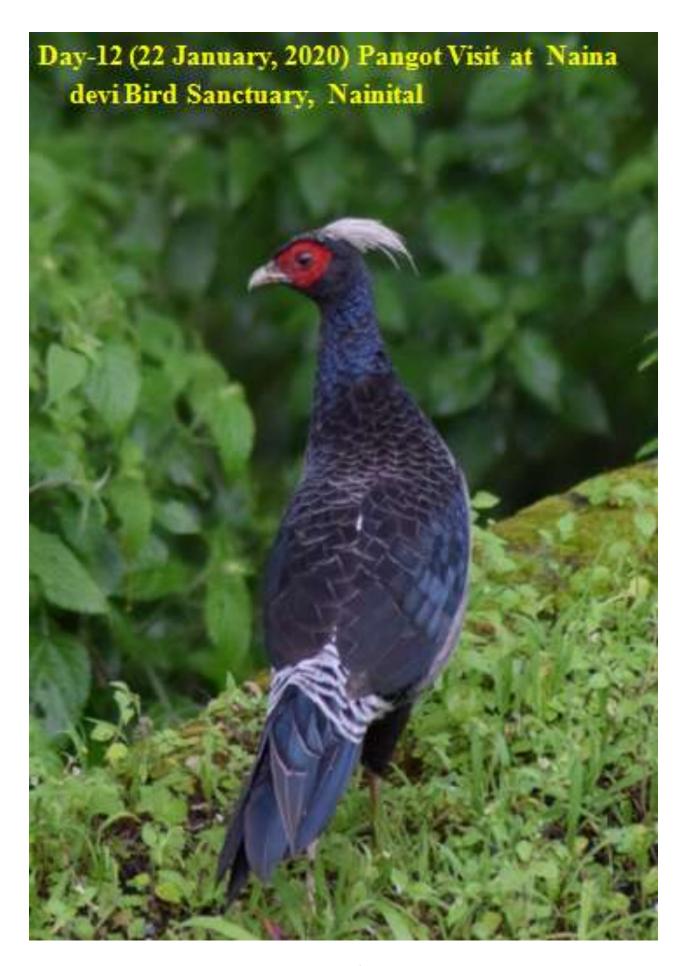
### Session-2

In the afternoon session, Mr. Bhatt, Mr. Bisht and Dr. Joshi deliberated upon birds and their relation to humans. They, by quoting various examples explained how birds have been a part of our culture, mythology, daily lives and an inspiration to many inventions like airplanes. They

also explained how birds serve as an important indicator for predicting the arrival of monsoon (Pied Cuckoo)/fruiting season (Indian Cuckoo), etc. The birds that have association with humans and are a part of our culture is: Barn Swallow, House Sparrow, Pied Cuckoo, Indian Cuckoo, Crow, Eagle, Vultures, Owls, Sarus crane, Swans and many more. Some of the participants also shared their knowledge on links between bird and humans. The resource persons requested the trainees to read and learn more about more of these stories that will aid them in bird interpretation.

The day concluded with the feedback from the trainees on the sessions and preparation for departure from camp Syaat.



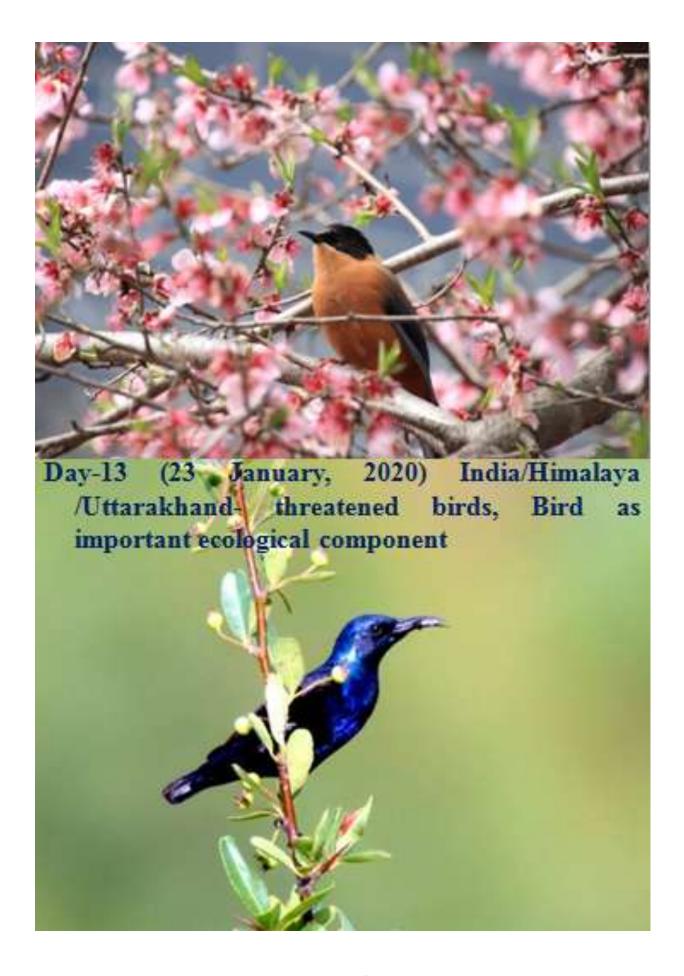


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### Day-12 (Naina Devi Bird Sanctuary, Pangot, Nainital: 22<sup>nd</sup> January 2020)

The team departed early morning to Pangot, Nainital. There Mr. Prakash Joshi, a bird guide welcomed the team. Following the breakfast at Pangot, Mr. Joshi led the team to a trail of 2-3 kms. The site has temperate and subtropical forest vegetation. Mr. Joshi shared his experience of starting as a bird watching guide and starting it as a livelihood option, with the trainees, which were words of encouragement for the trainees to adopt bird watching as an income generating source. During the trail Mr. Joshi familiarized the trainees with birds of the temperate forest like Striated Barbet, Black faced Warbler, White tailed Nuthatch, Rufous Sibia, Himalayan Woodpecker, Himalayan Griffon, Green backed Tit, Black throated tit, White collared black bird, etc. After the visit Mr. Joshi explained how one can adopt bird tourism as a livelihood option. He shared his knowledge on birds and requested the participants to give their time to the hobby of bird watching then only they can adopt it as a profession. After the session and field visit at Pangot the team departed for GBPNIHE, Kosi-Katarmal.





### **Session-1**

The day at GBPNIHE started with yoga and motivational talk at Surya-Mandir, Katarmal, which is one among two main Sun Temples in India after Konark. Mr. Bacchi Singh Bisht was the instructor for the Yoga class. The trainees expressed that they enjoyed doing yoga in the temple campus, which was refreshing and energising.

The post-breakfast session was taken up by Dr. Ravindra Joshi on Essentials of bird watching across different clientele. In this session Dr. Joshi explained why knowing the different type of clientele is a necessity in bird watching tourism. He described various types of clientele (Twichers, Enthusiasts, Casual) and what one should do to cater the needs of each type of clientele.



He described twichers are well educated and well equipped clients and they come for a particular purpose (e.g. to see or photograph a particular bird) and for that one needs to have knowledge on that particular birds habitat, so that the client doesn't go disappointed. For enthusiasts one needs to have knowledge on every aspect of nature to enrich the knowledge of the client. So, Dr. Joshi requested all the trainees to be well prepared for all kinds of clients for the growth and promotion of their bird tourism activities.

### **Session-2**

In another session on nature photography in which Mr. Threesh Kapoor, Nature Photographer, Kausani, gave his deliberations. He through his photographs showed how composition, light and our imagination can bring life to the photographs we take. In response to the query of the trainees regarding suggestions on camera for photography, Mr. Kapoor said that it is not necessary to have an expensive camera, all that matters is the knowledge of light, our imagination and a lot of practise, to take a good photograph.



### **Session-3**

The day concluded with distribution of assignments to the participants by Dr. Ravindra Joshi on mapping a trail. The trainees were divided into four groups and asked to prepare a trail map of the places visited during last 11 days. Before giving the assignments Dr. Joshi explained the things that needs to be mentioned in the trail mapping and why it is necessary. He explained that knowing the trail is a prerequisite for conducting any trail walk.





### Session-1 & 2

Binsar Wildlife sanctuary has been named as one of the Important Bird and Biodiversity Area (IBA) in the world. Considering this a trip was scheduled to the sanctuary for a good bird and biodiversity (plant/animal) watching experience. While on the way to the sanctuary Kasar Devi temple (one of the recognized Temples) in Almora was visited. There one of the traineesMr. Bipin Joshi, who is resident of the area gave information on the temple and its relevance.



On reaching the wildlife sanctuary, a session on "Mapping the trail" was taken up by Dr. Ravindra Joshi and Mr. Ravi Pathak. The assignment that was given to the trainees last day was explained and reviewed. Reviewing the maps, Dr. Joshi emphasized on taking note of any natural element which is related to bird is very necessary. He further explained how observing the flowering and fruiting time of various plants in the trail can be an important key to be a part of the trail map being prepared. Mr. Pathak explained how knowing the phenology of plants can help in making a bird calendar of a particular trail. They also explained the importance of mapping trails and preparation of bird calendar in bird tourism. They familiarized the trainees with the GPS and how to map a trail using GPS and role of google earth in mapping the trail. After the session, a trail walk was done from Binsar Mahadev temple inside to sanctuary to Dhaulcheena (13 km). During the trail the trainees witnessed Himalayan Griffon and their soaring behaviour up close. Birds that were seen during the trail were Fulvous breasted Woodpecker, Himalayan Griffon, Coal Tit, Himalayan Blue tail, Himalayan Bulbul, Common Myna, Chestnut bellied Rock thrush, etc.



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Day-15 (25 January, 2020) Bird watching for tourism/ Green skilling for self-employment



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It was the final day of the training programme. There were two sessions scheduled that day: Value chain in bird tourism and Global, National and regional Bird Conservation Network. The sessions were taken up by Dr. Ravindra Joshi and Mr. Ravi Pathak. In the session, Dr. Joshi explained the value chain system in bird watching, giving various daily life examples. He requested the participants to start from being at the lowest of the value chain and gradually move up, toward the top of the chain. Mr. Pathak introduced the trainees with various bird conservation networks like BirdLife International, BNHS, eBird, Conservation International. He also gave information about IBAs and Endemic Bird Areas (EBAs) around the world and in India. He familiarized them with the concept of formulation of IBAs and EBAs and the birds that are protected under these conservation networks with examples of birds from Uttarakhand like Chir Pheasant and Himalayan Quail.

One session was especially scheduled for "Solid Waste Management" as a part of Swacch Bharat Abhiyan, which was taken up by Mr. Himanshu Joshi, Engineer. Mr. Joshi described the categorization of solid wastes on the basis of their type, time of degradation, source, etc. He explained methods for solid waste management that includes reuse of waste material for various purposes, landfill preparation, etc.

In the evening the feedback from the trainees was taken for the overall training module and they were given an assignment to present during the valedictory session scheduled on 26<sup>th</sup> January. Two assignments were given to the trainees, one on "Bird and their Habitats" and the other on "Birds and their Forage (feeding habit)" based on the observation taken during the training.





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### **Programme - Valedictory Session** (26 January 2020)

| 11.30-11:45 AM | Welcome Address & Progress Report of Training                          | Dr. G.C.S. Negi<br>Coordinator ENVIS<br>GBPNIHESD, Almora                      |
|----------------|--|--|
| 11:45-12:15 PM | Presentations by Trainees  | Salient features of Bird Identification and Ornithology                        |
| 12:15-12:30 PM | Address by Chief Guest   | Shri Rahul Chaubey, District Tourism  Development Officer, Almora, Uttarakhand |
| 12:30-12:45 PM | Remarks of Director  | Dr. R.S. Rawal Director, GBPNIHESD   |
| 12:45-12:55 PM | Felicitation of Chief Guest & Certificate Distribution to the Trainees | Chief Guest/ Director  |
| 12:55-1:00PM   | Vote of Thanks   | Dr. Mahesha Nand<br>ENVIS, GBPNIHESD   |
| 1:00PM         | Lunch Break  | GBPNIHESD Canteen  |

After celebration of Republic Day at the Institute and plantation activity, the valedictory session was scheduled. Mr. Rahul Chaubey, Chairman, District Tourism Department, Almora was the chief guest for the session. Director of the Institute Dr. R. S. Rawal, Mr. Rahul Chaubey and Dr. Negi chaired the session. At first Dr. Negi presented the summary of the whole training programme and appreciated the zeal and enthusiasm of the trainees and resource persons of the programme. During the training course 194 species of birds were recorded (Annexure - III) with two rare species to sight in Uttarakhand i.e. White rumped Munia and Black throated Sunbird. The presentations on the given assignments were delivered by the trainees and was appreciated by the dignitaries on dais and found that all the trainees completed the training course successfully.



Mr. Rahul Chaubey in his address told the trainees that the training they got from here must have generated some spark inside them to take this opportunity further as their source of income. He said after all the main focus of the training is to develop the skill of a particular person, so we need to grab the opportunity and move forward with it to build our capacity further in this field.



He appreciated the efforts of ENVIS centre and the GBPNIHE in choosing this particular course for the youth of the country. He said that we need to harness the natural potential given by nature to our state (Uttarakhand) sustainably, taking conservation into focus as well. He said that he will try to schedule a training of 2-3 months for further developing the potential of youths in tourism sector.

Dr. Rawal in his address said that the experience he has gained after listening to the deliberations and spending time at Ramnagar (Corbett National Park Landscape) during the training is going to help him see birds with a new angle. He said the presentation given by the trainees were effective and they will aid everyone who is adopt bird watching as a livelihood option. He wished that the trainees would associate with the institute in future as well. He appreciated the efforts of the trainees, resource persons and ENVIS team for successfully organizing the training course and wished everyone good luck.



On this occasion a calendar on "Birds of Himalaya", prepared by Mr. Kuldeep Joshi, Mr. Ravi Pathak, Dr. Suresh Rana and Dr. Ravindra Joshi on behalf of ENVIS centre GBPNIHE, was released by the dignitaries on the dais and certificate of participation and calendars were presented to the trainees.





Concluding the session, Dr. Mahesanand Kuniyal, presented a formal vote of thanks to the Chief guests, Director of the Institute, Coordinator-ENVIS, all the trainees, resource persons and the ENVIS team of GBPNIHE, who have made the training programme a success.

### **Feedback from the Participants**



I have been associated with the bird watching for the past few years in and around Corbett National Park, Ramnagar. The exposure that was provided to us by way of conducting this course, under ENVIS-GSDP of GBPNIHE is phenomenal. This course enabled me to update my knowledge regarding bird

identification and basic ornithology. The information and the experience shared with us by the resource persons are definitely going to help us in nurturing our skill of bird identification. The resource persons during the training session explained us how our own observations and gained knowledge about the nature is going to help us in nature interpretation, which will further encourage us to make a livelihood out of it. I am thankful to the ENVIS center of GBPNIHE for giving us this opportunity to participate and enhance our knowledge base on birds through this skill building course. I am confident that I will apply this knowledge and skill in my bird watching business as a nature guide.



I belong to a village named Kyari, which falls in Corbett National Park landscape, Ramnagar. I have been working as a nature guide in and around the CNP for the past 6 years. I became familiarized with the birds of the area. This GSDP training have enhanced my knowledge base not only

on birds but also on the nature interpretation. Beside this, the course has been able to add scientific angle to our earlier knowledge base. I am confident that the outcome of this course will be benefiting me in the future.

### Bhaskar Sati



I have been working as a nature guide in Binsar Wildlife Sanctuary, (Almora) for the past 10 years. As I was working for so long, I thought that I have a vast knowledge of birds and other natural elements. But after joining this GSDP course, I realized that whatever knowledge I had, was a small fraction of what

is present in the nature. During this 15 days course, I have learnt much more than what I had learnt in the past 8 years. This course has encouraged us to learn more from nature to do better in our field of work. I would like to thank the ENVIS-GBPNIHE for providing me with this opportunity to build up on my knowledge on birds and Ornithology.

### Bipin Chandra Joshi

As far as Bird identification is concerned, this course has provided me a lot to take back with me. When I was at my home town, I only merely knew 5-6 birds that I can count on my fingers. But at present I can identify more than 50 bird species, which I think is an achievement for me and for which I am thankful to the ENVIS-GBPNIHE team for helping me to get this achievement. Now that the course has completed, I will be going back to my place and will start documenting and observing birds there and make this skill as a means of my self-employment.

### Prakash Chandra Sati

**Table- 4.** Checklist of Birds recorded during the training programme

| Common Name                   | Scientific name                        | Preferred Habitat |
|-------------------------------|--|-------------------|
| Alexandrine Parakeet          | Psittacula eupatria                    | Orchard/Forest    |
| Ashy Drongo                   | Dicrurus leucophaeus                   | Forest            |
| Ashy Prinia                   | Prinia socialis                        | Scrub             |
| Asian Openbill                | Anastomus oscitans                     | Wetland           |
| Asian pied Starling           | Gracupica contra                       | Human habitation  |
| Bank Myna                     | Acridotheres ginginianus               | Human habitation  |
| Bar tailed Treecreeper        | Certhia himalayana                     | Forest            |
| Bar winged flycatcher Shrike  | Hemipus picatus                        | Shrubs            |
| Barn Swallow                  | Hirundo rustica                        | Agriculture       |
| Black Bulbul                  | Hypsipetes leucocephalus               | Forest            |
| Black chinned Babbler         | Cyanoderma pyrrhops                    | Scrub             |
| Black crested Bulbul          | Pycnonotus flaviventris                | Forest            |
| Black Drongo                  | Dicrurus macrocercus                   | Cosmopolitan      |
| Black faced Warbler           | Abroscopus schisticeps                 | Forest            |
| Black headed Gull             | Chroicocephalus ridibundus             | Wetland           |
| Black headed Jay              | Garrulus lanceolatus                   | Forest            |
| Black hooded Oriole           | Oriolus xanthornus                     | Forest            |
| Black Kite                    | Milvus migrans                         | Cosmopolitan      |
| Black Redstart                | Phoenicurus ochruros                   | Forest            |
| Black rumped Woodpecker       | Dinopium benghalense                   | Forest            |
| Black throated Sunbird        | Aethopyga saturata                     | Forest            |
| Black throated Thrush         | Turdus atrogularis                     | Scrub             |
| Black throated Tit            | Aegithalos concinnus                   | Scrub             |
| Black winged Stilt            | Himantopus himantopus                  | Wetland           |
| Blue bearded Bee-eater        | Nyctyornis athertoni                   | Forest            |
| Blue capped Redstart          | Phoenicurus coeruleocephala            | Forest            |
| Blue fronted Redstart         | Phoenicurus frontalis                  | Forest            |
| Blue whistling Thrush         | Myophonus caeruleus                    | Cosmopolitan      |
| Bluethroat                    | Luscinia svecica                       | Scrub             |
| Brahminy Starling             | Sturnia pagodarum                      | Human habitation  |
| Bronze winged Jacana          | Metopidius indicus                     | Wetland           |
| Bronzed Drongo                | Dicrurus aeneus                        | Forest            |
| Brown capped Pygmy Woodpecker | Yungipicus nanus                       | Forest            |
| Brown fish Owl                | Ketupa zeylonensis                     | Forest            |
| Brown fronted Woodpecker      | Dendrocoptes auriceps                  | Forest            |
| Brown headed Barbet           | Psilopogon zeylanicus Forest           |                   |
| Brown headed Gull             | Chroicocephalus brunnicephalus Wetland |                   |
| Brown Rockchat                | Oenanthe fusca Human habitation        |                   |
| Cattle Egret                  | Bubulcus ibis                          | Agriculture       |
| Changeable hawk Eagle         | Nisaetus cirrhatus                     | Forest            |

| Chesnet headed Tesia            | Cettia castaneocoronata        | Scrub          |
|---------------------------------|--------------------------------|----------------|
| Chestnut bellied Nuthatch       | Sitta cinnamoventris           | Forest         |
| Chestnut bellied rock Thrush    | Monticola rufiventris          | Forest         |
| Chestnut crowned Laughingthrush | Trochalopteron erythrocephalum | Forest         |
| Coal Tit                        | Periparus ater                 | Forest         |
| Collared Falconet               | Microhierax caerulescens       | Forest         |
| Common Babbler                  | Argya caudata                  | Cosmopolitan   |
| Common Chiffchaff               | Phylloscopus collybita         | Scrub          |
| Common Greenshank               | Tringa nebularia               | Riverine       |
| Common Hoopoe                   | Upupa epops                    | Cosmopolitan   |
| Common Iora                     | Aegithina tiphia               | Forest         |
| Common Kingfisher               | Alcedo atthis                  | Riverine       |
| Common Moorhen                  | Gallinula chloropus            | Wetland        |
| Common Myna                     | Acridotheres tristis           | Cosmopolitan   |
| Common Pochard                  | Aythya ferina                  | Wetland        |
| Common Redshank                 | Tringa totanus                 | Riverine       |
| Common Rosefinch                | Carpodacus erythrinus          | Scrub/Forest   |
| Common Sandpiper                | Actitis hypoleucos             | Riverine       |
| Common Snipe                    | Gallinago gallinago            | Wetland        |
| Common Tailorbird               | Orthotomus sutorius            | Scrub          |
| Cotton pygmy Goose              | Nettapus coromandelianus       | Wetland        |
| Crested Kingfisher              | Megaceryle lugubris            | Riverine       |
| Crested serpant Eagle           | Spilornis cheela               | Forest         |
| Crested tree Swift              | Hemiprocne coronata            | Agriculture    |
| Crimson Sunbird                 | Aethopyga siparaja             | Forest/Orchard |
| Darter                          | Anhinga melanogaster           | Wetland        |
| Eurasian collared Dove          | Streptopelia decaocto          | Forest         |
| Eurasian Coot                   | Fulica atra                    | Wetland        |
| Eurasian Jay                    | Garrulus glandarius            | Forest         |
| Ferruginous Duck                | Aythya nyroca                  | Wetland        |
| Fire breasted Flowerpecker      | Dicaeum ignipectus             | Forest         |
| Fulvous breasted Woodpecker     | Dendrocopos macei              | Forest         |
| Golden bush Robin               | Tarsiger chrysaeus             | Scrub          |
| Golden fronted Leafbird         | Chloropsis aurifrons           | Forest         |
| Goosandar                       | Mergus merganser               | Wetland        |
| Great barbet                    | Psilopogon virens              | Forest         |
| Great Cormorant                 | Phalacrocorax carbo            | Wetland        |
| Great crested Grebe             | Podiceps cristatus             | Wetland        |
| Great Egret                     | Ardea alba                     | Riverine       |
| Great Hornbill                  | Buceros bicornis               | Forest         |
| Great Tit                       | Parus major                    | Forest/Scrub   |
| <b>Greater Coucal</b>           | Centropus sinensis             | Scrub          |

| Greater Flameback                    | Chrysocolaptes guttacristatus | Forest              |  |
|--------------------------------------|-------------------------------|---------------------|--|
|                                      |                               |                     |  |
| Greater Yellownape                   | Chrysophlegma flavinucha      | Forest              |  |
| Green backed Tit                     | Parus monticolus              | Forest              |  |
| Common Green Magpie                  | Cissa chinensis               | Forest              |  |
| Grey backed Shrike                   | Lanius tephronotus            | Scrub               |  |
| Grey breasted Prinia                 | Prinia hodgsonii              | Scrub               |  |
| Grey Bushchat                        | Saxicola ferreus              | Scrub               |  |
| Grey capped pygmy Woodpecker         | Yungipicus canicapillus       | Forest              |  |
| Grey Francolin                       | Francolinus pondicerianus     | Grassland           |  |
| <b>Grey headed canary Flycatcher</b> | Culicicapa ceylonensis        | Forest              |  |
| Grey Heron                           | Ardea cinerea                 | Agriculture/Wetland |  |
| Grey hooded Warbler                  | Phylloscopus xanthoschistos   | Scrub               |  |
| Grey Hornbill                        | Ocyceros birostris            | Cosmopolitan        |  |
| Grey Treepie                         | Dendrocitta formosae          | Forest              |  |
| Grey Wagtail                         | Motacilla cinerea             | Riverine            |  |
| Grey winged Blackbird                | Turdus boulboul               | Forest              |  |
| Himalayan Bluetail                   | Tarsiger rufilatus            | Forest              |  |
| Himalayan Bulbul                     | Pycnonotus leucogenys         | Forest              |  |
| Himalayan Griffon                    | Gyps himalayensis             | Open areas          |  |
| Himalayan Woodpecker                 | Dendrocopos himalayensis      | Forest              |  |
| House Crow                           | Corvus splendens              | Human habitation    |  |
| House Sparrow                        | Passer domesticus             | Human habitation    |  |
| Indian Cormorant                     | Phalacrocorax fuscicollis     | Riverine/Wetland    |  |
| Indian pond Heron                    | Ardeola grayii                | Riverine/Wetland    |  |
| Indian jungle Crow                   | Corvus culminatus             | Forest              |  |
| Indian Peafowl                       | Pavo cristatus                | Forest/Agriculture  |  |
| Indian Robin                         | Copsychus fulicatus           | Agriculture         |  |
| Indian Roller                        | Coracias benghalensis         | Agriculture         |  |
| Indian White-eye                     | Zosterops palpebrosus         | Cosmopolitan        |  |
| Intermediate Egret                   | Ardea intermedia              | Riverine            |  |
| Jungle Babbler                       | Turdoides striata             | Forest              |  |
| Jungle Owlet                         | Glaucidium radiatum           | Forest              |  |
| Kalij Pheasant                       | Lophura leucomelanos          | Scrub               |  |
| Large billed Crow                    | Corvus macrorhynchos          | Forest              |  |
| Lemon rumped Warbler                 | Phylloscopus chloronotus      | Scrub/Forest        |  |
| Lesser Yellownape                    | Picus chlorolophus            | Forest              |  |
| Lineated Barbet                      | Psilopogon lineatus           | Forest              |  |
| Little Cormorant                     | Microcarbo niger              | Riverine            |  |
| Little Egret                         | Egretta garzetta Wetland      |                     |  |
| Little Grebe                         | Tachybaptus ruficollis        | Wetland             |  |
| Little ringed Plover                 | Charadrius dubius             | Wetland             |  |
| Long billed Pipit                    | Anthus similis                | Agriculture         |  |
| Long omen ripit                      | ZIMIMO DHIMMO                 | 115110011010        |  |

| Long tailed ShrikeLanius schachScrubMaroon OrioleOriolus trailliiForestMountain hawk EagleNisaetus nipalensisForestNorthern PintailAnas acutaWetlandOrange bellied LeafbirdChloropsis hardwickiiForestOriental magpie RobinCopsychus saularisAgriculture/OrchardOriental pied HornbillAnthracoceros albirostrisForestOriental turtle DoveStreptopelia orientalisForest/Human habitationPallas GullIchthyaetus ichthyaetusWetlandPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed SvadavatAmandava amandavaForestRed briested FlycatcherFicedula parvaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/OrchardRed wattled LapwingVanellus indicusAgriculture/Riverine |
|---|
| Mountain hawk EagleNisaetus nipalensisForestNorthern PintailAnas acutaWetlandOrange bellied LeafbirdChloropsis hardwickiiForestOriental magpie RobinCopsychus saularisAgriculture/OrchardOriental pied HornbillAnthracoceros albirostrisForestOriental turtle DoveStreptopelia orientalisForest/Human habitationPallas GullIchthyaetus ichthyaetusWetlandPied BushchatSaxicola caprataScrubPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Northern Pintail Anas acuta Wetland Orange bellied Leafbird Chloropsis hardwickii Forest Oriental magpie Robin Copsychus saularis Agriculture/Orchard Oriental pied Hornbill Anthracoceros albirostris Forest Oriental turtle Dove Streptopelia orientalis Forest/Human habitation Pallas Gull Ichthyaetus ichthyaetus Wetland Pied Bushchat Saxicola caprata Scrub Pied Kingfisher Ceryle rudis Riverine Plain Martin Riparia paludicola Riverine/Wetland Plum headed Parakeet Psittacula cyanocephala Orchard/Forest Plumbeous water Redstart Phoenicurus fuliginosus Riverine Purple Heron Ardea purpurea Wetland Purple Swamphen Porphyrio porphyrio Wetland Red Avadavat Amandava amandava Scrub Red billed blue Magpie Urocissa erythroryncha Forest Red orested Pycatcher Ficedula parva Forest Red crested Pochard Netta rufina Wetland Red headed Vulture Sarcogyps calvus Open areas Red naped Ibis Pseudibis papillosa Agriculture Red vented bulbul Pycnonotus cafer Scrub/Orchard  |
| Orange bellied LeafbirdChloropsis hardwickiiForestOriental magpie RobinCopsychus saularisAgriculture/OrchardOriental pied HornbillAnthracoceros albirostrisForestOriental turtle DoveStreptopelia orientalisForest/Human habitationPallas GullIchthyaetus ichthyaetusWetlandPied BushchatSaxicola caprataScrubPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Oriental magpie RobinCopsychus saularisAgriculture/OrchardOriental pied HornbillAnthracoceros albirostrisForestOriental turtle DoveStreptopelia orientalisForest/Human habitationPallas GullIchthyaetus ichthyaetusWetlandPied BushchatSaxicola caprataScrubPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Oriental pied HornbillAnthracoceros albirostrisForestOriental turtle DoveStreptopelia orientalisForest/Human habitationPallas GullIchthyaetus ichthyaetusWetlandPied BushchatSaxicola caprataScrubPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Oriental turtle DoveStreptopelia orientalisForest/Human habitationPallas GullIchthyaetus ichthyaetusWetlandPied BushchatSaxicola caprataScrubPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Pallas Gull  Ichthyaetus ichthyaetus  Scrub  Pied Bushchat  Saxicola caprata  Scrub  Pied Kingfisher  Ceryle rudis  Riparia paludicola  Plum headed Parakeet  Psittacula cyanocephala  Plumbeous water Redstart  Phoenicurus fuliginosus  Riverine  Purple Heron  Ardea purpurea  Wetland  Purple Swamphen  Porphyrio porphyrio  Wetland  Red Avadavat  Amandava amandava  Scrub  Red billed blue Magpie  Urocissa erythroryncha  Forest  Red crested Pochard  Netta rufina  Wetland  Red headed Vulture  Sarcogyps calvus  Pycnonotus cafer  Scrub/Orchard   |
| Pied BushchatSaxicola caprataScrubPied KingfisherCeryle rudisRiverinePlain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Pied Kingfisher  Ceryle rudis  Riparia paludicola  Riverine  Plum headed Parakeet  Psittacula cyanocephala  Orchard/Forest  Plumbeous water Redstart  Phoenicurus fuliginosus  Riverine  Purple Heron  Ardea purpurea  Wetland  Purple Swamphen  Porphyrio porphyrio  Red Avadavat  Amandava amandava  Scrub  Red billed blue Magpie  Urocissa erythroryncha  Forest  Red breasted Flycatcher  Ficedula parva  Forest  Red crested Pochard  Netta rufina  Wetland  Red headed Vulture  Sarcogyps calvus  Red naped Ibis  Pseudibis papillosa  Red vented bulbul  Pycnonotus cafer  Scrub/Orchard  |
| Plain MartinRiparia paludicolaRiverine/WetlandPlum headed ParakeetPsittacula cyanocephalaOrchard/ForestPlumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Plum headed Parakeet  Psittacula cyanocephala  Orchard/Forest  Plumbeous water Redstart  Phoenicurus fuliginosus  Riverine  Purple Heron  Ardea purpurea  Wetland  Purple Swamphen  Porphyrio porphyrio  Red Avadavat  Amandava amandava  Scrub  Red billed blue Magpie  Urocissa erythroryncha  Forest  Red breasted Flycatcher  Ficedula parva  Forest  Red crested Pochard  Netta rufina  Wetland  Wetland  Red headed Vulture  Sarcogyps calvus  Open areas  Red naped Ibis  Pseudibis papillosa  Agriculture  Red vented bulbul  Pycnonotus cafer  Scrub/Orchard   |
| Plumbeous water RedstartPhoenicurus fuliginosusRiverinePurple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Purple HeronArdea purpureaWetlandPurple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Purple SwamphenPorphyrio porphyrioWetlandRed AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Red AvadavatAmandava amandavaScrubRed billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Red billed blue MagpieUrocissa erythrorynchaForestRed breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Red breasted FlycatcherFicedula parvaForestRed crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard   |
| Red crested PochardNetta rufinaWetlandRed headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Red headed VultureSarcogyps calvusOpen areasRed naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Red naped IbisPseudibis papillosaAgricultureRed vented bulbulPycnonotus caferScrub/Orchard  |
| Red vented bulbulPycnonotus caferScrub/Orchard  |
| J. J  |
| Red wattled Lapwing Vanellus indicus Agriculture/Riverine   |
|   |
| Red whiskered BulbulPycnonotus jocosusScrub/Orchard   |
| River Lapwing Vanellus duvaucelii Riverine  |
| Rock BuntingEmberiza ciaScrub/Agriculture field   |
| Rock PigeonColumba liviaCosmopolitan  |
| Rose ringed Parakeet Psittacula krameri Orchard/Forest  |
| Ruddy ShelduckTadorna ferrugineaWetland   |
| Rufous bellied EagleLophotriorchis kieneriiForest   |
| Rufous bellied NiltavaNiltava sundaraForest   |
| Rufous bellied Woodpecker         Dendrocopos hyperythrus         Forest  |
| Rufous gorgeted Flycatcher         Ficedula strophiata         Forest   |
| Rufous SibiaHeterophasia capistrataForest   |
| Rufous TreepieDendrocitta vagabundaForest   |
| Rusty cheeked Scimitar Babbler         Pomatorhinus erythrogenys         Scrub  |
| Scaly breasted Munia Lonchura punctulata Scrub/Agriculture field  |
| ShikraAccipiter badiusForest  |
| Slaty blue FlycatcherFicedula tricolorForest  |
| Slaty headed ParakeetPsittacula himalayanaForest/Orchard  |

| Spangled Drongo         Dicrurus bracteatus         Forest           Speckled Piculet         Picumnus innominatus         Forest           Spotted Dove         Streptopelia chinensis         Forest/Human habitation           Spotted Owlet         Athene brama         Agriculture fields           Steepe Eagle         Aquila nipalensis         Open areas           Stork billed Kingfisher         Pelargopsis capensis         Riverine           Streaked Laughingthrush         Trochalopteron lineatum         Scrub           Striated Laughingthrush         Grammatoptila striatus         Scrub/Forest           Striated Prinia         Prinia crinigera         Scrub           Tufted Duck         Aythya fuligula         Wetland           Verditer Flycatcher         Eumyias thalassinus         Forest/Agriculture           Wallereeper         Tichodroma muraria         Wetland/Open areas           White breasted Waterhen         Amaurornis phoenicurus         Wetland/Open areas           White browd Wagtail         Motacilla maderaspatensis         Riverine           White capped water Redstart         Phoenicurus leucocephalus         Riverine           White collared Blackbird         Turdus albocinctus         Forest           White crested Laughingthrush         Garrulax leucolophus | Small Niltava                 | Niltava macgrigoriae      | Scrub/Forest            |
|--|-------------------------------|---------------------------|-------------------------|
| Spotted Dove  Streptopelia chinensis  Forest/Human habitation  Spotted Owlet  Athene brama Agriculture fields  Steepe Eagle Aquila nipalensis Open areas  Stork billed Kingfisher Pelargopsis capensis Riverine  Streaked Laughingthrush Trochalopteron lineatum Scrub  Striated Laughingthrush Grammatoptila striatus Scrub/Forest  Striated Prinia Prinia crinigera Scrub  Tufted Duck Aythya fuligula Wetland  Verditer Flycatcher Eumyias thalassinus Forest/Agriculture  Wallcreeper Tichodroma muraria Wetland/Open areas  White breasted Waterhen Amaurornis phoenicurus Wetland  White browed Wagtail Motacilla maderaspatensis Riverine  White capped water Redstart Phoenicurus leucocephalus Riverine  White crested Laughingthrush Garrulax leucolophus Forest  White rumped Munia Lonchura striata Scrub/Agriculture field  White tailed Nuthatch Sitta himalayensis Forest  White throated Fantail Rhipidura albicollis Forest White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine  White Wagtail Motacilla alba Riverine  Wooly necked Stork Ciconia episcopus Yellow bellied Fantail Chelidorhynx hypoxanthus Scrub Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard   | Spangled Drongo               | Dicrurus bracteatus       | Forest                  |
| Spotted Owlet Athene brama Agriculture fields Steepe Eagle Aquila nipalensis Open areas Stork billed Kingfisher Pelargopsis capensis Riverine Streaked Laughingthrush Trochalopteron lineatum Scrub Striated Laughingthrush Grammatoptila striatus Scrub/Forest Striated Prinia Prinia crinigera Scrub  Tufted Duck Aythya fuligula Wetland Verditer Flycatcher Eumyias thalassinus Forest/Agriculture Wallcreeper Tichodroma muraria Wetland/Open areas White breasted Waterhen Amaurornis phoenicurus Wetland White browed Wagtail Motacilla maderaspatensis Riverine White capped water Redstart Phoenicurus leucocephalus White crested Laughingthrush Garrulax leucolophus Forest White crested Laughingthrush Garrulax leucolophus Forest White tumped Munia Lonchura striata Scrub/Agriculture field White tailed Nuthatch Sitta himalayensis Forest White throated Fantail Rhipidura albicollis Forest White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine White Wagtail Motacilla alba Riverine Wooly necked Stork Ciconia episcopus Agriculture Yellow bellied Fantail Chelidorhynx hypoxanthus Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard   | Speckled Piculet              | Picumnus innominatus      | Forest                  |
| Steepe Eagle Aquila nipalensis Open areas Stork billed Kingfisher Pelargopsis capensis Riverine Streaked Laughingthrush Trochalopteron lineatum Scrub Striated Laughingthrush Grammatoptila striatus Scrub/Forest Striated Prinia Prinia crinigera Scrub Tufted Duck Aythya fuligula Wetland Verditer Flycatcher Eumyias thalassinus Forest/Agriculture Wallcreeper Tichodroma muraria Wetland/Open areas White breasted Waterhen Amaurornis phoenicurus Wetland White browed Wagtail Motacilla maderaspatensis Riverine White capped water Redstart Phoenicurus leucocephalus Riverine White collared Blackbird Turdus albocinctus Forest White crested Laughingthrush Garrulax leucolophus Forest White trumped Munia Lonchura striata Scrub/Agriculture field White tailed Nuthatch Sitta himalayensis Forest White throated Fantail Rhipidura albicollis Forest White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine White throated Laughingthrush Pterorhinus albogularis Forest White Wagtail Motacilla alba Riverine Wooly necked Stork Ciconia episcopus Agriculture Yellow bellied Fantail Chelidorhynx hypoxanthus Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard   | Spotted Dove                  | Streptopelia chinensis    | Forest/Human habitation |
| Stork billed KingfisherPelargopsis capensisRiverineStreaked LaughingthrushTrochalopteron lineatumScrubStriated LaughingthrushGrammatoptila striatusScrub/ForestStriated PriniaPrinia crinigeraScrubTufted DuckAythya fuligulaWetlandVerditer FlycatcherEumyias thalassinusForest/AgricultureWallcreeperTichodroma murariaWetland/Open areasWhite breasted WaterhenAmaurornis phoenicurusWetlandWhite browed WagtailMotacilla maderaspatensisRiverineWhite capped water RedstartPhoenicurus leucocephalusRiverineWhite collared BlackbirdTurdus albocinctusForestWhite crested LaughingthrushGarrulax leucolophusForestWhite rumped MuniaLonchura striataScrub/Agriculture fieldWhite tailed NuthatchSitta himalayensisForestWhite throated FantailRhipidura albicollisForestWhite throated KingfisherHalcyon smyrnensisAgriculture/RiverineWhite throated LaughingthrushPterorhinus albogularisForestWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | Spotted Owlet                 | Athene brama              | Agriculture fields      |
| Streaked Laughingthrush Striated Laughingthrush Striated Prinia Prinia crinigera Scrub Striated Prinia Prinia crinigera Scrub Striated Prinia Prinia crinigera Scrub  Tufted Duck Aythya fuligula Wetland Verditer Flycatcher Eumyias thalassinus Forest/Agriculture Wallcreeper Tichodroma muraria Wetland/Open areas White breasted Waterhen Amaurornis phoenicurus Wetland White browed Wagtail Motacilla maderaspatensis Riverine White capped water Redstart Phoenicurus leucocephalus Riverine White collared Blackbird Turdus albocinctus Forest White crested Laughingthrush Garrulax leucolophus Forest White rumped Munia Lonchura striata Scrub/Agriculture field White tailed Nuthatch Sitta himalayensis Forest White throated Fantail Rhipidura albicollis Forest White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine White throated Laughingthrush Pterorhinus albogularis Forest White Wagtail Motacilla alba Riverine Wooly necked Stork Ciconia episcopus Agriculture Yellow bellied Fantail Chelidorhynx hypoxanthus Scrub Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard   | Steepe Eagle                  | Aquila nipalensis         | Open areas              |
| Striated LaughingthrushGrammatoptila striatusScrub/ForestStriated PriniaPrinia crinigeraScrubTufted DuckAythya fuligulaWetlandVerditer FlycatcherEumyias thalassinusForest/AgricultureWallcreeperTichodroma murariaWetland/Open areasWhite breasted WaterhenAmaurornis phoenicurusWetlandWhite browed WagtailMotacilla maderaspatensisRiverineWhite capped water RedstartPhoenicurus leucocephalusRiverineWhite collared BlackbirdTurdus albocinctusForestWhite crested LaughingthrushGarrulax leucolophusForestWhite rumped MuniaLonchura striataScrub/Agriculture fieldWhite tailed NuthatchSitta himalayensisForestWhite throated FantailRhipidura albicollisForestWhite throated KingfisherHalcyon smyrnensisAgriculture/RiverineWhite throated LaughingthrushPterorhinus albogularisForestWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | Stork billed Kingfisher       | Pelargopsis capensis      | Riverine                |
| Striated Prinia Prinia crinigera Scrub  Tufted Duck Aythya fuligula Wetland  Verditer Flycatcher Eunyias thalassinus Forest/Agriculture  Wallcreeper Tichodroma muraria Wetland/Open areas  White breasted Waterhen Amaurornis phoenicurus Wetland  White browed Wagtail Motacilla maderaspatensis Riverine  White capped water Redstart Phoenicurus leucocephalus Riverine  White collared Blackbird Turdus albocinctus Forest  White crested Laughingthrush Garrulax leucolophus Forest  White rumped Munia Lonchura striata Scrub/Agriculture field  White tailed Nuthatch Sitta himalayensis Forest  White throated Fantail Rhipidura albicollis Forest  White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine  White Wagtail Motacilla alba Riverine  Wooly necked Stork Ciconia episcopus Agriculture  Yellow bellied Fantail Chelidorhynx hypoxanthus  Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard   | Streaked Laughingthrush       | Trochalopteron lineatum   | Scrub                   |
| Tufted Duck  Aythya fuligula  Verditer Flycatcher  Eumyias thalassinus  Forest/Agriculture  Welland/Open areas  White breasted Waterhen  Amaurornis phoenicurus  Wetland  White browed Wagtail  Motacilla maderaspatensis  Riverine  White capped water Redstart  Phoenicurus leucocephalus  Riverine  White collared Blackbird  Turdus albocinctus  Forest  White crested Laughingthrush  Garrulax leucolophus  Forest  White rumped Munia  Lonchura striata  Scrub/Agriculture field  White tailed Nuthatch  Sitta himalayensis  Forest  White throated Fantail  Rhipidura albicollis  Forest  White throated Kingfisher  Halcyon smyrnensis  Agriculture/Riverine  White Wagtail  Motacilla alba  Riverine  Wooly necked Stork  Ciconia episcopus  Agriculture  Yellow bellied Fantail  Chelidorhynx hypoxanthus  Yellow footed green Pigeon  Treron phoenicoptera  Forest/Orchard  | Striated Laughingthrush       | Grammatoptila striatus    | Scrub/Forest            |
| Verditer Flycatcher  Eumyias thalassinus  Forest/Agriculture  Wallcreeper  Tichodroma muraria  Wetland/Open areas  White breasted Waterhen  Amaurornis phoenicurus  Wetland  White browed Wagtail  Motacilla maderaspatensis  Riverine  White capped water Redstart  Phoenicurus leucocephalus  Riverine  White collared Blackbird  Turdus albocinctus  Forest  White crested Laughingthrush  Garrulax leucolophus  Forest  White rumped Munia  Lonchura striata  Scrub/Agriculture field  White tailed Nuthatch  Sitta himalayensis  Forest  White throated Fantail  Rhipidura albicollis  Forest  White throated Kingfisher  Halcyon smyrnensis  Agriculture/Riverine  White throated Laughingthrush  Pterorhinus albogularis  Forest  White Wagtail  Motacilla alba  Riverine  Wooly necked Stork  Ciconia episcopus  Agriculture  Yellow bellied Fantail  Chelidorhynx hypoxanthus  Forest/Orchard   | Striated Prinia               | Prinia crinigera          | Scrub                   |
| WallcreeperTichodroma murariaWetland/Open areasWhite breasted WaterhenAmaurornis phoenicurusWetlandWhite browed WagtailMotacilla maderaspatensisRiverineWhite capped water RedstartPhoenicurus leucocephalusRiverineWhite collared BlackbirdTurdus albocinctusForestWhite crested LaughingthrushGarrulax leucolophusForestWhite rumped MuniaLonchura striataScrub/Agriculture fieldWhite tailed NuthatchSitta himalayensisForestWhite throated FantailRhipidura albicollisForestWhite throated KingfisherHalcyon smyrnensisAgriculture/RiverineWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | <b>Tufted Duck</b>            | Aythya fuligula           | Wetland                 |
| White breasted Waterhen Amaurornis phoenicurus Wetland White browed Wagtail Motacilla maderaspatensis Riverine White capped water Redstart Phoenicurus leucocephalus Riverine White collared Blackbird Turdus albocinctus Forest White crested Laughingthrush Garrulax leucolophus Forest White rumped Munia Lonchura striata Scrub/Agriculture field White tailed Nuthatch Sitta himalayensis Forest White throated Fantail Rhipidura albicollis Forest White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine White throated Laughingthrush Pterorhinus albogularis Forest White Wagtail Motacilla alba Riverine Wooly necked Stork Ciconia episcopus Agriculture Yellow bellied Fantail Chelidorhynx hypoxanthus Forest/Orchard  | Verditer Flycatcher           | Eumyias thalassinus       | Forest/Agriculture      |
| White browed Wagtail  White capped water Redstart  White collared Blackbird  White crested Laughingthrush  White rumped Munia  Lonchura striata  White tailed Nuthatch  White throated Fantail  White throated Laughingthrush  Pterorhinus albogularis  White Wagtail  Wooly necked Stork  Yellow footed green Pigeon  Motacilla alba  Riverine  Riverine  Riverine  Forest  Riverine  Forest  Forest  Agriculture field  Forest  Agriculture/Riverine  Forest  Riverine  Riverine  Riverine  Forest  Agriculture/Riverine  Forest  Agriculture/Riverine  Forest  Ciconia episcopus  Agriculture  Yellow footed green Pigeon  Treron phoenicoptera  Forest/Orchard   | Wallcreeper                   | Tichodroma muraria        | Wetland/Open areas      |
| White capped water Redstart  White collared Blackbird  Turdus albocinctus  Forest  White crested Laughingthrush  Garrulax leucolophus  Forest  White rumped Munia  Lonchura striata  Scrub/Agriculture field  White tailed Nuthatch  Sitta himalayensis  Forest  White throated Fantail  Rhipidura albicollis  White throated Kingfisher  Halcyon smyrnensis  Agriculture/Riverine  White throated Laughingthrush  Pterorhinus albogularis  Forest  White Wagtail  Motacilla alba  Riverine  Wooly necked Stork  Ciconia episcopus  Agriculture  Yellow bellied Fantail  Chelidorhynx hypoxanthus  Forest/Orchard  | White breasted Waterhen       | Amaurornis phoenicurus    | Wetland                 |
| White collared Blackbird  Turdus albocinctus  Forest  White crested Laughingthrush  Garrulax leucolophus  Forest  White rumped Munia  Lonchura striata  Scrub/Agriculture field  White tailed Nuthatch  Sitta himalayensis  Forest  White throated Fantail  Rhipidura albicollis  Forest  White throated Kingfisher  Halcyon smyrnensis  Agriculture/Riverine  White throated Laughingthrush  Pterorhinus albogularis  Forest  White Wagtail  Motacilla alba  Riverine  Wooly necked Stork  Ciconia episcopus  Yellow bellied Fantail  Chelidorhynx hypoxanthus  Forest/Orchard  | White browed Wagtail          | Motacilla maderaspatensis | Riverine                |
| White crested LaughingthrushGarrulax leucolophusForestWhite rumped MuniaLonchura striataScrub/Agriculture fieldWhite tailed NuthatchSitta himalayensisForestWhite throated FantailRhipidura albicollisForestWhite throated KingfisherHalcyon smyrnensisAgriculture/RiverineWhite throated LaughingthrushPterorhinus albogularisForestWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | White capped water Redstart   | Phoenicurus leucocephalus | Riverine                |
| White rumped Munia  Lonchura striata  Scrub/Agriculture field  White tailed Nuthatch  Sitta himalayensis  Forest  White throated Fantail  Rhipidura albicollis  Forest  White throated Kingfisher  Halcyon smyrnensis  Agriculture/Riverine  White throated Laughingthrush  Pterorhinus albogularis  Forest  White Wagtail  Motacilla alba  Riverine  Wooly necked Stork  Ciconia episcopus  Yellow bellied Fantail  Chelidorhynx hypoxanthus  Forest/Orchard  | White collared Blackbird      | Turdus albocinctus        | Forest                  |
| White tailed Nuthatch Sitta himalayensis Forest White throated Fantail Rhipidura albicollis Forest White throated Kingfisher Halcyon smyrnensis Agriculture/Riverine White throated Laughingthrush Pterorhinus albogularis Forest White Wagtail Motacilla alba Riverine Wooly necked Stork Ciconia episcopus Agriculture Yellow bellied Fantail Chelidorhynx hypoxanthus Scrub Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard  | White crested Laughingthrush  | Garrulax leucolophus      | Forest                  |
| White throated FantailRhipidura albicollisForestWhite throated KingfisherHalcyon smyrnensisAgriculture/RiverineWhite throated LaughingthrushPterorhinus albogularisForestWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | White rumped Munia            | Lonchura striata          | Scrub/Agriculture field |
| White throated KingfisherHalcyon smyrnensisAgriculture/RiverineWhite throated LaughingthrushPterorhinus albogularisForestWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | White tailed Nuthatch         | Sitta himalayensis        | Forest                  |
| White throated LaughingthrushPterorhinus albogularisForestWhite WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard   | White throated Fantail        | Rhipidura albicollis      | Forest                  |
| White WagtailMotacilla albaRiverineWooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard   | White throated Kingfisher     | Halcyon smyrnensis        | Agriculture/Riverine    |
| Wooly necked StorkCiconia episcopusAgricultureYellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | White throated Laughingthrush | Pterorhinus albogularis   | Forest                  |
| Yellow bellied FantailChelidorhynx hypoxanthusScrubYellow footed green PigeonTreron phoenicopteraForest/Orchard  | White Wagtail                 | Motacilla alba            | Riverine                |
| Yellow footed green Pigeon Treron phoenicoptera Forest/Orchard   | Wooly necked Stork            | Ciconia episcopus         | Agriculture             |
|  | Yellow bellied Fantail        | Chelidorhynx hypoxanthus  | Scrub                   |
| Vollow Woodsil Motacilla flava Pivarina  | Yellow footed green Pigeon    | Treron phoenicoptera      | Forest/Orchard          |
| Tenow wagtan Wonacuu jiava Kiveinie  | Yellow Wagtail                | Motacilla flava           | Riverine                |

# पक्षी ज्ञान देगा हिमालयी पर्यटन को नई पहचान

देशभर में तैयार किए जाएंगे 5.50 लाख पर्यावरण एवं पक्षी प्रेमी, पर्यटन व स्वरोजगार को मिलेगा बढ़ाव

संवाद सहयोगी, अत्मोहा : तिमालवं राज्य के साथ ही देशभर के विभिन्न प्रदेशों में पर्यावरण एवं वश्री प्रेमियों को क्रम प्रतिक्षण देवर पर्यटन विकास की बदावा दिवा जाएग। इसी बहाने बर्ड वर्षिण, वन एवं प्रयोवाण से जुड़ी गतिविधियों के जरिये स्वरोजनात के द्वार भी खोले जाएं। वर्ष 2021 तक अलग अलग राज्यें 5.50 लाख लोगों को कौरात विकास के लिए तैयर करने का लक्ष्य रखा है।

परिवर्तन मंत्रालय की पहल पर हरित धीरात विकास कार्यक्रम के तात जीबी पंत राष्ट्रीय हिम्तलवी पर्वावरण शोप एवं सतत विकास संस्थान कोसी कटारमान में राष्ट्रसारीय 'पक्षी पान्यान एवं बुनिवारी पक्षी विज्ञान' विध्यक 18 दिनो कार्यकाल शुरू हो गई है। केंद्र में मुख्य अनिम एनं निदेशक मारतीय कन जीव संस्थान देशरहून हो, जीएर रावत व विदेशक संस्थान में अस्टास एवल ने संयुक्त रूप से किया। डॉ. गवन ने क्या केंद्रीय पर्याचरन मंत्रालय का सक्ष्य वर्ष 2021 तक इस तस के प्रतिकाण कार्यक्रमों के अस्मि देशभर में लगभग 5.50 लाख लोगों की यन एवं पर्याचरण के श्रेष्ट में कीजल विकास के लिए तैयार बरना है। इससे पर्यटन बी संपावन को नय अधम मिलेग।



जीवी पत्र राष्ट्रीय विभागती वर्धकरण नरस्य कॉर्सी कराजना अस्मीता है निरम्भ है, आरम्प नकर (का से पीवे स्वार पत्) व उनके दाएं पूर्व निरमक चारति रूप जीव संस्थार देशाहरू हो, जेन्द्र समावे स्वार दिशना सामग्री के होणिया = जानस्थ

#### इन विंदुओं पर रहेगा फोकस

पंडियों की पहचार, पारिनेक्सिकीट उपयोग, अञ्चल जरूरते, पर्यावरण में उपयोगिता, लोक विज्ञान में उनके

#### यहां दिया जाएगा प्रशिक्षण

काबेट नेप्रानल पार्क, रामनगर के स्थाल, पंजूड, धनगंद, विश्वरी, कुमाखरक आदि में।

पक्षी विशेषक बीएस बिल, जी, एजान अहमद देहरादून, क्षातीलम् मार्वाजक अवित्य केंद्र प्रभावी में, विशेष्ट नेवी ने ल्लाहर शो के अतिये असम जानकारी थी। वरिष्ठ वैज्ञानिक श्री. आहरी महर, ही. तुर्वाच ऐते. हो। विदेश आणी, वीट पाटक. हो. महेकानद, विदेश पद जानी, विकाद रिक्ष किए व सुनव किरीली आहे. ने विकास पर्के

#### अध्ययनकर्ताओं को मिलेगा वडा लाभ : डॉ. रावल

निदेशक राज्यान डॉ. रायत ने करा. पूरे भारत में 1800 से अधिक वही वासरिता रिविस की जा पुकी हैं। जैव विविधास के लिहाज से उर्वर उतराखंड में 600 से ज्यादा परियों का संसार बसल है। हरित क्षेत्राल कार्यक्रम इसे सतत पर्यटन से जोड़ने का कार कर रहा। उन्होंने युवाओं को पक्षी अवलोकन व कांटावाकी का कीशल विकसित कर स्वरोजगान के लिए प्रेरित करने की जरूरत बताई। ताकि स्वरोजगार व अविकी संभवनाओं को नकाम दिया जा सके । कहा कि यह देश टुनिया के पर्यटकों तथा इस क्षेत्र में अध्ययन करने वालों के लिए मील का प्रस्थर साबित होगा। प्रतिक्रित वृत्ता जनपद स्तर पर पर्वटन व रक्तांज्ञचार विकास में खेजदान

### इन राज्यों के प्रतिनिधि चहुंचे उत्तराखंड के पांच जिलों समेत उप्र उद्धेखः, असमः, युजरातः, राजस्थान राज्याँ से १५ लोगः।

सहारा-



रामनगर - पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार के तत्वाधान में हरित कौशल विकास कार्यक्रम के द्वारा गोविंद बल्लभ पंत इंस्टीट्युट हिमालयन एनवायरनमेंट डेवेलपमेंट अल्मोडा एवं सतत विकास संस्थान के इनविस केंद्र द्वारा पक्षी पहचान एवं ब्नियादी पक्षी विज्ञान का 18 दिवसीय प्रशिक्षण शिविर रामनगर के क्यारी गाँव में चल रहा है।



डस प्रशिक्षण कैम्प में पक्षी विशेषज्ञों के द्वारा प्रशिक्षणार्थियों को पक्षियों के छाया चित्र की बारीकियों को समझाया गया तथा उनके द्वारा प्रत्येक प्रशिक्षणार्थी को पक्षीयों की जीवन शैली और रहन सहन के बारे में भी बताया गया है। इस दौरान शिविर में प्रशिक्षण ले रहे प्रशिक्षणार्थियों को पक्षियों की पहचान एवं उनने ज्यानरार तथा वातावरण का ज्ञान प्राप्त कर सकें।

### देहरादून । मंगलवार • 14 जनवरी • 2020

### | www.rashtriyasahara.com |

## पक्षी विज्ञान से मिलेगी प्रदेश को नई पहचान : रावत

🔳 सद्यस न्यूज ब्यूसे

अल्मोड़ा ।

जीवी पंत कोसी करहरमहा के निदेशक डॉ. जाका पत कानता करहरपाश का तिरक्षक हा. कारदास राज्या ने कहर कि भारता में 1.5 से अधिक पद्मी प्रजातियों जात हैं और जैय विश्ववता से यनी करवाराबंध में आकेशे छह सी से अधिक पक्षी प्रजातियों पाई जाती हैं। इनकी पहचान और दुन्हें सतत् पूर्वटन से जीवने कर काम हरित कौशल कार्यक्रम के झरा किया वा रहा है। सोमवार को 18 दिवसीय पक्षी पहचान

एवं वतियादी पक्षी विज्ञान प्रशिक्षण कार्वक्रम एवं जुलवाज ज्या विकास असराव विकस्त का जुलारेश पर गीचिंद कल्लाभ पत्त राष्ट्रीय हिमालवी पर्यावरण एवं सतत् विकास संस्थान के इनविस केंद्र हारा किया गया। इस प्रशिक्षण कार्यक्रम का शुभारंभ देहरादून भारतीय क्रम जीव संस्थान पूर्व निदेशक औं, जीएस शक्त एवं संस्थान के निदेशक जा आरएस रावल हारा किया गया। यह प्रशिक्षण भारत सरकार के पर्यावरण, जन एवं जलवायु परिवर्तन मंबालय की और से हरित कौशल विकास कार्यक्रम के तहत दिखा जा रहा है। पक्षी विज्ञान से जुड़े वैज्ञानियों ने कहा कि प्रवीवरण मंत्रालयः भारत सरकार का लक्ष्य वर्ष २०२१



जोकी शंदराज में मोजून अभिन्यासी एवं विकेषक।

तक इस तरह के प्रतिक्षम कार्यकर्मी के मार्श्यम से देशभर में लगभग 5.50 राज्य लोगों की जन एवं पर्यावरण के क्षेत्र में करिशल विकास हैतु तिमार करना है। मुश्लिए कार्यक्रम के संयोजक तथा इनक्स केंद्र के प्रभारी का गिरीश तेगी क्षारा स्टाइन्ड की के मार्श्यम से प्रशिक्षण कार्यक्रम की विकास सार्थम से प्रशिक्षण कार्यक्रम की विकास सार्थम से प्रशिक्षण कार्यक्रम की विकास सार्थम से केंद्र की कर्यक्रम की कार्यक्रम कार्यक्रम के केंद्र मार्थ के की कार्वेट नेशनल पार्क के इर्दशिद रामगार के स्थात, पनगेट, किलबरी रिसंब फरिस्ट,

कुंजाखरक आदि स्थानीं पर चलेगा। प्रसा कार्यक्रम में उत्तराखंड के पांच जिलों समेत जसर प्रदेश, अर्थसा, असम्, गुजरात, राजस्थान राज्यों से 15 लीग प्रतिभाग गुजरात, राज्यस्थान राज्या स 15 लाग आराममा कर रहे हैं। इस मीके पर संस्थान के बैजानिक, उस आईडी भट्ट, डा. सुबांध ऐसे, डा. रविंड जोसी, रिब पाटक, इनांबस बेंड्र के डा. महेश्वनद, बिपित चंद्र सम्में, विजय दिएं बिप्ट, सुम्मा किरोल्ड संस्थान के शीवार्डी एवं संस्थान के कर्मखारी उपस्थित रहे।

## पक्षी पहचान को लेकर प्रशिक्षण शुरू

बनियादी पक्षी विज्ञान पर 18 दिवसीय प्रशिक्षण कार्यक्रम बहस्पतिवार को कैप हॉर्नीबल क्यारी में शुरू हुआ। इस दौरान प्रशिक्षणार्थियों को पक्षियों की नई प्रजातियों के बारे में डॉ. रवींट्र जोशी एवं बँची सिंह बिष्ट ने जानकारी टी। डॉ. जोशों ने यह बताया कि यह प्रशिक्षण तभी सफल होगा, जब वह पक्षियों से लगाव रखेंगे।

रापनगर (नैनीताल)। पक्षी पहचान और रवि पाठक ने छायाचित्र से बारीकियों को समझाया। प्रशिक्षण में पर्यटन के क्षेत्र में रोजगार की संभावनाओं पर विचार किया जाएगा। डॉ. जीसीएस नेगी की अध्यक्षता में यह कार्यक्रम हुआ। प्रशिक्षण कार्यक्रम में तराई पश्चिमी वन प्रभाग के डीएफओ हिमांशु बागरी, डॉ. रवि जोशी, रवि पाठक, डॉ. महेश आंनद, डॉ. प्रदीप सिंह आदि रहे। संवाद

# 'पक्षी विज्ञान को

भेड़ा। जीबी पंत संस्थान संस्थान कोसी कटारमल में वन पर्यावरण एवं जलबायु परिवर्तन मंत्रालय भारत सरकार के इनविस सचिवालय की और से संचालित हरित कौशल विकास कार्यक्रम के तहत पक्षी पहचान एवं बुनियादी पक्षी विज्ञान विषय पर दिवसीय प्रशिक्षण संपन्न हो गया है।

प्रशिक्षण में प्रदेश के आठ जिलों सहित अन्य राज्यों से पहुंचे प्रशिक्षणार्थियों को विषय विशेषज्ञों की ओर से पक्षी पहचान एवं बुनियादी पक्षी विज्ञान की स्वरोजगार के रूप में अपनाने को लेकर प्रशिक्षण दिया गया। भ्रमण के दौरान पक्षी केटी वाल्बर को पहली बार उताराखंड राज्य से सर्वप्रथम खोजा गया। पर्यटन अधिकारी राहुल चौबे ने कहा कि हरित कौशल कार्यक्रम के तहत चलाये जा रहे पाठयक्रमों से न केवल कृषक आजीविकों को सुद्दता मिलेगी, बल्कि हिमालयी क्षेत्रों में हो रहे पलायन को भी रोका जा सकेगा।

इस दौरान ७१ वें गणतंत्र दिवस पर निदेशक डा. आरएस रावल ने संस्थान कर्मियों को बधाई दी। ध्वजारोहण के बाद वृक्षारोपण कार्यक्रम भी आयोजित किया गया। प्रशिक्षण के समन्वयक एवं संस्थान के इनविस केंद्र प्रभारी डा. गिरीश नेगी ने प्रशिक्षण के बारे मे जानकारी दी। यहां डा. रविंद्र जोशी, इनविस केंद्र के डा.महेशानंद, विपिन शर्मा एवं विजय सिंह बिट मीजूद रहे।

### **Outcomes**

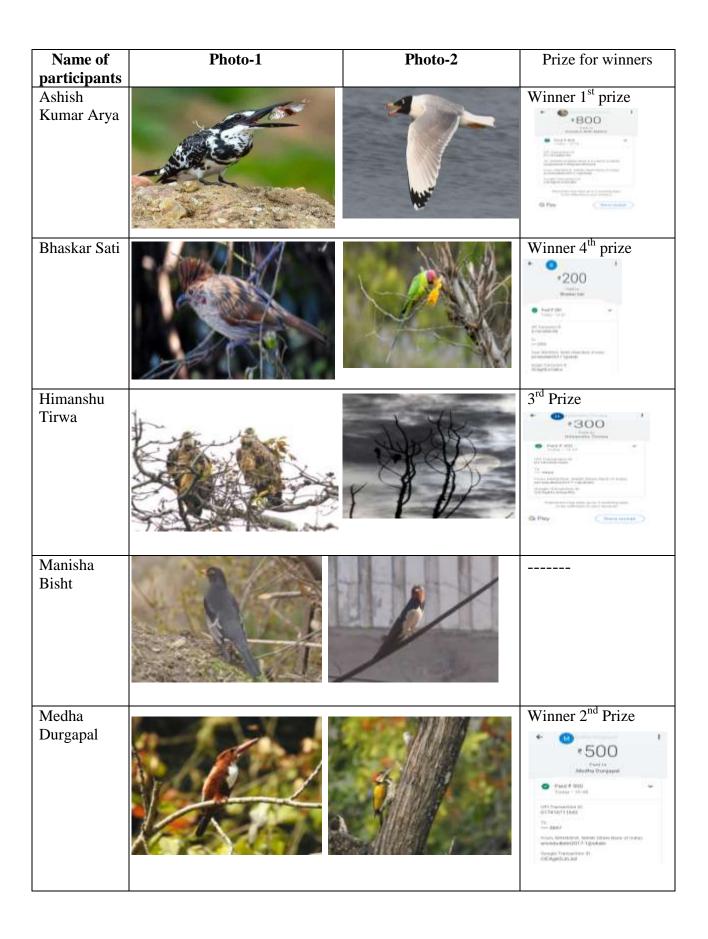
ENVIS Centre organised organised Himalayan Bird Ornithology photography competition during **International Biodiversity Day on 22 May 2020.** 

- ♣ On the occasion of the International Day for Biological Diversity (IDB) on 22<sup>nd</sup> May, 2020, ENVIS centre on Himalayan Ecology, GBPNIHE, is organized a Himalayan ornithology competition for GSDP trainees of "Bird Identification and Basic Ornithology" 11-26 January 2020.
- ♣ The following format were sent by email to all GSDP trainees based on this 7 entries were received under above competition.

Only send photos/ details of the birds which you have found after the GSDP course. List of the birds you found during the GSDP course has been sent to you. Photographs should be in digital form with at least of 5 mega pixels size. Each participant can submit a maximum of 3 entries to Email Id: (gbpihed@envis.nic.in; maheshlyf87@gamil.com; deepudun28@gmail.com).

### Prize and term of references

- ♣ The last date of receiving entries in the Institute is 21<sup>st</sup> May 2020.
- ♣ Best entry (judged by a panel) in each thematic area will be given a token incentive (**I**<sup>st</sup> **prize Rs.** 1,000/-; **II**<sup>nd</sup> **Rs.** 5,00/-; and one consolation prize **Rs.** 250) and a certificate of merit. All participants will be awarded with certificate of participation and appreciation.
- ♣ Institute will have right to use photographs received as entries for the competition in various institute documents with due credit to the photographer.





### **Special issue of Newsletter**

- → A special Issue of ENVIS Newsletter were compile and release by Mr. Yasvir Singh, Economic Advisor, MoEF&CC during the occasion of V.C of North region ENVIS Centre Meeting
- ♣ All articles were written by GSDP trainees on Bird Identification and Basic Ornithology on following topics.



| Topics  | GSDP trainees/ Resource Persons                   |  |
|---|---|--|
| प्रशिक्षण के दौरान अवलोकित पक्षी प्रजातियों की सूची | All GSDP trainees during course                   |  |
| जिम कार्बेट राष्ट्रीय उद्यान जैव – विविधता          | Himanshu Tirwa                                    |  |
| Himalayan Vulture: Introduction and Role in         | Vikas Kumar Maurya                                |  |
| Ecosystem   |   |  |
| आईबिसबिल जलीय पक्षीः सामान्य परिचय                  | Mahindra Singh Pawar                              |  |
| Birdwatching Ethics and Responsible Tourism         | Bhaskar Sati                                      |  |
| Birds Survey Methods                                | Kamal Kant Joshi (Resource Persons)               |  |
| Birds and their Ecosystem                           | Vinay Singh                                       |  |
| Birds of Wetlands in Corbett Park Landscape         | Manisha Bisht, (GSDP Trainee) Deepika Goswami and |  |
|   | V.P uniyal (Resource Persons)                     |  |
| Birds and their Feeding Behaviour                   | Medha Durgapal                                    |  |

### **Success story/ Placement Status**

| S.No | Name                 | Current                | Designation             | E-mail ID.                    |
|------|----------------------|------------------------|-------------------------|-------------------------------|
|      |                      | Organisation           |                         |                               |
| 1.   | Amardeep Singh       | -                      | Unemployed              | internetpointrmr@gmail.com    |
|      | Sethi                |                        |                         |                               |
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## Green Skill Development Programme (GSDP)

### Importance of Skilling India's Youth

India's youthful manpower, a result of the demographic dividend, need to be provided with skills and ability to tackle global challenges. The more we give importance to skill development the more competent youth will be. It is important to predict the possibilities of the future, and prepare for them today itself. We have to make India the skill capital of the world.

### Shri Narendra Modi, Prime Minister of India

To protect the environmental right of our future generations, all of us have a green social responsibility. The fast evolving and emerging technologies in dynamic world to combat the menace of environmental degradation need to be complemented by specially trained and skilled manpower in various field at all levels. Imparting skill sets for greener transformation will generate employment opportunities and strengthen our resolve to conserve and preserve the priceless environment.

### Dr. Harsh Vardhan, Minister, Environment, Forest and Climate Change

### Background

India being the second most populous country in the world is bestowed with a large working population. India has advantage of reaping this demographic dividend. However, high drop-out rates from school coupled with poor vocational skills may hinder in reaping this dividend. There exists a demand supply gap of skill sets, both cognitive and practical, at various levels in the Environment/ Forest fields in India







### Opportunities

The candidates completing the Course(s) may be employed gainfully in the zoos/wildlife sanctuaries/national parks/ biosphere reserves/ Botanical Gardens/Nurseries/wetland sites/ State Biodiversity Boards/Biodiversity Management Committees/Wildlife Crime Control Bureau; industries (involved in production/ manufacturing of green products, as ETP operator); tourism (as Nature/Eco-tourist Guides), agriculture (as organic farmers/ green practitioners), education & research sectors as well as engage in waste management (in Municipal Corporations/ Councils/Urban Local bodies to advise on how to improve sewage, sanitation, land use services/ tackle pollution), water management, construction related areas, etc. Some of the courses enable the candidates to become self-employed.

### Achievements

The first GSDP course was formulated for skilling Biodiversity Conservationists (Basic Course) and Parataxonomists (Advance Course) of 3 months duration each, on a pilot basis in ten select districts of the country (covering nine bio-geographic regions). 94 Trainees successfully completed the basic course qualifying as skilled Biodiversity Conservationists and 152 Trainees completed the Advanced Course qualifying as skilled Parataxonomists. BSI and ZSI were the nodal Centres for the pilot programme.

### For further details:

ENVIS Secretariat

Ministry of Environment, Forest & Climate Change (MoEF&CC)

New Delhi- 110 003





### ENVIS CENTRE ON HIMALAYAN ECOLOGY

G.B. Pant National Institute of Himalayan Environment

& Sustainable Development

(An Autonomous Institute of the Ministry of Environment, Forest & Climate Change, Govt. of India) Kosi-Katarmal, Almora - 263 643, Uttarakhand, India

#### Background

ENVIS Centre on Himalayan Ecology at the G.B. Pant National Institute of Himalayan Environment & Sustainable Development (GBPNIHESD) was established in 1992-93 with the financial support from the Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India, New Delhi.

#### Mandate

To spread environmental awareness and help Research and Development (R&D) in the areas related to Himalayan Ecology

#### Objectives

- . To collect, compile and process information on different aspects of Himalayan Ecology.
- disseminate available information to various stakeholders through electronic and print media
- To develop, up-grade maintain ENVIS website.



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### Himalayan Database

### Indian Himalayan States

- 4 Social Profile (Demography, Literacy, Birth Rate, etc.)
- Educational Infrastructure (Universities, Schools, etc.)
   Health & Family Weither (Heapitals, Blood Banks, etc.)
   Climate (Rainfall, Temperature, etc.)

- 4 Land (Classification, Area, Wasteland, etc.)
- 4 Water (Glaciera, Laker, etc.)
- 4 Agriculture (Area, Yield, Imigation, Growth rates, etc.)
- 4 Hosticulture (Area, Production, Productivity, etc.)
- 4 Livestock (Number, Production, etc.)
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Books Reports Documents on IHR

#### News Clippings

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- ♦ News Articles (Daily news papers in Hindi & English)

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