

U.P. State Biodiversity Board
Lucknow



ANNUAL REPORT 2012-2013

Uttar Pradesh State Biodiversity Board Lucknow

Cover Photo : Wetlands

Front cover: 1. Sarus Cranes (Grus antigone)

2. Painted Storks (Mycteria leucocephala)

Back cover : Black Headed Ibis (Threskiornis melanocephalus)

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Introduction

Introduction

Biodiversity encompasses the variety of all life on earth including terrestrial, marine and aquatic ecosystems. It includes diversity at three levels: Genetic Diversity (within species), Species Diversity (between species) and Ecosystem Diversity (between ecosystems).

Biodiversity is essential for human survival and well being. It forms the core of all development actions since it provides food, fodder, medicines, water, clean air and other goods and services.

Uttar Pradesh at a Glance

It is the fourth largest (area wise) and most populous state in the country. On 3.7% of the total area of the country, Uttar Pradesh supports 16.49% of the human population of India and about 12% of the livestock population. The population density in the state is 828 persons per km².

Agriculture is the main occupation of the people. The state is well drained by a number of riversthe Ganga, Yamuna, Ramganga, Gomti, Ghaghra, Gandak, Chambal, Betwa, Ken, Son etc.

The total forest/tree cover is 21,720 sq. km. which represents 9.01% of the total geographical area of the state. The recorded forest area is $16,583 \, \mathrm{km}^2$ which is 6.88% of the state's geographical area. The state is home to one National Park and 24 wildlife sanctuaries. Latest Remote Sensing Applications Center (RSAC) records show that U.P. has 11,45,178 ha area (4.8% of its geographical area) as wetlands.

About 2881 species of plants are recorded from Uttar Pradesh which is about 6.34% of the total species of India. The National Bureau of Fish Genetic Resources has recorded about 115 species of fish in U.P. from 20 rivers. Out of this, 109 are native fishes and 06 are exotic fishes.

The Biological Diversity Act, 2002

The Biological Diversity Act, 2002 of 2003 was enacted by Ministry of Environment and Forests, Government of India on 5th February, 2003. This Act provides for conservation of biological diversity, sustainable use of its components and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto. The Act has 12 chapters and 65 sections.

The Biological Diversity Act provides a legal mechanism for establishing sovereign rights over the Indian biodiversity and its conservation, protection against misappropriation, regulation of access and sustainable use of biodiversity and associated knowledge.

The Biodiversity Rules were notified on 15th April, 2004.

The functions of SBBs as per Section 22 of the Act include:

- Advising the State Governments, subject to guidelines issued by the Central Government, on matters relating to conservation of biodiversity, sustainable use of its components and equitable sharing of benefits arising out of utilization of biological resources.
- Regulating by granting approvals or otherwise requests for commercial utilization or bio-survey and bio-utilization of any biological resources by Indians.
- > Performing such other functions as necessary to carry out the provisions of this Act or as prescribed by the State Government.

Constitution of the Board

As per the Biological Diversity Act, Section 22, each state is to establish a State Biodiversity Board. Accordingly, the Uttar Pradesh State Biodiversity Board (UPSBB) was established vide G.O. No. 1498/14-5-2006-57/2006 dt. 20 September 2006.

The Board consists of the following members:

1.	Principal Secretary, Forest Department, Government of Uttar Pradesh	Chairman
2.	Nominee of Principal Secretary/Secretary, Environment Department, Government of Uttar Pradesh	Member
3.	Nominee of Principal Secretary/Secretary, Horticulture Department, Government of Uttar Pradesh	Member
4.	Nominee of Principal Secretary/Secretary, Agriculture Department, Government of Uttar Pradesh	Member
5.	Nominee of Principal Secretary/Secretary, Animal Husbandry Department, Government of Uttar Pradesh	Member
6-	Principal Chief Conservator of Forests, Uttar Pradesh	Member
7 to 11	Five Specialist Members	Specialist Members

In exercise of the powers under subsection (1) of Section 63 of the Biological Diversity Act, 2002, the UP State Biological Diversity Rules, 2010 was framed vide notification number 570/XIV-5-2010-57/2006 dated April 9, 2010. Under the provision of section 19(3) of the Uttar Pradesh Biological Diversity Rules, 2010, the Board shall submit the Annual report and the State Government will lay the report before the Legislative Assembly.

Board Meetings

7th Board meeting: 11th Oct., 2012

The 7th Board meeting was held on 11th Oct. 2012. In this meeting, confirmation of the minutes of the previous meeting was done first, followed by the discussion on the progress and follow up actions on the directions given in the previous meeting. In addition, a review on the progress of various activities of the Board was presented by Pratibha Singh, DCF. It was brought to the notice of the board that India is host to the 11th Conference of Parties (COP) of the convention of Biological Diversity (CBD) that is currently at Hyderabad. Brochures/Flyers/Booklets/ Standees for the information of international guests have been developed and will be displayed/distributed at a stall in COP-11. These materials are being distributed free of cost at Hyderabad during the COP-11 meeting.

The following decisions were taken at the 7th Board meeting:

- 1. Approval of audited financial report of 2011-12.
- 2. Approval of expenditure of the Board upto August 2012.
- 3. Proposed budget of the Board for 2012-13.
- 4. Approval of Guidelines for preparation of PBR with the cooperation of educational institutions.
- 5. Approval was given for making 1000 copies (each) of books on Birds of Raj Bhawan, Lucknow and "Trees of Lohia Park", Lucknow by the Board.
- 6. The draft of Annual Report 2011-12 was approved by the Board for publication in Hindi and English.
- 7. o7 new projects were approved for funding from the Board.
- 8. Extension was given to BSIP currently doing the project, "Documentation of Plant Diversity through Literature Survey for Development of Uttar Pradesh Biodiversity Database Information System (UPBDIS)" for a period of 09 months (01-04-12 to 31-12-12).
- 9. Extension was given to Zoology Deptt., Lucknow University for the project, "Annotated and Colored Checklist of the Reptiles and Amphibians of Uttar Pradesh" for a period of six months (May to October 2012).
- 10. Permissions sought/Approvals given:
 - i. Under Section 6 of Biological Diversity Act and Rule 18 of Biodiversity Rules, 2004, permission was sought from NBA by Shri R. K. Gupta, Head, Innovation Protection Unit, N.I.S. C.A.I.R Building, New Delhi for the use of biological resources e.g. Cymbopogon spp., Chrysanthemum cineraraiaefolium, Eucalyptus citriodora, Foeniculum vulgare, Lavandula spp., Lippia spp., Mentha arvensis, Mentha piperita, Ocimum basilicum, Perlargonium gravelens, Zingiber officinale from Central Institute of Medicinal and Aromatic Plant,

- Lucknow. NBA had sought consent of UPSBB for this, the same was granted subject to conditions.
- ii. Under Section 6 of Biological Diversity Act and Rule 18 of Biodiversity Rules, 2004, NIS, CSIR Building, New Delhi had sought permission from NBA by N.I.S. C.A.I.R Building, New Delhi for the use of biological resources like Juglans regia, Indigofera tinctoria, Terminilia chebula, Acacia simuata, Lawsonia inermis, Trigonella fornum-graecum, Sapindus mukorossi, Elipta alba, Embelica officinalis, Acacia catechú, Piper betle for research purpose through the purchase from Nakkhas Bazar, Lucknow. NBA had sought consent of UPSBB for this, the same was given.
- iii. Under Section 20 of Biological Diversity Act and Rule 19 of the Biodiversity Rules, Prof. K.P. Joy, Centre of Advance Studies, Deptt. Of Zoology, Banaras Hindu University had sought permission for use of biological resource *Hetero pneustes fossilis* (Edible catfish) for research through purchase from Chauka Ghat Bazar of Banaras. NBA had sought consent of UPSBB for this, the same was given subject to conditions.
- iv. Under Section 7 of Biological Diversity Act and U.P. State Biodiversity Rules 2010, M/s Sungro Seeds Ltd. had sought permission from NBA for the use of biological resources like 50 seeds of *Gossypium hirsutum/barbedense* (Cotton) and *Cry1EC*-cockerline, NBRI event 24 and Cry 1EC-gene-sourced from a soil microorganism, *Bacillus thuringiensis* from NBRI campus. It was decided by the Board to refer the matter to U.P. Deptt. of Science & Technology for seeking their advice in this regard. Besides, the advice of two or three Biotechnology specialists in this field was also sought.

8th Board meeting: 07th Dec., 2012

8th Board meeting was held on 07th December, 2012. In this meeting, confirmation of the minutes of the previous meeting was done, followed by the discussion on the progress and follow up actions on the directions given in the previous. Besides, a review on the progress of ongoing activities of the Board was presented by Pratibha Singh, DCF. It was informed that the COP-11 event was held at Hyderabad during 01-19 October 2012 and a stall of U.P. State Biodiversity was also exhibited, where a total of 22000 flyers and 2000 booklets were distributed free of cost to the visitors taking interest in the exhibition.

The following decisions were taken at the 8th Board meeting:

- 1. Presentation of work of the Board during the year 2012-13.
- 2. Approval of expenditure of the Board upto September, 2012.

- 3. Approval for the extension of ongoing project "Documentation of Plant Diversity through Literature Survey for Development of Uttar Pradesh Biodiversity Database Information System (UPBDIS)" for a period upto 31st March 2013 with the condition that no extra grant will be given for this purpose.
- 4. Permission sought/Approval given:

Under Section 7 of Biological Diversity Act and U.P. State Biodiversity Rules 2010, M/s Sungro Seeds Ltd. had sought permission from NBA for the use of biological resources like 50 seeds of *Gossypium hirsutum/barbedense* (Cotton) and Cry1EC-cockerline, NBRI event 24 and Cry 1EC-gene-sourced from a soil microorganism, *Bacillus thuringiensis* from NBRI campus.

It was decided by the Board to refer the matter to U.P. Deptt. of Science & Technology for seeking their advice in this regard. Besides, the suggestions from two or three specialists in this field should also be sought.

Biodiversity Management Committees

Biodiversity Management Committees (BMCs)

As per guidelines of the Biological Diversity Act, 2002 and in accordance with Rule 21 of Uttar Pradesh Biological Diversity Rules, 2010, two Biodiversity Management Committees (BMC's) were constituted this year. The details of the Biodiversity Management Committees (BMC's) are given as follows:

S. No.	Name of the Village	Block	District	Date
1.	Naipalapur	Khairabad	Sitapur	16-01-2013
2.	Harsewakpur No. 2	Chargawan	Gorakhpur	26-02-2013

So far, seven (07) BMCs have been constituted in the state, the details of which are as follows:

S. No.	Agro Climatic Zone	Name of District	Name of Block	Name of Village	Date of BMC formation
1	Central Plain	Lakhimpur	Lakhimpur	Saidapur Devkali	15-10-2009
2		Sitapur	Khairabad	Naipalapur	16-01-2013
3	Tarai	Bahraich	Balha	Nanpara Dehat	07-12-2010
4	Budelkhand	Chitrakoot Dham	Karvi (Chitrakoot)	Baihar	19-01-2011
5	Eastern Plain	Barabanki	Banki	Bhitauli Kalan	03-03-2011
6	North Eastern	Gorakhpur	Piprauli	Bhawapar	05-04-2011
7	Plain	Gorakhpur	Chargawan	Harsewakpur No. 2	26-02-2013

The functions of these BMCs include:

- a. Preparing, maintaining and validating People's Biodiversity Register (PBR) in consultation with the local people.
- b. Maintaining a register giving information about the details of access to biological resources and traditional knowledge granted, details of the collection fee imposed and details of the benefits derived and the mode of their sharing.
- c. Advising on any matter referred to it by the State Biodiversity Board or Authority for granting approval, to maintain data about the local vaids and practitioners using the biological resources.

Peoples's Biodiversity Register (PBR)

People's Biodiversity Registers (PBRs)

The main function of the BMC is to prepare People's Biodiversity Register in consultation with local people. The registers shall contain comprehensive information on the availability and knowledge of local biological resources, their medicinal or any other use or any other traditional knowledge associated with them.

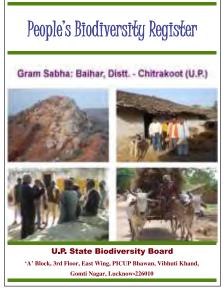
The PBRs focus on participatory documentation of local biodiversity, traditional knowledge and practices. They are seen as key legal documents in ascertaining the rights of local people over the biological resources and associated traditional knowledge.

During this period, the following two People's Biodiversity Registers (PBRs) have been completed:

i) **Gram Sabha: Baihar, Distt. - Chitrakoot:** The Biodiversity Management Committee (BMC) of this village was formed on 19-01-2011. Extensive survey was done during formation of the People's Biodiversity Register (PBR) of this village. PBR of the village was validated on 23-01-2013 by the BMC. Overall 295 species were recorded in this village; details of the same are given below in the table:

Total diversity of life recorded in Village Baihar, District Chitrakoot

Crop Plants	42
Wild Plant Species of Importance	12
Pests of Crops	08
Wild relatives of Crops	01
Ornamental Plants	10
Fodder Crop	01
Wild Aquatic Plant Species of Importance	00
Fumigate / Chewing Plants	01
Aquatic Biodiversity	00
Domesticated Animals	07
Other Plants in the Wild	23
Culture Fisheries	00
Wild Animals (Mammals, Birds, Reptiles,	68
Amphibian, Insects, others)	
Wild Plants of Medicinal Importance	25
Trees, Shrubs, Herbs, Tubers,	45
Grasses, Climbers	
Fruit Plants	13
Medicinal Plants	06
Weeds	22
Timber Plants	09

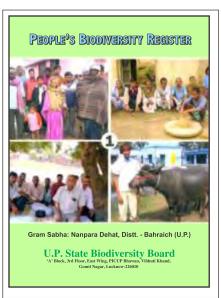


Cover page of the PBR

ii) Gram Sabha: Nanpara Dehat, Distt. - Bahraich: The Biodiversity Management Committee (BMC) of this village was constituted on 07-12-2010. Interactions/meetings with the local peoples, survey of the village and several visits was organized during formation of the People's Biodiversity Register (PBR) of this village. The PBR of Nanpara Dehat is available in two volumes (Vol. - 1 & Vol.-2). The BMC of the village validated the PBR on 12-03-2013. Altogether *343 species* were recorded in this village; details of the same are given below in the table:

Total diversity of life recorded in Village Nanpara Dehat, District Bahraich

Crop Plants	47
Wild Plant Species of Importance	15
Pests of Crops	17
Wild relatives of Crops	06
Ornamental Plants	18
Fodder Crop	03
Wild Aquatic Plant Species of Importance	04
Fumigate / Chewing Plants	00
Aquatic Biodiversity	08
Domesticated Animals	13
Other Plants in the Wild	19
Culture Fisheries	16
Wild Animals (Mammals, Birds, Reptiles,	69
Amphibian, Insects, others)	
Wild Plants of Medicinal Importance	28
Medicinal Plants	13
Fruit Plants	24
Timber Plants	15
Weeds	28



Cover pages of the PBR



Cover pages of the PBR

Projects

The progress of these projects during the year 2012-2013 is as follows:

(A) Completed Project

1. Annotated and Coloured Checklist of Reptiles and Amphibians of Uttar Pradesh

The study was carried out by the **Department of Zoology**, **Lucknow University**. The project was sanctioned initially for period of one year with the objective to comprehensively document the poorly known diversity of amphibians and reptiles of Uttar Pradesh.

The herpetology of Uttar Pradesh has never been studied systematically or in sufficient detail with respect to the distribution and abundance of species, Consequently, there was an urgent need to compile and collate existing data as well as initiate systematic cataloguing and documentation of abundance, distribution, habitat preferences and natural history of herpeto-fauna of the state to produce an authentic, annotated and illustrated checklist of reptiles and amphibian occurring within the political boundaries of Uttar Pradesh, which can serve as reliable baseline for monitoring biodiversity and environmental change.

Sampling sites were identified in the different physiographic zones of the state as well as different habitat types in the state.

The significant findings have been compiled to produce an authentic, annotated and illustrated checklist of herpetofauna occurring with in the political boundaries of Uttar Pradesh. A total of 88 species of herpetofauna have been recorded in the state. These include 64 species of reptiles and 24 species of amphibians.

List of amphibians reported from Uttar Pradesh

S. No.	Common Name	Scientific Name	Order	Family	Genus	Species	IUCN Status
1.	Jerdon's Bull Frog	Hoplobatrachus crassus	Anura	Ranidae	Hoplobatrachus	crassus	Common
2.	Common Indian Toad	Duttaphrynus melanostictus	Anura	Bufonidae	Duttaphrynus	melano- stictus	Not Evaluated
3.	Marbled Toad	Bufo stomaticus	Anura	Bufonidae	Bufo	stomaticus	Not Evaluated
4.	Himalayan Toad	Bufo himalayanus	Anura	Bufonidae	Bufo	himala- yanus	Least Concern
5.	Beautiful Stream Frog	Amolops formosus	Anura	Bufonidae	Amolops	formosus	Least Concern
6.	Stoliczka's Frog	Rana vicina	Anura	Bufonidae	Rana	vicina	Least Concern

S. No.	Common Name	Scientific Name	Order	Family	Genus	Species	IUCN Status
7.	Marbled Toad	Duttaphrynus stomaticus	Anura	Bufonidae	Duttaphrynus	stomaticus	Least Concern
8.	Skipper Frog	Euphlyctis cyanophlyctis	Anura	Dicro- glossidae	Euphlyctis	cyano- phlyctis	Not Evaluated
9.	Indian Bullfrog	Hoplobatrachus tigerinus	Anura	Dicro- glossidae	Hoplobatrachus	tigerinus	Least Concern
10.	Common Pond Frog	Fejervarya limnocharis	Anura	Dicro-	Fejervarya glossidae	limnocharis	Least Concern
11.	Ornamented Pygmy Frog	Microhyla ornata	Anura	Micro- hylidae	Microhyla	ornata	Least Concern
12.	Gray Balloon Frog	Uperodon globulosum	Anura	Micro- hylidae	Uperodon	globulosum	Least Concern
13.	Marbled Baloon Frog	Uperodon systoma	Anura	Micro- hylidae	Uperodon	systoma	Least Concern
14.	Assam Narrow- mouth Toad	Kaloula assamensis	Anura	Micro- hylidae	Kaloula	assamensis	Least Concern
15.	Sri Lankan Bullfrog	Kaloula taprobanica	Anura	Micro- hylidae	Kaloula	taprobanica	Least Concern
16.	Terai Cricket Frog	Fejervarya teraiensis	Anura	Ranidae	Fejervarya	teraiensis	Least Concern
17.	Indian Burrowing Frog	Sphaerotheca breviceps	Anura	Ranidae	Sphaerotheca	breviceps	Least Concern
18.	Roland's Burrowing Frog	Sphaerotheca rolandae	Anura	Ranidae	Sphaerotheca	rolandae	Least Concern
19.	Field frog	Limnonectes limnocharis	Anura	Ranidae	Limnonectes	limnocharis	Vulnarable
20.	Common Sand Frog	Tomopterna species	Anura	Ranidae	Tomopterna	species	Least Concern
21.	Common Tree Frog	Polypedates maculates	Anura	Rhaco- phoridae	Polypedates	maculates	Least Concern
22.	Dudhwa Tree Frog	Chirixalus dudhwaensis	Anura	Rhaco- phoridae	Chirixalus	dudh- waensis	Data Daficient
23.	Not Known	Polypedates taeniatus	Anura	Rhaco- phoridae	Polypedates	taeniatus	Not Known
24.	Not Known	Chiromantis dudhwaensis	Anura	Rhaco- phoridae	Chiromantis	dudh- waensis	Not Known

The list of 64 identified reptiles of U.P. includes 35 species snakes, 15 species of reptiles, 12 species of lizards in addition to the crocodile and ghariyal. Of the 35 species of snakes 24 listed and identified 16 are venomous, 17 are non-venomous and 2 are unknown. The list is as follows:-

1. List of reptiles reported from Uttar Pradesh

Venomous and Non-venomus Snakes of Uttar Pradesh

S. No.	Common Name	Scientific Name	Order	Sub-Order	Family	Genus	Species
1	Reticulated Python	Python reticulated	Squamata	Ophidia	Pythonidae	Python	reticulated
2	Indian Rock Python	Python molurus	Squamata	Ophidia	Pythonidae	Python	molurus
3	Red Sand Boa	Eryx johni	Squamata	Ophidia	Boidae	Eryx	johni
4	Common Wolf Snake	Lycodon aulicus	Squamata	Ophidia	Boidae	Lycodon	aulicus
5	Himalayan Pit Viper	Gloydius himalayanus	Squamata	Ophidia	Viperidae	Gloydius	Himalayanus
6	Russell's Viper	Daboia russelii	Squamata	Ophidia	Elapidae	Daboia	russelii
7	King Cobra	Ophiophagus hannah	Squamata	Ophidia	Elapidae	Ophiophagus	hannah
8	Wall;s Sind Krait	Bungarus sindanus walli	Squamata	Ophidia	Elapidae	Bungarus	sindanus walli
9	Siebold's Smooth- scaled water Snake	Enhydris sieboldii	Squamata	Ophidia	Colubridae	Enhydris	sieboldii
10	Common Smooth- scaled Water Snake	Enhydris enhydris	Squamata	Ophidia	Colubridae	Enhydris	enhydris
11	Common Vine Snake	Ahaetulla nasauta	Squamata	Ophidia	Colubridae	Ahaetulla	nasauta
12	Leith's Sand Snake	Psammophis leithii	Squamata	Ophidia	Colubridae	Psammophis	leithii
13	Condanarus sand snake	Psammophis condanarus	Squamata	Ophidia	Colubridae	Psammophis	condanarus
14	Checkered Keelback	Xenochrophis piscatorn	Squamata	Ophidia	Colubridae	Xeno- chrophis	piscatorn
15	Barred wolf Snake	Lycodon striatus	Squamata	Ophidia	Colubridae	Lycodon	striatus
16	Banded Racer	Argyrogena fasciolata	Squamata	Ophidia	Colubridae	Argyrogena	fasciolata
17	Common Trinket Snake	Coelognathus helena	Squamata	Ophidia	Colubridae	Coelog- nathus	helena Helena
18	Common Sand Boa	Gongylophis conicus	Squamata	Ophidia	Boidae	Gongylophis	conicus

S. No.	Common Name	Scientific Name	Order	Sub-Order	Family	Genus	Species
19	Beaked Worm Snake	Grypotyphlops acutus	Squamata	Ophidia	Typhlopidae	Grypo- typhlops	acutus
20	Brahminy Worm Snake	Ramphotyphlops braminus	Squamata	Ophidia	Typhlopidae	Rampho- typhlops	braminus
21	Spectacled Cobra	Naja naja	Squamata	Ophidia	Elapidae	Naja	naja
22	Banded Krait	Bungarus fasciatus	Squamata	Ophidia	Elapidae	Bungarus	fasciatus
23	Forsten's Cat snake	Boiga forsteni	Squamata	Ophidia	Colubridae	Boiga	forsteni
24	Common Cat Snake	Boiga trigonata	Squamata	Ophidia	Colubridae	Boiga	trigonata
25	Olive Keelback	Atretium schistosum	Squamata	Ophidia	Colubridae	Atretium	schistosum
26	Common Krait	Bangarus caeruleus	Squamata	Ophidia	Elapidae	Bangarus	caeruleus
27	Striped Keelback	Amphiesma stolatum	Squamata	Ophidia	Colubridae	Amphiesma	stolatum
28	Russell's Kukri Snake	Oligodon taeniolatus	Squamata	Ophidia	Colubridae	Oligodon	taeniolatus
29	Indian Rat Snake	Ptyas mucosa	Squamata	Ophidia	Colubridae	Ptyas	mucosa
30	Burmese Python	Python morulus bivittatus	Squamata	Ophidia	Pythinidae	Python	morulus bivittatus
31	Common Bronze- back Tree Snake	Dendrelaphis tristis	Squamata	Ophidia	Colubridae	Dendrelaphis	tristis
32	Yellow- Speckled	Lycodon jara	Squamata	Ophidia	Colubridae	Lycodon	jara
	Wolf Snake						
33	Mock Viper	Psammodynastes pilverulentus	Squamata	Ophidia	Colubridae	Psammo - dynastes	pilverulentus
34	Cantor's black- headed snake	Sibynophis sagitarious	Squamata	Ophidia	Colubridae	Sibynophis	sagitarious
35	Bar-necked keelback	Xenochrophis schnurrenbergeri	Squamata	Ophidia	Colubridae	Xenochrophis	schnurren- bergeri

List of reported turtles and tortoise from Uttar Pradesh

30	6	Tricarinate Hill Turtle	Melanochelys tricarinata	Testudines	Cryptodira	Geogmydidae	Melano- chelys
3'.	7	Brown Roofed Turtle	Pangshura smithii	Testudines	Cryptodira	Geogmydidae	tricarinata Pangshura smithii
38	8	Crowned River Turtle	Hardella thurjii	Testudines	Cryptodira	Geogmydidae	Hardella thurjii

S.	Common Nome	Scientific Name	Order	Sub-Order	Family	Conuc	Charing
S. No.	Common Name	Scientific Name	Order	Sub-Order	ramily	Genus	Species
39	Three Striped Roofed Turtle	Batagur dhongoka	Testu- dines	Cryptodira	Geogmydidae	Batagur	dhongoka
40	Spotted Pond Turtle	Geoclemys hamiltonii	Testu- dines	Cryptodira	Geogmydidae	Geoclemys	hamiltonii
41	Indian peacock Soft Shell Turtle	Nilssonia hurum	Testu- dines	Cryptodira	Trionychidae	Nilssonia	hurum
42	Painted Roofed Turtle	Batagur kachuga	Testu- dines	Cryptodira	Geogmydidae	Batagur	kachuga
43	Indian Soft Shell Turtle	Nilssonia gangeticus	Testu- dines	Cryptodira	Trionychidae	Nilssonia	gangeticus
44	Indian Eyed Turtle	Morenia petersi	Testu- dines	Cryptodira	Geogmydidae	Morenia	petersi
45	Indian Black Turtle	<i>Melanochelys</i> trijuga	Testu- dines	Cryptodira	Geogmydidae	Melanochelys	trijuga
46	Indian Roofed Turtle	Pungshura tecta	Testu- dines	Cryptodira	Geogmydidae	Pungshura	tecta
47	Elongated Tortoise	Indotestudo elongata	Testu - dines	Cryptodira	Geogmydidae	Indotestudo	elongata
48	Indian Narrow Headed Soft Shell Turtle	Chitra indica	Testu- dines	Cryptodira	Trionychidae	Chitra	indica
49	Indian Tent Turtle	Pangshura tentoria	Testu- dines	Cryptodira	Geogmydidae	Pangshura	tentoria
50	Indian Flap Shell Turtle	Lissemys punctata	Testu- dines	Cryptodira	Geogmydidae	Lissemys	punctata

$Gharial\, and\, crocodile\, reported\, from\, Uttar\, Pradesh$

51	Crocodile	Crocodylus palustris	Crocodilia	Crocodylidae	Crocodylus	palustris
52	Gharial	Gavialis gangeticus	Crocodilia	Crocodylidae	Gavialis	gangeticus

Lizards reported from Uttar Pradesh

53	Chhipkali	Hemidactylus flaviviridis	Squamata	Sauria	Gekkonidae	Hemidactylus	flaviviridis
54	Brook's Gecko	Hemidactylus brookii	Squamata	Sauria	Gekkonidae	Hemidactylus	brookii
55	Southern House Gecko	Hemidactylus frenatus	Squamata	Sauria	Gekkonidae	Hemidactylus	frenatus

S. No.	Common Name	Scientific Name	Order	Sub-Order	Family	Genus	Species
56	Common garden lizard	Calotes versicolor	Squamata	Iguania	Agamidae	Calotes	versicolor
57	Common Brahminy Skink	Eutropis carinata	Squamata	Sauria	Scincidae	Eutropis	carinata
58	Snake Skink	Lygosoma punctatus	Squamata	Sauria	Scincidae	Lygosoma	punctatus
59	Yellow Monitor	Varanus flavescens	: Squamata	Lacertilia	Varanidae	Varanus	flavescens
60	Monitor Lizard	Varanus	Squamata	Sauria	Varanidae	Varanus	Varanus
61	Desert monitor	Varanus griseus	Squamata	Lacertilia	Varanidae	Varanus	griseus
62	Jerdon's blood sucker	Calotes jerdoni	Squamata	Iguania	Agamidae	Calotes	jerdoni
63	Forest calotes	Calotes rouxi	Squamata	Iguania	Agamidae	Calotes	rouxi
64	Frilled house gecko	Cosymbotus platyurus	Squamata	Not Know	ı Gekkonidae	Cosymbotus	platyurus



Common Name: Indian Tent Turtle Scientific Name: *Pangshura tentoria*



Common Name: Banded Krait. Scientific Name: *Bungarus fasciatus*



Common name: Indian Bullfrog Scientific name: *Hoplobatrachus tigerinus*



Common name: Common Indian Monitor Scientific name (Varanus bengalensis)



Common name: Common Brahminy Skink Scientific name: *Eutropis carinata*



Common name: Mugger Scientific name: *Crocodylus palustris*

2. Enumeration of lichens from Uttar Pradesh

The study on lichens of Uttar Pradesh was under taken by the **National Botanical Research Institute**, **Lucknow** keeping in view of its large geographical area, forest cover, ecologically interesting habitats, the insufficient information on lichen flora of the state. The aim of the study was to document the diversity of lichens in the entire state, but to begin with the study was done in the eastern districts of Uttar Pradesh.

The study was initiated with the compilation of scattered literature, which resulted in 90 species of the lichens. The next step involved the identification of the unidentified lichen specimens of U.P. already available at lichen herbarium of CSIR-National Botanical Research Institute (LWG)

which is the largest in south-east Asia. Some of the earlier reported lichens from the state are reexamined to ascertain their correct identity. Nomenclatures of many lichens were updated according to recent developments. Fresh collections of lichens were made from more than 100 localities within 36 districts of eastern U.P. About 2250 lichen specimens were critically studied under microscope for identification following recent literature and standard procedures.

The study revealed the occurrence of **173 taxa (170 species and 3 varieties)** belonging to 29 families and 54 genera. A total of 85 taxa are being recorded for the first time from Uttar Pradesh. while 9 are new to India. Among 71 districts of U.P. now the lichen representation is available for 36 districts, in comparison to previous record from only 15 districts. Among these 36 districts, Lucknow represented maximum number of lichens with 55 species, which is followed by Behraich (51 spp.) and Sonbhadra (46 spp.). The districts Gonda, Unnao and Pilibhit represented one species each.

The lichen flora of U.P. was analyzed for its diversity in species composition, functional groups, growth forms and substratum preferences. The state has maximum number of crustose lichens represented by 119 taxa. It is interesting to note that the state represented by a good number of squamulose taxa with 30 species. The foliose lichens were in moderate number (15 spp.) while placodioid (5 spp.) and the leprose (4 spp.) have poor representation.

New Distributional records of Lichen for India



Opegrapha astrea



Peltula corticola



Phyllopeltula steppae



Graphis japonica



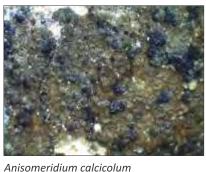
Lichinella flexa



Ramonia microspora

The occurrence of Pyrenocarpous (27 spp.), Lecanoroid (27 spp.), Graphidaceous (21 spp.), Bacidioid (18 spp.), Physcioid (19 spp.), Cyanolichens (18 spp.) in abundance are the clear indicators of humid and tropical climate of the state U.P. It is observed that the lichens are specific to their substratum and most of them prefer to grow on tree bark (119 spp.). However, large number of lichens (49 spp.) also prefer rocky substratum including lime and cement plaster of old buildings and monuments. The species of Strigula grew on leaves on mango trees. A new species belonging to genus *Verrucaria* is the only terricolous lichen found in the state. *Dirinaria aegilita* and *Parmotrema praesorediosum* are the only two species that occur both on bark and rock.

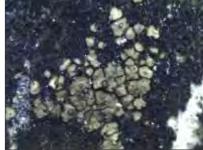
Out of 173 taxa of lichen most of them are rare in occurrence and represented by less than 5 specimens; while 61 of them are common. A total of 19 species were most common, found growing luxuriantly on tree trunk and rocky substratum in many districts. *Arthopyrenia nidulans, Arthothelium abnorme, Caloplaca bassiae, Peltula euploca, Pyxine cocoes* and *Rinodina oxydata* are some of the most common lichens in U.P.



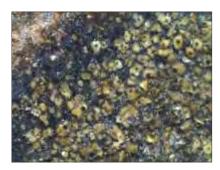
Anisomeridium calcicolum Upreti & Nayaka



Bacidia inundata (Fr.) Körber



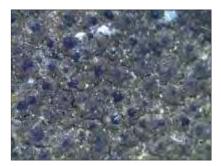
Endocarpon nanum A. Singh & Upreti



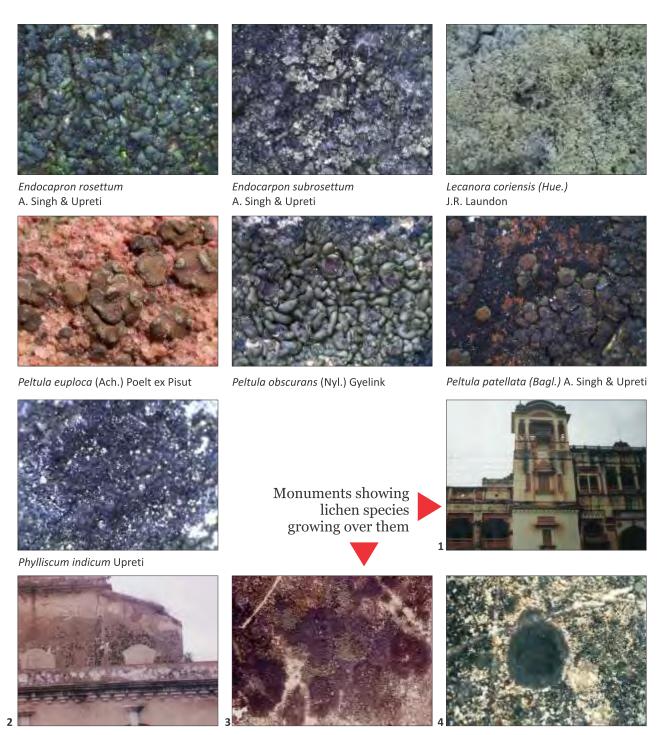
Endocarpon nigrozonatum A. Singh & Upreti



Endocapron pallidum Ach.



Endocapron pusillum Hedw.



1. Banaras Hindu University (Varanasi) – An old building with scarce growth of lichen on horizontal parapet; 2. Ramnagar Fort Gate (Varanasi) – walls with lime plaster show luxuriant growth of lichen; 3. Endocarpon, Phylliscum species growing on lime plaster wall of Khusro – Bagh (Allahabad); 4. Phylliscum indicum – a common lichen on vertical and horizontal face of wall in Bahu-Begum Maqbara (Faizabad)

3. Documentation of plant diversity through literature survey for development of Uttar Pradesh Biodiversity Database Information System (UPBIS)

The study was carried out by **Birbal Sahni Institute of Paleobotany**, **Lucknow**. The main objective of the proposed work was to develop a database for plant species of Uttar Pradesh that was available online.

The objective was to make up-to-date documentary record of whole plant diversity of Uttar Pradesh. After going through published literature of the state, **1047 genera and 2884 species of plants (lower and higher) are recorded from Uttar Pradesh**. The details are as below:-

Sl. No.	Plant Group	Genera	Species
1	Algae	50	300
2	Lichens	28	88
3	Fungi	196	935
4	Bryophytes	36	72
5	Pteridophytes	21	44
6	Gymnosperms	2	3
7	Angiosperms	714	1442

The data is available online at www.upbiodiversity.com

4. Monitoring of roosting and breeding sites of vultures in Jhansi, Latitpur, Jalaun and Mahoba

The study has been carried out by the **Zoology Department of Lucknow University**. The study examined the natural breeding sites of vultures in the state. Four selected districts e.g. **Jhansi, Lalitpur, Jalaun** and **Mahoba** of U.P. were surveyed for the identification of vulture species as well as their breeding and roosting sites.

The data were collected to identify the possible vulture occurrence spots within the selected regions. Road surveys were conducted to count the number of vultures while driving along the roads or counts at carcasses seen beside roads. The colonies were surveyed to count the number of breeding pairs at each colony. Nest survey methodology was conducted on foot as well as vehicle depending on the area and suitability. Indirect signs of vultures in particular such as white washes and molted feathers were searched to locate vulture breeding colonies. The interviews and group discussions with villagers, local herders and local residents were used as a main source of information.

There are 22 species of vultures in the world. India has 9 species of vultures. *Uttar Pradesh has 8 vulture species*. The study area has 3 vulture species: *Gyps indicus* (Indian Vulture or long-billed), *Neophron percnopterus* (Egyptian Vulture) and *Sarogyps calvus* (Red-headed vulture or King vulture).



Gyps indicus (Indian Vulture or long-billed)



Neophron percnopterus (Egyptian Vulture)



Sarogyps calvus (Red-headed vulture or King vulture)

The study shows a total of 10 breeding and 12 roosting sites in the study area as given below:-

Sl.No.	Name of the district	Breeding sites	Roosting sites
1	Jhansi	04	05
2	Lalitpur	04	05
3	Jalaun	02	02
4	Mahoba	-	-
	Total	10	12

Species wise distribution of vultures in study area

	Gypus indicus (Indian vulture or long-billed)	Neopheon percnopterus (Egyptian vulture)	Sarcogyps calvus (Red-headed vulture) or King vulture	Vulture Population
Jhansi	85-90	60-70	2-4	30%(2)
Lalitpur	250-275	10-15	2-3	55%(1)
Jalaun	-	70-80	-	15%(3)
Mahoba	-	4-5	-	(4)
Total	335-365	144-170	4-7	
	69%	31%		

The approximate number of vultures in study area is 483-542.

Nesting sites of vultures in study area







Sl. No		Nesting Sites (10)	Number of nes	sts recorded
			2011	2012
1	Jhansi	 Lehergirdh in Sipri Bazar Moath Prithvipur Nayakheda, Babina 	5-6	40-45
2	Lalitpur	4. Dhaora Beat5. Madanpur Poorvi Beat6. Gauthra Beat7. Deogarh8. Garhauli	120-130	120-130
3	Jalaun	9. Chelhi 10.Kotra	-	25-30
4	Mahoba	Nil-	-	

Suggestions for vulture conservation in the state include:

- 1. Continued monitoring of roosting and breeding sites identified in the study.
- 2. "Vulture Census" to be done every year in Nov.-Dec. and Mar.-Apr. after proper training and sensitization of staff.
- 3. Conservation of large trees and deserted nests of vultures. Plantation of Semal, Arjun and Pipal trees as these were seen to be most preferred trees by vultures.
- 4. Establishment of Vulture restaurants.
- 5. The study also emphasized the importance of educational awareness programmes for local to build overall awareness on conservation issues.
- 6. Proper coordination among various departments like Forest, Tourism, Archeological, Agriculture, Education and Revenue department.
- 7. Training of veterinary doctors.
- 8. Ensure local participation in conservation and census count efforts.
- 9. Maintenance of one rehabilitation centre for vultures in area were vulture are maximum in number to begin with.
- 10. A similar study to be taken up in the entire state of U.P. covering all the districts.
- 11. International Day for Vulture awareness should be celebrated to spread awareness on issues of vulture conservation.

Roosting sites 11 (sites where most of the non-breeding population meets)

Sl. No		Breeding Sites (11)
1	Jhansi	 Lehergirdh in Sipri Bazar Moath Prithvipur Nayakheda, Babina Bhagwantpura
2	Lalitpur	5. Dhaora Beat6. Madanpur Poorvi Beat7. Gauthra Beat8. Deogarh9. Garhauli
3	Jalaun	10.Kotra 11. Orai



Egyptian vultures roosting in Bhagwantpura, Jhansi

5. Assessment and preparation of an illustrated resource inventory of underutilized wild edible plant resources in terai region of Uttar Pradesh

Botanical Research Institute (CSIR), Lucknow. The study area comprised of the districts of Pilibhit, Lakhimpur-kheri, Bahraich, Shrawasti, Balrampur, Siddharthnagar and Mahrajganj. These districts have a good population of mainly Tharu tribals. They make use of many plant species to meet their day to day needs, dietary requirements, nutrition and food supplements. During the study many tribal villages and forests in different seasons were surveyed. Experienced, knowledgeable elderly tharu tribal men were interviewed to document potential underutilized wild edible plant species for future food plants having newer tastes, texture, flavor, vitamins and minerals may also provide newer food recipes. The voucher specimens were collected processed, identified and housed in the herbarium of CSIR - NBRI for future reference and study. About 100 plant species belonging to 83 genera and 57 families were recorded.

List of reported underutilized wild edible plants of Uttar Pradesh

Sl. No.	Scientific Name	Family	Sl. No.	Scientific Name	Family
1.	Agaricus campestris	Agaricaceae	38.	Dillenia pentagyna	Dilleniaceae
2.	Alangium salvifolium	Alangiaceae		Diospyros exsculpta	Ebenaceae
	Aloe vera	Liliaceae	39.	Diplazium esculentum	Athyriaceae
3.			40.		•
4.	Amaranthus spinosus	Amaranthaceae	41.	Dioscorea bulbifera	Dioscoreaceae
5.	Amaranthus viridis	Amaranthaceae	42.	Dioscorea glabra	Dioscoreaceae
6.	Amorphophallus paeoniifolius	Araceae	43.	Dioscorea hispida	Dioscoreaceae
7.	Ampelocissus latifolia	Vitaceae	44.	Dioscorea pentaphylla	Dioscoreaceae
8.	•	Rubiaceae	45.	Ehretia laevis	Ehretiaceae
	Anthocephalus chinensis Antidesma acidum		46.	Emblica officinalis	Euphorbiaceae
9.		Euphorbiaceae	47.	Erioglossum rubiginosum	Sapindaceae
10.	Arisaema tortuosum	Araceae	48.	Ficus benghalensis	Moraceae
11.	Artocarpus lacucha	Moraceae	49.	Ficus hispida	Moraceae
12.	Asparagus racemosus	Liliaceae	50.	Ficus palmata	Moraceae
13.	Averrhoa carambola	Oxalidaceae	51.	Ficus racemosa	Moraceae
14.	Basella alba	Basellaceae	52.	Ficus virens	Moraceae
15.	Bauhinia vahlii	Caesalpiniaceae	53.	Flacourtia indica	Flacourtiaceae
16.	Bauhinia variegata	Caesalpinaceae	54.	Flacourtiajangomas	Flacouritaceae
17.	Boerhavia diffusa	Nyctaginaceae	55.	Grewia hainesiana	Tilliaceae
18.	Bombox ceiba	Bombacaceae	56.	Grewia hirsuta	Tiliaceae
19.	Borassus flabellifer	Arecaceae	57.	Glycosmis mauritiana	Rutaceae
20.	Bridelia squamosa	Euphorbiaceae	58.	Helminthostachys	Ophioglossceae
21.	Buchanania lanzan	Anacardiaceae		zeylanica	
22.	Butea monosperma	Fabaceae	59.	Holarrhena pubescens	Apocynaceae
23.	Caesulia axillaris	Asteraceae	60.	Ipomea aquatica	Convolvulaceae
24.	Capparis zeylanica	Capparaceae	61.	Leucas aspera	Lamiaceae
25.	Carissa opaca	Apocynaceae	62.	Limonia acidissima	Rutaceae
26.	Centella asiatica	Apiaceae	63.	Luffa cylindrica	Cucurbitaceae
27.	Chenopodium album	Chenopodiaceae	64.	Madhuca longifolia	Sapotaceae
28.	Chlorophytum tuberosum	Liliaceae	65.	Manikara hexandra	Sapotaceae
29.	Coccinia grandis	Cucurbitaceae	66.	Marsilia minuta	Marsiliaceae
30.	Commelina benghalensis	Commelinaceae	67.	Miliusa velutina	Annonaceae
31.	Cordia dichotoma	Boraginaceae	68.	Momordica dioica	Cucurbitaceae
32.	Costusspeciosus	Zingiberaceae	69.	Moringa oleifera	Moringaceae
33.	Crotolaria juncea	Fabaceae	70.	Morus alba	Moraceae
34.	Curculigo orchioides	Amaryllidaceae	71.	Murraya koenigii	Rutaceae
35.	Curcuma angustifolia	Zingiberaceae	72.	Nelsonia canecsens	Acanthaceae
36.	Dendrocalamus strictus	Poaceae	73.	Nelumbo nucifera	Nelumbonaceae
37.	Digera muricata	Amaranthaceae	74.	Nymphaea nouchali	Nymphaeaceae
0/.	2 igora mar ioata	1 III al	/4.	1.g/np/taoa/touchait	2.13 III pilacaccac

Sl. No.	Scientific Name	Family
75.	Nymphaea stellata	Nymphaeaceae
76.	Ophioglossum reticulatum	Ophioglossaceae
77.	Oxalis corniculata	Oxalidaceae
78.	Phoenix sylvestris	Arecaceae
79.	Phyllanthus fraternus	Euphorbiaceae
80.	Physalis minima	Solanaceae
81.	Pithecellobium dulce	Mimosaceae
82.	Portulaca oleracea	Portulacaceae
83.	Portulaca quadrifida	Portulacaceae
84.	Pueraria tuberosa	Fabaceae
85.	Rumex dentatus	Polygonaceae
86.	Schleichera oleosa	Sapindaceae
87.	Semecarpus anacardium	Anacardiaceae
88.	Shorea robusta	Dipterocarpaceae
89.	Solanum nigrum	Solanaceae
90.	Spondias pinnata	Anacardiaceae
91.	Sterculia villosa	Sterculiaceae
92.	Syzygium cerasoides	Myrtaceae
93.	Syzygium cumini	Myrtaceae
94.	Terminalia bellirica	Combretaceae
95.	Trianthema portulacastrun	n Aizoaceae
96.	Vicia sativa	Fabaceae
97.	Xeromphis uliginosa	Rubiaceae
98.	Ziziphus mauritiana	Rhamnaceae
99.	Ziziphus oenoplia	Rhamnaceae
100.	Ziziphus rugosa	Rhamnaceae



Averrhoa carambola: Raw fruits are edible



Flacourtia jangomas: The Fruits are edible



Limonia acidissima: Unripe fruits are eaten



Manilkara hexandra: Ripe fruits are edible

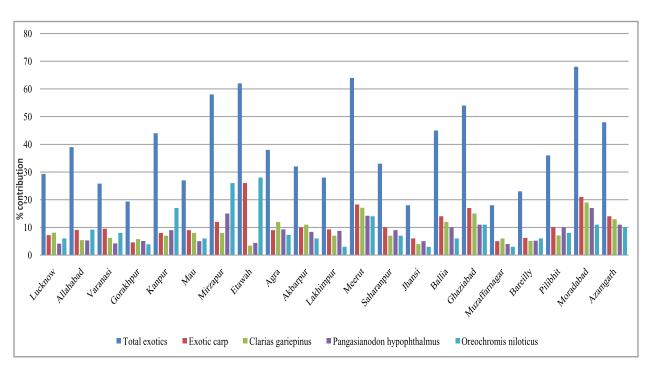
(B) Ongoing Projects:

The following projects were sanctioned for a period of two years by the Board in March, 2011. The progress of each project is summarized below:

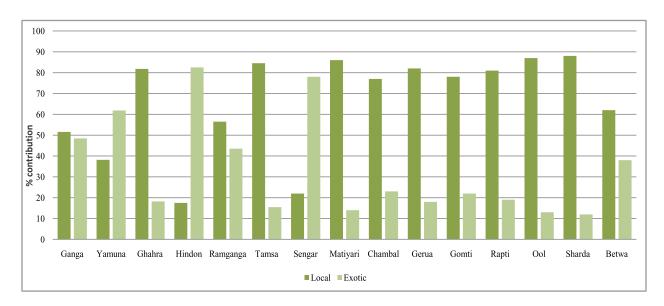
1. Inventorization, impact assessment and risk communication of invasive fish species in Uttar Pradesh

The study is being carried out by the **National Bureau of Fish Genetic Resources (ICAR)**, **Lucknow**. The present study was under taken to enlist the available invasive fish species and to document their impacts in different aquatic bodies/river streams. 11 alien fish species and 3 exotic hybrids have been recorded from grow out farms (>500 in number) from 38 districts of Uttar Pradesh. These exotic species were Chinese carps which included grass carp and silver carp as well as common carp contributing substantially to commercial aquaculture in Uttar Pradesh.

In this study, increased incidence and occurrences of exotic species in several river stretches, reservoirs, lakes and wetlands which have been considered serious in view of sustainability of local fish diversity are being observed. Since exotic fishes are dominant and aggressive in behaviour, they have potential to extirpate the local fish species.

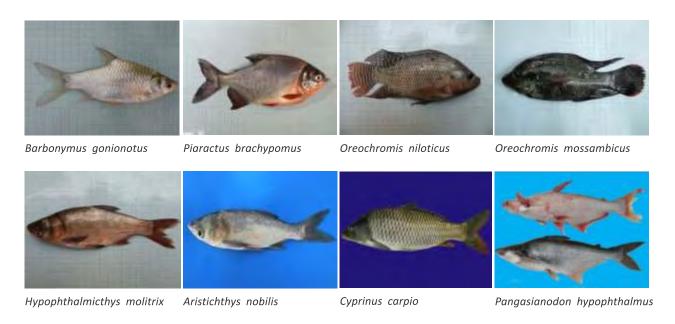


Market contribution of total and different exotic fishes in Uttar Pradesh



Occurrences and contribution of exotic fishes in different river stretches in Uttar Pradesh

Recent invasion of tilapia and common carp has increasingly taken-over at many locations contributing substantially to the fishery of these river stretches and streams eliminating the catch of locally commercial important species particularly Indian major carps.



Commonly cultured exotic fish species in Uttar Pradesh

2. Exploration and documentation of cucurbit biodiversity and its implication in Uttar Pradesh

The study is being carried out by the **Department of Vegetable Sciences**, **Narendra Dev University of Agriculture and Technology**, **Kumar Ganj**, **Faizabad**. An attempt has been made to explore the existent biodiversity of important as well as under exploited cucurbits of the state, by travel and visits across the state. Characterization and documentation of cucurbits was carried out for salient morphological traits, physiological traits, quality traits and resistance through description and photography. Efforts were made to locate region specific high yielding potential land races of certain cucurbits of the state. Exploration of cultivated/certain wild cucurbits was carried out by travel and visit of road sides, farmers' field, hutments and houses in the villages, town areas and cities across Uttar Pradesh. Collection of observations and documentation was done through description and photography of existent variability of various valuable cucurbit crops of the state. Conservation and evaluation of some very important and unique genotypes of cucurbits at NDUAT Kumarganj, Faizabad was carried out. Besides, collection of seed material of valuable genotype of interest and their deposition in Nation Gene Bank at National Bureau of Plant Genetic Resources, New Delhi was undertaken.

Surveys conducted across the state of Uttar Pradesh revealed that great extent of variability occurs in bottle gourd, sponge gourd, satputiya, pointed gourd, ivy gourd, bitter gourd and muskmelon. Documentation of a large number of genotypes of different cucurbits, *viz.* bottle gourd, pumpkin, sponge gourd, ash gourd, pointed gourd, ivy gourd, muskmelon, longmelon, snapmelon, cucumber, satputiya etc, are being carried out.



A. Bottle gourd genotype collected from Faizabad, bearing two fruits



B. Sponge gourd genotype collected om Kushinagar distt. bearing androgynous Inflorescence



C. Wild type bitter gourd genotype encountered in distt. Sultanpur

Fascinating genotypes of different cucurbits encountered in eastern U.P.

Based on the findings, the recommendations will be made for their *in-situ* conservation at specific site of cultivation and long term conservation at NBPGR, New Delhi. For instance, Lucknow Batti of muskmelon, Jaunpuri Karela, Lakhanawi Kakri, Kampierganj ka kundru, Faizabadi lauki etc. require special attention for conservation.

3. Status and habitat assessment of Bengal Florican Houbaropsis bengalensis in the grasslands of Uttar Pradesh

The present study on status survey on Bengal florican was carried by the Wildlife Institute of India, Dehradun, Uttrakhand in Dudhwa National Park, Kishanpur Wildlife Sanctuary, Pilibhit Reserve Forests and Lagga-Bagga in Uttar Pradesh (U.P.) during June, 2011-2012. Since Bengal Florican is listed as one of the critically endangered species. The field work was carried out in three different seasons first in breeding seasons (April 2011), second in pre-breeding (October 2011- January 2012) and the third in breeding season (February 2012-May 2012) of florican. To study the present status and population of florican, area search method is being used along with focal animal sampling for behavior study. The habitat parameters were collected using vegetation quardrat sampling method. Data was analyzed using simple statistical tools: MS Excel, PC-ord and SPSS. The status survey was carried out in peak breeding season in all the study sites. After many repeated search in each potential grassland patch, only 3 adult male floricans were recorded. Two were territorial males from Dudhwa National Park and one male was flight from Pilibhit Reserve Forests. The females are more difficult to locate so the population estimation was based on the assumption of an equal sex ratio.

The vegetation sampling was done in both seasons. In pre-breeding seasons, all the potential grassland patches were classified into three different plant communities dominated by *Desmostachya bipinnata*, *Impereta cylindrical* and *Themeda arundinacea* respectively whereas, in breeding season four different communities were found. A separate community was formed dominated by *Saccharum narenga*.

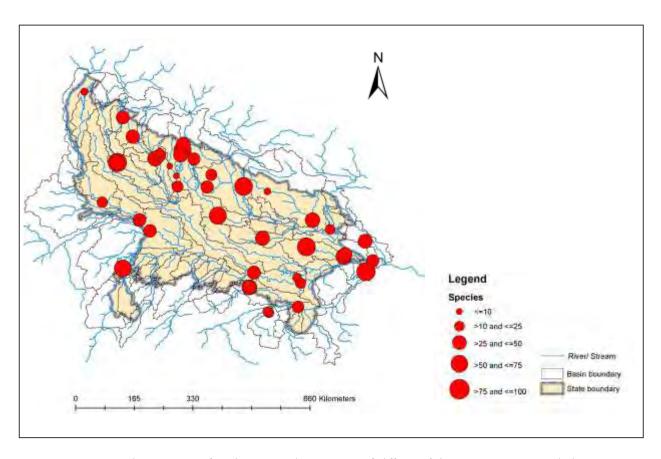
During the study three sets of behavioral activity data was recorded. It was observed that florican spent maximum time (52.32%) in feeding. The second set after an interval of 6 days from the first showed that the florican invested equal time in feeding 38.53% and movement 44.04% whereas in third set the maximum time was spent in movement 76.67% along with the numbers of display activity in search of female.

4. Germplasm exploration, assessment and documentation of the freshwater fish biodiversity of Uttar Pradesh

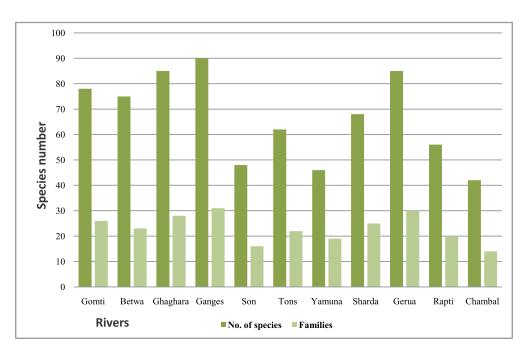
The study was carried out by the **National Bureau of Fish Genetic Resources (ICAR)**, **Lucknow**. Rapid explorations of the 12 main rivers, 7 tributaries, 12 dams including reservoirs and four lakes/taals in Uttar Pradesh were carried out and data on fish diversity, species composition, distribution and relative abundance were recorded. **The total freshwater fish diversity of 124 native species and seven exotics species belonging to 26 families** have so far been described from all the explored rivers in Uttar Pradesh. Overall, high species diversity (90 species) were recorded from Ganges followed by 85 species in Ghaghara,78 species in Gomti, 75 in Betwa, 68 in Sharda, 62 in Tons, 63 in Rapti, 60 in 52 in Chambal and 50 in Sone,

respectively. The Shannon-Weiner biodiversity index of 12 rivers were calculated of which river Ganga showed highest diversity of species (4.14) followed by Gerua (4.17), Ghaghara (4.16) and Gomti (4.16) rivers.

New biogeographical distribution of the freshwater fish *Glyptothorax conirostris* was reported and described from river from Ganga canal, Roorki and a new distribution record of threatened catfish *Amblyceps mangois* (family Amblycipitidae) was documented from river Gomti, Ganga and Ramganga Rivers. The species described from different rivers and tributaries were assessed under various categories as per IUCN (2012) and a total of 10 species were found included as near threatened (NT), 1 as vulnerable (VU), 78 as least concern (LC), 2 as data deficient (DD) whereas 34 species were under not evaluated (NE) categories.



GIS Map showing sites of exploration and occurrence of different fish species in Uttar Pradesh.



Bar diagram showing family and species richness in the selected rivers of Uttar Pradesh.



Field exploration and fish diversity assessment.

5. Use of ITK (Indigenous Technology Knowledge) and experience in crop production and protection in Vindhayn region of eastern Uttar Pradesh

The study is being carried out by the **Department of Agronomy, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi**. The actual project work was started in the month of October 2011 with three major objectives viz i) intensive survey and collection of indigenous technical knowledge in agriculture prevailing in Vindhyan region, ii) proper documentation and validation of these ITKs on farmer field and their cross sectoral validation with already documented ITKs in the farmers' fields leading to iii) a mandate to generate location specific technologies through farmers participatory research involving feedback from on station experimentation.

The out-reach programmes involved farmers participatory survey, documentation and on station experiments on relevant crops (2011-12). The operational area received high rainfall in the region providing opportunities for water harvesting which can be linked with advantage to agriculture.





Farming system development in Vindhyan region of eastern Uttar Pradesh



Bamboo based bower system of Bitter gourd cultivation



Students developing skill to learn ITK's at experimentation site

Under this project about 25000 farmers and 1000 students visited the experimentation sites.

There is much to be learned from indigenous knowledge systems of local people. As it is seen from the cases of indigenous agriculture of Sonbhadra district and surrounding areas of eastern Uttar Pradesh, the traditional agricultural practices evolved from these knowledge systems are performing well even today without bringing much ecological degradation.

New Projects:

The following projects were sanctioned for a period of two years by the Board in December 2012:

	Name of the anxiest		
Sl. No.	Name of the project	Name of the Institution	Total Cost of the Project (Rs. in lacs)
1	Inventorization of Aromatic Plant Species, their status and assessment of area under cultivation of essential oil bearing crops in some districts of upper Gangetic Plain.	Central Institute of Medicinal and Aromatic Plants (CIMAP), Lucknow	12.95
2	Status, distribution and threats with special emphasis on conservational measures of House Saprrow (Passer domesticus) in urban and rural areas of Lucknow district of Uttar Pradesh	University of Lucknow, Lucknow	11.38
3	Assessment of Floral and Faunal Biodiversity of the Aquatic Eco- systems of Bird Sanctuaries (Wetlands) in Uttar Pradesh using High Resolution Remote Sensing Data and GIS Techniques	Remote Sensing Applications Centre, U.P. Sector G,, Jankipuram Kursi Road, Lucknow	20.17
4	Chiropteran Diversity and Conservation in Uttar Pradesh	Babasaheb Bhimrao Ambedkar University, Vidya Vihar, Rae bareilly Road, Lucknow	22.97
5	Fish Diversity of Ramgarh and Bakhira Lake: Comparison of Present Status with Pristine Data of Conservation and Sustainable Utilization	National Bureau of Fish Genetic Resources, Canal Ring Road, Telebagh, Lucknow	14.99
6	Assessment of sedges based on: Micromorphological characters, Food value and potential role in phyto-remediation in wetlands of Uttar Pradesh	University of Allahabad, Allahabad	11.84
7	Diversity, distribution and ethno botany of Pteridophytes and hepaticae (Bryophytes) in Dudhwa National Park in Uttar Pradesh and bordering regions	National Botanical Research Institute, CSIR, Lucknow	14.76

International Day for Biological Diversity 2012

INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY -2012



National Conference on "Marine Biodiversity"

Uttar Pradesh State Biodiversity Board celebrated the International Day on Biological Diversity (IDB-2012) on 22nd May 2012 at Dr. Ram Manohar Lohia National Law University



Campus, Lucknow. On this occasion, a National Conference on "Marine Biodiversity" was organized in which more than 350 delegates including various research organizations/institutes, universities, officers from U.P. Forest Department and other state as well as NGO's etc participated. The aim of the conference was to create awareness about oceans and to inspire action to conserve marine wilderness and biodiversity. The conference was inaugurated by **Dr. Syed Azmal Khan**, Professor Emeritus, Centre of Advanced Study in Marine Biology, Annamalai University, Parangipettai, Tamil Nadu.

Shri J.S. Asthana, Principal Chief Conservator of Forests, U.P. welcomed all the dignitaries and delegates of the conference and delivered the welcome address. He said that presently, so far 2,30,000 marine species have been identified but still information on thousands of species is yet to be explored. He expressed the concern about increasing pollution load on seas and the need of the hour to spread the awareness in this regard.

Shri Rajesh Kumar Singh, Secretary (Environment and Forests) and Chairman, U.P.State Biodiversity Board, in his talk said that about 65% of grasses and habitats in coastal areas have almost been destroyed and approx. 80% of sea fish stock has either been exploited or over exploited. He further added that the aspect of biodiversity conservation should be introduced as a subject in study course of students of class VI to XII.

Dr. J.K. Jena, Director, National Bureau of Fish Genetic Resources, Lucknow delivered his guest lecture on marine fish biodiversity and its management. Giving the brief account of marine resources, he said that coast line of India extends upto 8129 km with EEZ as 2.02 million km2 the fishery potential of our county is 3.9-4.2 million tones. He said that the Arabian Sea is known as one of the world's most productive oceanic region- upwelling, broad continental shelf area and wind-driven mixing. He said that as far as aquatic diversity of India is concerned, there are 2508 fishes (7.4% of world species), 2934 crustaceans (7.4% of world species), 5070 mollusks (6.0% of world species), 765 echinoderms (10.9% of world species), 486 sponges, 842 cnidarians (8.4% of world species), 844 seaweeds (4.2% of world species). According to him, the major threats to the biological resources in aquatic ecosystems include: extensive use of non-selective gears, indiscriminate capture of juveniles and sub-adults, onboard discards of low value fishes, coastal pollution, and habitat alteration. Besides, climate change and natural calamities are posing serious threats to the marine biodiversity.

Speaking on this occasion, **Shri Pawan Kumar**, Secretary, U.P. State Biodiversity Board, Lucknow focused on the importance of the year 2012 for India as India is hosting COP-11 (Conference of Parties) of CBD in Hyderabad during this year. This year is also the 20th Anniversary of the Rio Conference on Environment and Development, 20th Anniversary of Convention on Biological Diversity (CBD) and the 40th Anniversary of the 1992 first UN Conference on the Human Environment held in Stockholm in 1972. Throwing the light on the connection between Aichi targets and marine biodiversity, he gave the detailed overview of Target 6, Target 10 and Target 11 of the Aichi targets. During his talk, he drew the attention of the audience towards the role of the ocean, which acts as carbon sink in balancing the carbon di-oxide emissions generated by us and also providing us minerals and many more advantages which are not been taken into account. While concluding his presentation, he expressed his concern to save marine biodiversity and discussed some important critical ocean issues to be taken care of viz. overfishing, pollution, ocean acidification, global warming, habitat loss, deep water drilling.

As a chief guest, **Dr. Syed Azmal Khan**, Professor Emeritus in his talk gave on account of potential values of biodiversity as food fodder, species and aromatics, fibres in textiles, fuel supply etc. He said that more animal phyla exist in oceans than on land. He said that of 35 marine phyla, 14 are endemic whereas rare phyla contain only few species. Focusing his talk on significance of sea food, he said that seafood is superior to all the other animal protein sources. He also described important marine habitat e.g. corals, mangroves, sea grass beds, seaweed stretches, rocks and sand dunes. Dr. Khan also showed the beautiful slides of marine biodiversity such as coral, coral reefs, butterfly fishes, angel fishes, cardinal fishes and groupers etc. He further added that seventy percent of the modern medicines come from biodiversity. The sea is a source of many bacteria that are useful as antibiotics.

In the first technical session of the conference, **Shri Samir Sinha**, from Dehradun, gave a brief account of "**illegal trade in marine biodiversity**". He discussed the potential values of wild life trade and informed that wildlife trade is any sale or exchange of wild animal and plant resources by people. This can involve live animals and plants or a diverse range of products

needed or prized by humans-including skins, medicinal ingredients, tourist curios, timber, fish and other food products. Most wildlife trade is probably within national borders, but there is a large volume of wildlife in trade internationally. He further said that TRAFFIC has estimated the value of the illegal wildlife trade as between US \$ 10 to 20 billion a year.

He further informed that the marine species in trade include Marine Turtles, Corals, Sea shells, Sea Horses, Sharks, Whale Sharks, Sea cucumbers, Live Reef Fish. About seventy species of sharks are reported from Indian waters, though only eighteen species are reported to be occasionally or frequently caught. Some shark species are also listed in the Schedule I of the WLPA 1972. Sharks are particularly vulnerable to overexploitation because of their biological characteristics of maturing late, having few young and being long-lived. He informed that the coral reefs ecosystems are among the "most diverse and valuable ecosystems on earth", supporting one million species of animals and plants and an estimated eight million species that are yet to be discovered. Giving an account of live reef fish trade, he said that around 2 million people worldwide keep marine aquaria. This trade is a global multi-million dollar industry, worth an estimated US\$200-330 million annually. A total of 1,471 species of marine fish have been documented in trade worldwide with the best estimate of annual global trade ranging between 20 and 24 million individuals.

Dr. K.C. Gopi, Senior Scientist, Zoological Survey of India, Indian Museum Complex, Kolkata delivered his guest lecture on "Coastal and Marine Biodiversity of India." He presented the status of marine environment of India incorporating 10 maritime states with 800 km stretch of coastal region having 2 island groups and 3 gulf areas. He reported that 2.66% (4,827 sq. km) of world's mangroves exist in India. Describing the various coastal and marine ecosystems, Dr. Gopi informed that mangrove ecosystem has 420 and 1862 species of flora and fauna respectively. Talking about the associated biodiversity in seagrass ecosystem, he said that there are 153 microalgae, 359 macroalgae, 178 invertebrates live as epiphytes and as associated organisms, fishes. About 340 animals feed on seagrasses, green turtles partially feed on seagrasses. Besides, 844 species of seaweeds he also exist in marine ecosystem of India. Further, he added that estimated total biodiversity of the world is 3-10 million in which only 1.7 million species have been identified where as total marine species in the world are estimated to be 3 lakhs out of which about 80,000 (3.12%) species have been identified so far. India contributes 5.33% (15,000 spp.) of the world's estimated marine species.

Dr Alok Saxena, Addl. Director, Indira Gandhi National Forestry Academy, Dehradun spoke on "Marine Diversity in India conservation and Management issues (with special reference to A & N islands)". He stated that sea waters cover about 70% of Earth's surface and account for 99% of volume known to sustain life. The total number of recorded marine species (both plants and animals) is less than that of terrestrial habitats mainly because marine diversity has not been fully understood due to logistic constraints in explorations and collection of specimen. Nearly all phyla are found to occur in the sea while only about half of the total number of phyla is represented by land animals. 21 phyla are exclusive marine. Similarly, marine plant life forms also show greater survival strategy.

Focusing on India's rich marine biodiversity he said that coastal waters along East and West Coast and also around two island groups have a plethora of marine species. Marine floral diversity includes 844 species of marine alga (sea weeds) belonging to 217 genera, 14 species of sea grasses and 69 species of mangroves. Marine faunal diversity includes 451 species of sponges,>400 species of corals, >2900 species of crustacean, 3370 species of marine mollusks, > 200 species of bryozoans,765 species of echinoderm, 47 species of tunicates, more than 1300 marine fishes, 26 species of sea snakes, 5 species of sea turtles and 30 species of marine mammals including dugong, dolphins, whales etc. In addition a wide variety of sea birds can be observed around the coast.

Dr. Dhruy Sen Singh, Department of Geology, University of Lucknow delivered his talk on "Climate Change, Global Warming and Marine Biodiversity". He said that the universe is diversified and consists of stars, planets, satellites, comets, meteorites and asteroids. The planet earth is also diversified and consists of various continents and oceans. Our nation India is the classical example of diversification in terms of physiography, language, caste, religion etc, India has some of the world's most biodiverse regions. It hosts 2 biodiversity hotspots; the Western Ghats and the Himalayas. These hotspots have numerous endemic species. Expressing the views on marine biodiversity, he said that marine organisms play a crucial role in almost all biogeochemical processes that sustain the biosphere, and provide a variety of products (goods) and functions (services) which are essential to humankind's well-being. These include the production and mineralization of organic material, storage of cabon, storage of pollutants and waste products from land, the buffering of the climate and of climate change, coastal protection (mangroves, dune-beach systems, coral reefs). Massive deforestation and uncontrolled urbanization have led to environmental degradation never witnessed so far. Climate change is natural but pollution is anthropogenic. Our concern should be aimed on the conservation of natural things that will sustain the biodiversity. We should think and act to preserve the natural resources without which we cannot survive.

Dr. S. Balachandran, Deputy Director, Bombay Natural History Society, Mumbai delivered his guest lecture on "Avian diversity in coastal wetlands of India and their conservation needs". He described the role of coastal birds in the ecosystem as: recycling the nutrients back to the ecosystem, enriching the nutrients through guano deposition and enhance the fisheries, scavenging by feeding on the fishery wastes and feeding harmful insects-vector control. He said that there are 25 wetlands in India identified as Ramsar Sites out of which one is located in Uttar Pradesh. U.P. further has about 20 potential Ramsar Sites that have rich flora and fauna. He said that of the 181 critically endangered species in the world, India has about 9. Out of 351 endangered species of birds India has 12 and out of 674 vulnerable species in the world 59 species are found in India.

Souvenir:

In the inaugural session, a souvenir on the theme of the conference was also released. It carried twenty two articles on marine biodiversity.

Glimpses of IBD-2012



Inauguration of IBD-2012



Release of Souvenir on IBD 2012



Exhibits on Marine Biodiversity



A general view of the audience

Awareness Programmes

Marine Biodiversity Competitions 14th May 2012:

The U.P. State Biodiversity Board organized following competitions on 14th May 2012 with the help of Zoology Department, Lucknow University, at Regional Science City, Aliganj Lucknow.

S.N.	Name of the competition	Торіс
1.	Power point presentation	Illegal Trade in Marine Biodiversity
2.	Poster competition	Uses of Marine Biodiversity
3.	Quiz competition	Marine Biodiversity
4.	Essay competition	Ocean and their Importance in our Daily Life

The winners of the quiz competition were: Dhruv Dixit, Abhinav Pradeep and Nilesh Gupta. The winners of power point competition on "Illegal Trade in Marine Biodiversity" were: Vishnu Gupta, Kastubh Tandon, Pragati Yadav and Levin Roy. The prize winners of poster competition on "Uses of Marine Biodiversity" were: Avani Vikram Singh, Vishal Verma, Umama Fatima and Vishakha Chaudhary and that of the essay competition were: Snehil Srivastava and Charu Singh.

Chief Guest Prof. Syed Ajmal Khan giving away prizes to students on 22 May 2012 on the International Day for Biological Diversity



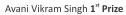






Winners of Poster Competition







Vishal Verma 2nd Prize



Umama Fatima 3rd Prize



Vishakha Chaudhary Consolation Prize

World Environment Day 05th June 2012:

The World Environment Day has been celebrated on 05th June across the globe with a theme "Green Economy: Does it include you?" On this occasion, competition on Power Point Presentation on the Topic "Ten Ideas to Make Lucknow Cleaner and Greener" was organized by the U. P. State Biodiversity Board at PICUP Bhawan, Gomti Nagar Lucknow during 11:00 am - 13:30 pm. The competition was divided into two categories *i.e.* junior group and senior group. The support in our efforts to spread awareness about protection of environment *vis-a-vis* green economy was encouraging.

Vulture Awareness Day 1st September 2012

On the occasion of **International Vulture Awareness Day** *i.e.* 1^{st} September 2012, a picture colouring competition was organized by U P State Biodiversity Board through the website. Total 198 entries were received from different schools/colleges of category (class 1^{st} - 5^{th}). The prize winners of the competition are as follows:

Class- Ist

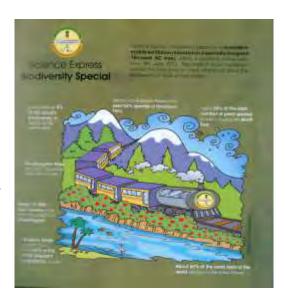
S.No.	Name of Student	Name of School	Prize
1.	Sneha Verma	Riverside Academy, Viram Khand-I, Gomti Nagar, Lucknow	Ist
2.	Satakshi Tiwari	City Montessori Inter College,Vishal Khand-II, Gomti Nagar, Lucknow	IInd
3.	Vaibhav Srivastava	S.J.S. Study Home College, Sector-12, Indira Nagar, Lucknow	Consolation
Class-	IInd		
1.	Afeefa Khan	S.J.S. Study Home College, Sector-12, Indira Nagar, Lucknow	Ist
2.	Falak Mohsin	Riverside Academy, Viram Khand-I, Gomti Nagar, Lucknow	IInd
3.	Kayanat Fatima	Riverside Academy, Viram Khand-I, Gomti Nagar, Lucknow	Consolation
Class	- IIIrd		
1.	Naina Saini	Seth M.R. Jaipuria School, Gomti Nagar, Lucknow	Ist
2.	Lakshya Gupta	United Public School, Kanpur	IInd
3.	Tanveer Alam Khan	Eram Intermediate College, C-Block, Indira nagar, Lucknow	Consolation
Class-	IVth		
1.	Dev Upadhyay	Seth M.R. Jaipuria School, Gomti Nagar,	Ist
		Lucknow	
2.	Anupam Dutta Chaudhary	Riverside Academy, Viram Khand-I, Gomti Nagar, Lucknow	IInd
3.	Kirti Vishwakarma	S.J.S. Study Home College, Sector-12, Indira Nagar, Lucknow	Consolation

Class- Vth

S.No	o. Name of Student	Name of School	Prize
1.	Shreea	Rani Laxmi Bai Memorial Senior Sceondary School, C-Block, Indira Nagar, Lucknow	Ist
2.	Sandhya Sahu	Riverside Academy, Viram Khand-I, Gomti Nagar, Lucknow	IInd
3.	Ishita Tandon	Study Hall, Vipul Khand-II, Gomti Nagar, Lucknow	Consolation

Science Express - Biodiversity Special (SEBS)

'Science Express - Biodiversity Special' (SEBS) is an innovative mobile exhibition mounted on a specially designed 16 coach AC train, traveling across India from 5th June to 22nd December 2012. SEBS is the fifth phase of the iconic and path-breaking Science Express. The SEBS is a unique collaborative initiative of Department of Science & Technology (DST) and Ministry of Environment & Forests (MoEF), Government of India.



Gorakhpur Cantt. Railway Station:

03rd November 2012

The 'Science Express - Biodiversity Special' (SEBS) was welcomed at Gorakhpur Cantt. Railway Station by Shri. Ravi Ranjan Jamuar, CCF, Gorakhpur, Smt Pratibha Singh, Deputy Conservator of Forests, U. P. State Biodiversity Board and was *attended by 14199 students and 754 teachers*.

Northern Railway Station, Lucknow: 07th November 2012

The Science Express-Biodiversity Special arrived on 07th Nov., 2012 at Charbagh Junction, Northern Railway, Lucknow. The exhibition was formerly inaugurated by Shri V.N. Garg, Principal Secretary, Forests and Environment, UP and Chairman UP State Biodiversity Board, Lucknow, Shri Pawan Kumar, Secretary, Forest and U.P. State Biodiversity Board, Shri J.S. Asthana, Principal Chief Conservator of Forests, U.P., Shri Rupak De, Principal Chief Conservator of Forests (Wildlife), Dr. Ashwani Kumar, Principal Chief Conservator of Forests, Research and Training and Shri Umendra Sharma, MD U.P. Forest Corporation graced the occasion. Besides, Shri O. P. Verma, Director, Environment, U.P. and Member Secretary, U.P. Pollution Control Board was also present. The children of schools from C.M.S., Riverside Academy and T.D. Girls Intermediate College also participated actively on this occasion. Science Express-Biodiversity Special train was visited by 46,425 visitors at Lucknow.

Dr. Amita Kanaujia and students of Zoology Department of Lucknow University were also present. The students of CMS had come with neatly painted placards. Dr. Preeti Kanaujia of C.E.E. (North Zone) encouraged the students to take the "biodiversity pledge". They also explained the concept of "Footprint" and "Handprint".



Shri. V. N. Garg, Principal Secretary, Forests and Shri. J. S. Asthana, PCCF U.P. welcome SEBS at Lucknow







Students participating in Platform Activity conducted by SEBS team

World Wetlands Day, 2nd February 2013





The World Wetland Day was celebrated on 2nd February, 2013 by U.P. State Biodiversity Board along with active participation from Department of Zoology, University of Lucknow and Department of Applied Animal Sciences, B.B. Ambedkar University.

India is a signatory to the Convention on Wetlands signed on 2nd February 1971. So far 164 countries have signed the convention and the total numbers of wetlands of International importance identified so far are 2083. The objective of celebrating the wetlands day was to undertake action aimed at raising public awareness of wetland values and benefits in general.



The programme started with a flagging off surveying teams by Pratibha Singh (IFS), Deputy Conservator of Forests, U. P. State Biodiversity Board Lucknow from the campus of University of Lucknow.

The study teams visited the following areas in and around Lucknow district:

Teams for field studies of Wetland Areas

Gp	Name of the Area	Wetlands Visited	Team Leaders & Members	Affiliation
A	Nawabganj Bird Sanctuary,	 Near Amausi airport in front of Sainik School Nawabganj Bird Sanctuary, Unnao Purain in Bichhiya block, Unnao (unconserved). Dahi Pond in Bichhiya block, Unnao (unconserved). Bhadosa Lake in Bichhiya block, Unnao (Unconserved). Rain in Bichhiya block, Unnao (unconserved). Rain in Bichhiya block, Unnao (unconserved) 	Dr. Amita Kanaujia Sachin Chaudhary (TVS) Group Akhilesh Kumar Shivangi Mishra Savita Pandey Sourabh Chakraverty	University of Lucknow Harita Tech Service Ltd University of Lucknow University of Lucknow University of Lucknow NIIT Lucknow
В	S.G.P.G.I.		Pallavi Gupta Shail Tiwari	Shahjahanpur, U.P. Lucknow
С	Mohanlalganj	 Unnamed in Telibagh- man made Behind Deen Dayal Park-man made Mohanlal Ganj- man made Parewa-Natural Nardahi Gunhari-Natural 	Sonika Kushwaha Riddhi Pandey Charu Kaushik Nafees Alam	University of Lucknow University of Lucknow University of Lucknow Lucknow
D	Gomti Nagar	 Wetland Behind Ambedkar Park, Gomtinagar Katotha Jheel, Near Amity International School, Gomtinagar. 	Vishwajeet Kanaujia Akshay Tripathi Amber Rastogi	Vishwakarma Maritime Institute, Pune. Vishwakarma Maritime Institute, Pune. National P.G. College, Lucknow
Е	Bakshi Ka Talab	o Behda pond, Nagar chongwa o Chandnapur, Mahona o Unai Village, Haldarpur o Teekarhaar, Barabanki	Adesh Kumar Aditya Tiwari Dayanidhi Gupta Satwik Singh	University of Lucknow Horner School, Lucknow Lucknow Seth M.R. Jaipuria School, Lucknow

Interaction with the villagers and school children during the visit







Team interacting with the villagers



Awareness amongst the students



Awareness in Village (distributing pamphlets)



Awareness programme in School



Interaction with students

These areas were visited to compare the biodiversity of wetlands outside protected areas with the biodiversity of wetlands inside protected areas (Nawabganj Bird Sanctuary). Interaction of University researchers and students of Ramkrishna Vidyavati Mahavidyalya, Sakran, Bichia Block, Unnao and villagers also took place.

Followed by the field visits, a power point presentation was also held on 07-02-2012 at UP State Biodiversity Board's Conference Hall. Teams that visited the field shared their experiences. Certificates of participation were awarded to all the participants.

Besides a power point presentation competition on "Biodiversity in Wetlands" was organized at Department of Applied Animal Sciences, B.B. Ambedkar University. About 150 participants from the Department of Environmental Biology/ Applied Plant Sciences/ Environmental Sciences/ Biotechnology/ Masks communication and Journalism/ Applied Physics/Applied Chemistry/ Human Development and Families Studies and MBA students took part in the competition.

A total of 256 students, research scholars and faculty members took part in the World Wetland Day Celebration. Smt. Pratibha Singh (DCF, UPSBB) delivered a lecture on "Wetlands and their importance in Biodiversity Conservation".

Dr. V. Elangovan (Coordinator, DAAS) talked about aquatic biodiversity and Dr. Ram Jee Srivastava (Senior Scientist, UPSBB) were the judges for the competition. Prizes along with certificates were distributed to the winners and participants. Mr. Amar Jyoti Das, Department of Environmental Microbiology, Ms. Sneha Verma, Department of Applied Animal Sciences and Ms. Dilpreet Kaur, Department of Applied Animal Sciences won the first, second and third prizes, respectively. Mr. Smriti Mehrotra, Department of Environmental Sciences and Ms. Harshita Pandey, Department of Applied Animal Sciences won the consolation prize.

World Sparrow Day 20th March 2013

The World Sparrow Day was celebrated on 20th March, 2013 at Regional Science City and the programme was jointly organized by the U.P. State Biodiversity Board and Zoology Department, Lucknow University

The aim of the programme was to raise awareness regarding Sparrow Conservation among the students through various competitions.

About 120 students participated in poster contest on "Design and Paint a House for your Sparrow" and 80 students participated in the quiz competition. In all 200 students participated enthusiastically in the events. Hand-bills and pamphlets on conservation of house sparrow were distributed among the students and teachers.

Besides, a request was also made through news papers to common public to count the sparrows and report the same at the board's email: upstatebiodiversityboard@gmail.com. The response regarding the sparrow count from the common public was encouraging.

The list of prize winners of the competition are as follows:

List of prize winners of the competition

Poster Making Contest

Category: Class VI-VIII

Name of Students	Class	□□□□□□□Name of School	Prize
Harshi Lal	VII	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	First
Anjali Abdi	VIII	La Martiniere Girls College, Lucknow	Second
Aviral Chharia	VIII-B	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	Third
Sonam Agarwal	VII	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	Consolation







Anjali Abdi, 2nd prize



Aviral Chharia, 3rd prize



Sonam Agarwal, Consolation prize

Category: Class IX-XII

Nihit Verma	XI-B	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	First
Monalisha Gupta	XI-B	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	First Amar Jvoti. Ist Prize

Palak Poddar	XI-B	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	Second
Eram Khan	XII	La Martiniere Girls College, Lucknow	Third
Jillian Elizabeth	XII- E	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	Consolation
Aarushi Singh	IX	Seth. M.R. Jaipuria School, Gomti Nagar, Lucknow	Consolation



Nihit Verma, 1st prize



Eram Khan, 3rd prize



Monalisha Gupta, 1st prize



Jillian Elizabeth, Consolation prize



Palak Poddar, 2nd prize



Aarushi Singh, Consolation prize

Responses received from the citizens:

 $About \, 1500 \, sparrows \, were \, counted \, and \, reported \, by \, email \, by \, the \, citizens.$

Pictures received from the citizens















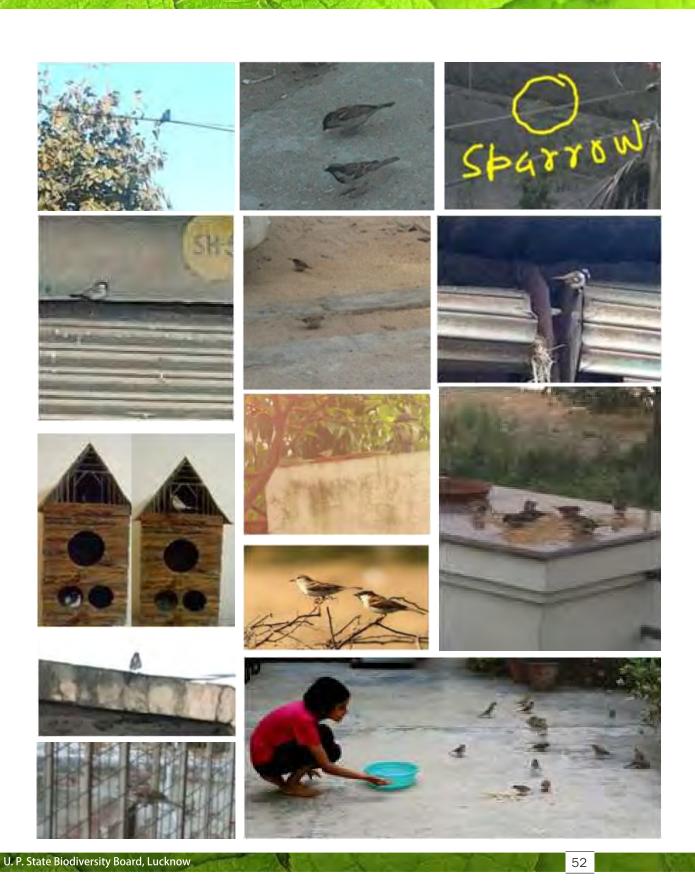












Awareness materials published and distributed, on World Sparrow Day-2013





Poster Handbills

Glimpses of World Sparrow Day -2013 Celebration













International Day of Forests, 22 March 2013



The Uttar Pradesh State Biodiversity Board, Lucknow celebrated "World Forestry Day" on 21st March, 2013. On this occasion, a poster competition on "Importance of Forests" was organized in the districts of Unnao and Lucknow with a view to spread awareness among the students.

A total of 155 students participated in the competition. Out of which, 80 students (upto class VIII) and 12 students (class IX) of Church School Nawabganj, Unnao and 25 students (class Vth to Xth) of Kendriya Vidhalaya, Unnao took part in the poster competition whereas 29 students of Awadh Academy, Lucknow and 09 students of T. D. Girls Inter College, Lucknow participated in the competition. The winners were awarded prizes accordingly.

The list of prize winners of the competition is mentioned below:

Result of Drawing Competitions organized

Name of the School: Church School, Nawabganj, Unnao

Category: Vth - VIIIth

S.No	. Name of Student	Class	Prize
1	Mantasa Khatoon	VIII	First

2	Mansi Diwakar	VII	Second
3.	Mansi Singh	VII	Consolation







Mantasa Khatoon, 1st Prize

Mansi Diwakar, 2nd Prize

Mansi Singh, Consolation Prize

Category: IXth - XIIth

1	Robin Vimal	IX	First
2	Manali Pandey	IX	Second
3.	Aviral Rathore	IX	Consolation







Robin Vimal,1st Prize

Manali Pandey, 2nd Prize

Aviral Rathore, Consolation Prize

Name of the School: Kendriya Vidhalaya, Unnao

Category: Vth - Xth

Sl No.	Name of Student	Class	Prize
1	Nidhi Shukla	X-A	Ist
2	Rupanjali Yadav	VIII-B	IInd
3	Prachi Singh	VI-B	IIIrd

4.	Akanksha Yadav	VIII-A	Consolation
5.	Vanshika Mishra	VIII-B	Consolation



Nidhi Shukla, 1st Prize



Rupanjali Yadav, 2nd Prize



3rd Prize, Prachi Singh



Akanksha Yadav, Consolation Prize



Vanshika Mishra, Consolation Prize

Results of Drawing Competitions organized

S. No.	Name of Student	School/College	Class	Prize
1	Anchal Kumari	TD Girls Inter College	III-A	First
2	Vandana Vishwakarma	Awadh Academy	VIII	Second
3.	Sneha Prajapati	T D Girls Inter College	VIII-A	Consolation



Anchal Kumari, 1st Prize



Vandana Vishwakarma, 2nd Prize



Sneha Prajapati, Consolation Prize

Glimpses of Poster Competition organized on the occasion of International Day for Forestry, 21st March 2013





Human Resource Development

Human Resource Development

The officers and staff of the Board participated in various workshops/conferences/trainings through the year, the details of which are as follows:

- 1. Dr. Ram Jee Srivastava, Senior Scientist and Shri R. K. Dubey, ACF participated in the National Work-shop on "Experience Sharing and Capacity Building of Biodiversity Management Committees" organized by M.P. State Biodiversity Board during August 7-8, 2012.
- 2. Dr. Ram Jee Srivastava, Senior Scientist attended the Regional Science Congress on the theme "Science for Shaping the Future of India" jointly organized by The Maharaja Sayajirao University of Baroda, Vadodara and Indian Science Congress at during September 15-16, 2012. He also presented an invited paper on "Biodiversity Conservation and Sustainable Use of Some Medicinal Plants in the Technical Section of Botany Department, University of Baroda, Vadodara.
- 3. Sri Pawan Kumar, Secretary, U. P. State Biodiversity Board, attended Convention on Biodiversity (CBD) CoP 11 from 14th to 18th October 2012 at Hyderabad organized by Ministry of Environment & Forests, Government of India, at HICC-HITEX Complex in Hyderabad, India.
- 4. Smt Pratibha Singh, Deputy Conservator of Forests, U. P. State Biodiversity Board attended Convention on Biodiversity (CBD) CoP 11 from 15th to 19th October 2012 at Hyderabad organized by Ministry of Environment & Forests, Government of India, at HICC-HITEX Complex in Hyderabad, India.
- 5. Dr Ram Jee Srivastava, Senior Scientist attended the Diamond Jubilee Celebrations of CSIR -National Botanical Research Institute, Lucknow on 25th Oct. 2012. Bharatratna Dr. APJ Abdul Kalam, Hon'ble Former President of India was the Chief Guest and his Excellency Shri B.L. Joshi, Hon'ble Governor of U.P. was the Guest of Honour on the occasion.
- 6. Dr Somesh Gupta, GIS/Technical Associate attended the 82nd Annual Session of NASI & National Symposium on "Nanoscience & Technology for Mankind" jointly organized by National Academy of Sciences, Allahabad and Banaras Hindu University, Varanasi during November 29- December 01, 2012. He also presented a research paper on "Ramifications of Climate Change on Biodiversity" in the biological session.
- 7. Sri R K Dubey, Assistant Conservator of Forests, U. P. State Biodiversity Board attended the Annual meeting of all State Biodiversity Boards and First National Biodiversity Congress-2012 on the theme "Biodiversity for Food Security" during 27-30 December 2012 organized by Kerala State Biodiversity Board, at Kanakakkunnu Palace, Thiruvananthapuram.

8. The Institute of Engineers (India) U.P. State Centre in association with The Professional Engineers (Civil) Association - PECA celebrated World Habitat Day on Oct-1, 2012. On this occasion Smt Pratibha Singh, Deputy Conservator of Forests, U. P. State Biodiversity Board delivered a keynote address focusing on habitat and feelings and affection for our habitat, the mother earth. She briefed about limitations of resources on biosphere with reference to our developments and growth including population. She also briefed about top ten green cities.

Publications .

PUBLICATIONS

a) Flyers: The U.P. State Biodiversity Board, Lucknow published the following flyers, which were distributed free of cost to the participants during XIth Conference of the Parties (COP 11) - Convention on Biological Diversity, organised by the Ministry of Environment & Forests, Government of India from 8th October to 19th October 2012 at Hyderabad.

















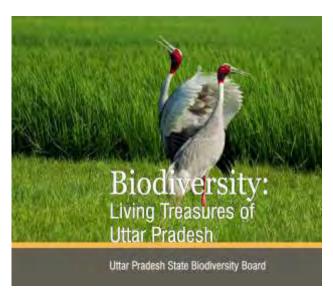






b) Booklet: A booklet on Biodiversity: "Living Treasures of Uttar Pradesh" was published for the XIth Conference of the Parties (COP 11) - Convention on Biological Diversity, organised by the Ministry of Environment & Forests, Government of India from 8th October to 19th October 2012 at Hyderabad

The booklets were distributed to the delegates during the event free of cost.



c) Souvenir on Marine Biodiversity: A Souvenir on "Marine Biodiversity" was released at the occasion of International Day for Biological Diversity (IBD-2012).

It has 22 articles on Marine Biodiversity. The soft copy of the same is also available at: http://www.upsbdb.org/content2.php



UTTAR PRADESH STATE BIODIVERSITY BOARD



- **d)** News Letter: e-magazine: A quarterly e-newsletter of U.P. State Biodiversity Board, Lucknow is published on line. This can be viewed on www.upsbdb.org under e-magazines. The following four issues have been completed till date.
 - i) Vol.: 3, Issue: 11, Apr. Jun. 2012



iii) Vol.: 3, Issue: 13, Oct. – Dec. 2012



ii) Vol.: 3, Issue: 12, Jul. - Sept. 2012



iv) Vol.: 4, Issue: 14, Jan. – Mar. 2013



Finance & Accounts

SANJAY RAJIV & CO. CHARTERED ACCOUNTANTS

1st, Floor, Y.M.C.A. Complex, 13, Rana Pratap Marg, Lucknow – 226 001 • Tel. ; (0522) 2209402 E-mail : myca.lucknow@gmail.com

Independent Auditor's Report

To the Members of Uttar Pradesh State Biodiversity Board.

We have audited the accompanying financial statements of Uttar Pradesh State Biodiversity Board ("the board"), which comprise the Balance Sheet as at March 31, 2013, and the Income & Expenditure Account and Receipt & Payment Account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management is responsible for the preparation of these financial statements that give a true and fair view of the financial position, financial performance of the Board in accordance with the Accounting Standards. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and fair view and are tree from material misstatement, whether due to fraud or error.

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with the Standards on Auditing issued by the Institute of Charlered Accountants of India. Those Standards require that we comply with ethical requirements and plan andperform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Board's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion and to the best of our information and according to the explanations given to us, the financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India:

- a) in the case of the Balance Sheet, of the state of affairs of the Board as at March 34, 2013;
- b) in the case of the Income & Expenditure Account, of the Surplus for the year ended on that date;

Place : Lucknow Date : 17.08.2013 ATMAY KR BHUTANI

Thantered Accountants

M.No 074203

SIGNIFICANT ACCOUNTING POLICIES & NOTES TO ACCOUNTS

- 1. The Board has changed the method of accounting from Cash to mercantile basis.
- 2. Erstwhile Interest on Pixed Deposits have been accounted for on actual receipt basis on the maturity of the Deposits, during the year the Interest income has been accounted for on accrual basis. This has resulted an increase of Rs 43,01,136/- in the interest income.
- 3. The accounts are prepared on historical cost basis as a going concern. Accounting policies not referred to otherwise are consistent with generally accepted accounting principles.
- 4. Expenses on Seminar on Biodiversity Day incurred through DFO, Avadh have been accounted for on the basis of Utilization Certificates received from the concerning DFO.
- 5. The total amount paid during the period to various agencies/departments for Biodiversity related projects has been considered as the expenditure for the relevant year.
- Fixed Assets are stated at cost of acquisition.
- 7. Depreciation on Fixed Assets has been provided on WDV basis at the rates prescribed under the Income Tax Act.

8. Closing Stock of Books have been valued at cost

For SANJAM RAJIV &

Chartered Accountants

X Accountants /

Samay Kr Bhutani

Partner

Place: Lucknow

Date : 17.08.2013

for Uttar Pradesh State Biodiversity Board

Secretary

U.P. State Blodiversity Board

LUCKNOW

Finance and Accounts

UTTAR PRADESH STATE BIODIVERSITY BOARD, LUCKNOW

RECEIPT & PAYMENT A/C FOR THE PERIOD 01.04.2012 to 31.3.2013

RECEIPT		AMOUNT	PAYMENT	AMOUNT
Opening Balance:			Pay & Allowance	457,926.00
Cash in Hand	1.00		Office Rent	1,431,012.00
Bank Balance	7,637,490.00	7,637,491.00	Electricity Bill	156,896.00
		.,,	Staff Vehicles	1,205,289.00
			Expenses on International Day for	839,711.00
Grant in Aid			Biological diversity 2012	,
Recurring Grant from	700,000.00		Telephone & Internet	129,782.00
Central Government	,		Ongoing PBR Activities	44,768.00
Corpus Grant from	5,000,000.00	5,700,000.00	Computer running & maintenance Exp.	118,463.00
State Government		-,,	Maintenance paid to PICUP Welfare Society	36,180.00
			Rent Rates & Taxes	5,666.00
Interest on Fixed Deposits		14,414,001.00	Postage & Courier	17,582.00
Fixed Deposit Matured during	year	139,448,529.00	Board Meetings & Seminar	75,632.00
Other Interest from Bank	•	661,431.00	Printing & Stationery	50,434.00
Donation & Advertisement		622,500.00	Travelling	94,741.00
Sale of Books		24,300.00	Publicity & Awareness Material for COP-11	300,000.00
Miscellaneous Receipts		3,175.00	Website Maintenance	22,500.00
Refund from Project		3,000.00	Biodiversity Awareness Programme	37,105.00
			News Paper & Periodicals	10,250.00
			Audit Charges	15,736.00
			Professional Charges	11,236.00
			Bank Charges	844.00
			Project Research, Data Collection & Documentation	4,867,300.00
			Supply of Manpower	684,275.00
			Preparation of Annual Report & Other Brochures	223,308.00
			Security Expenses	41,731.00
			Repair & Maintenance	12,560.00
			Office Expenses	78,812.00
			Library Book Purchased	3,420.00
			Laptop Purchased	126,888.00
			Fixed Deposit during the Year	141,948,529.00
			Closing Balance	
			Cash 1.00	
			Bank balance 12,965,850.00	
			Cheque in Hand 2,500,000.00	15,465,851.00
As nor our congrete report o	of avan Data	168,514,427.00		168,514,427.00

As per our separate report of even Date

For Sanjay Rajiv & Co Chartered Accountants -sd-(Sanjay Bhutani) Partner

Place: LUCKNOW Date: 17.08.2013

For UTTAR PRADESH STATE BIODIVERSITY BOARD -sd- $\,$

UTTAR PRADESH STATE BIODIVERSITY BOARD, LUCKNOW INCOME EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31.3.3013

EXPENDITURE	AMOUNT	INCOME	AMOUNT
Pay & Allowances	457,926.00	Recurring Grant	
Office Rent	1,431,012.00	From Central Government	700,000.00
Electricity Bill	156,896.00		
Staff Vehicles	1,205,289.00	Interest on Fixed Deposits	18,735,137.00
Expenses on International Day for	839,711.00	Other Interest from Bank	661,431.00
Biological Diversity		Donation & Advertisement	622,500.00
Telephone & Internet	129,782.00	Sale of Books	24,300.00
Ongoing PBR Activities	44,768.00	Refund from Project	3,000.00
Computer Running & maint.	118,463.00	Miscellaneous Receipts	3,175.00
Maintenance paid to PICUP Welfare Society	36,180.00		
Rent Rates & Taxes	5,666.00		
Postage & Courier	17,582.00		
Board Meetings & Seminar	75,632.00		
Cost Price of Book Sold	19,277.66		
Printing & Stationary	50,434.00		
Traveling	94,741.00		
Publicity & Awareness Material for COP-11	300,000.00		
Website Maintenance	22,500.00		
Biodiversity Awareness Programmes	37,105.00		
News Paper & Periodicals	10,250.00		
Audit Charges	15,736.00		
Professional Charges	11,236.00		
Bank Charges	844.00		
Project Research, Data Collection & Documentation	4,867,300.00		
Supply of Manpower	684,275.00		
Preparation of Annual Report & Other Broch	ures 223,308.00		
Security Charges	41,731.00		
Repair & Maintenance	12,560.00		
Office Expenses	78,812.00		
Depreciation	273,091.88		
Excess of Income over Expenditure	9,487,434.46		
	20,749,543.00		20,749,543.00

As per our separate report of even Date For Sanjay Rajiv & Co Chartered Accountants

-sd-(Sanjay Bhutani) Partner

Place: LUCKNOW Date: 17.08.2013

For UTTAR PRADESH STATE BIODIVERSITY BOARD -sd- $\,\,$

UTTAR PRADESH STATE BIODIVERSITY BOARD, LUCKNOW

BALANCE SHEET AS AT 31 March 2013

LIABILTIES	AMOUNT	ASSETS		AMOUNT
CORPUS FUND Balance b/f 149,222,658.32 Grant from Central 5,000,000.00 Government 5,000,000.00		Fixed Assets AS PER LIST INVESTMENT		786,088.03
Add: Surplus for the year <u>9,487,434.46</u>	163,710,092.78	Fixed Deposit with Banks Interest accrued but not received CURRENT ASSETS	141,948,529.00 3,981,106.00	145,929,635.00
		Security Deposit Rent Stock of Books Tax Deducted at Source 2009-10	275,835.00 353,801.75 320,030.00	
		Tax Deducted 2011-12 Tax Deducted at Source 2012-13	838.00 330,905.00	
		Income Tax Deposited Short Interest Credit Receivable from Bank	227,109.00 20,000.00	1,528,518.75
		Closing Balances Cash in Hand Cash at Bank	1.00 12,965,850.00	
	163,710,092.78	Cheque ih Hand	_2,500,000.00	15,465,851.00 163,710,092.78

As per our separate report of even Date

For Sanjay Rajiv & Co Chartered Accountants -sd-(Sanjay Bhutani) Partner

Place: LUCKNOW Date: 17.08.2013

For UTTAR PRADESH STATE BIODIVERSITY BOARD -sd- $\,$

Press Clippings

HINDUSTAN TIMES, LUCKNOW TUESDAY, MAY 22, 2012

RML UNIVERSITY

Marine life to be focus of national conference

HT Correspondent

adkoreporteradesk@hindustantimes.com

LUCKNOW: Marine life will be the focus of the national conference being held to mark the International Day for Biological Diversity at Dr Ram Manohar Lohia National Law University on Tuesday. The UP State Biodiversity Board (UPSBD) is organizing the conference. The theme set by Convention on Biological Diversity (CBD) is 'Marine Biodiversity-One Ocean Many Worlds of Life'.

"International Biodiversity Day-2012 is of special significance as it is the 40th anniversary of the first UN Conference on Human Environment held in Stockholm, 20th anniversary of the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, and the 10th anniversary of the World Summit on Sustainable Development in Johannesburg," says UPSBD senior official Pratibha Singh.

The decade 2011-2020 has also been termed as the International Decade of Biodiversity. Among other events focussing on this burning environmental issue, THE CONFERENCE AIMS TO CREATE AWARENESS ABOUT OCEANS AND INSPIRE MEASURES FOR CONSERVATION OF MARINE ECOSYSTEMS

India will be hosting the Conference of the Parties to the Convention on Biological Diversity (COP 11) at Hyderabad in October this year, Singh says. Target actions on the CBD theme include addressing sustainability of fish harvests, invertebrates and marine plants in marine and coastal areas; and, the establishment of protected areas for marine ecosystems.

To spread awareness among school children, various competitions were organised on May 14, the prizes for which will be given during the programme on

The national conference aims to create awareness about oceans and their role as sources. of oxygen, protein, medicine and climate regulation. It also hopes to inspire measures for conservation of marine ecosystems.



'Good brand ambassador needed for biodiversity'

All for an experiment of a spirit with the lines of continue people He impedigmental and in their model to the continue and the spirit of the continue and their spirit of the continue and their spirit of th

HINDUSTAN TIMES, LUCKNOW WEDNESDAY, MAY 28, 2019

shortstories



Regional Science City on Taesday. DESTANDAMENT.

70% OF MEDICINES COMES FROM BIODIVERSITY, SAYS PROFESSOR

ADDRESS: The UP State Biodiversity Board estebrated the International Day for Richardeal Discoursy by organizing a national conference of Farm Marchine Labor National Low University Ur Syed Armal Khan, Prof Smeritsa from the University or Syed Aguina Kroat, "rate statement the Contro for Advanced Biology, Amazinda (Junevesty was this chief gazet. Speaking on the occosion, Khao seed all barmons and animals get thus food only from businessity. The seed as percent of the molecules corner from businessity. The soul is a majore of many becteria that are useful as millipolate." To and To proceed that are useful as mineral as and a said. To principal (the forestrone of feets, 28 Addition, was nice present on the occasion. Prace were given uses to ambinist wire participant in the celebration of marine budiers, the Spice Kouse Stiple, challenge of the board, complained the importance of conserving traditionals. Research Singh, director, Darknew Zon, compared the programme. Also present on the occasion were Publishe Singh, DCF UP-State Recoverably Bound.

тие ріонет

Lucknow's muskmelons disappearing

THE PERSON NAMED IN COLUMN

TIMES CITY

Native birds on a vanishing flight

Urbanisation, Insecticides Pushing Winged Creatures Towards Extinction

JOIN HANDS, SAVE SPARROWS Specimen and Specimen company

VIJU CAN SAVE THE

TIMES CITY

industantimes HINDUSTAN TIMES LUCIOUSW

Sparrow population inching up?

POSITIVE TREND Bird watchers spot more than 1,800 birds in a day as compared to 2,500 in several days last year

to prove This source country to the city of one. This government is the city has given in the city has given in the city of a more country of one country of the city of a more country of the city of

these. The need Greater particular disorder Chemistro particular disorder of the manufacture of the state of



PERPHARY 3, 2011

Birdwatchers go sparrow-spotting for count

|--|--|--|--|--|

LUCKNOW I SATURDAY I FEBRUARY 2, 2013

World Wetlands Day today must to boost eco-tourism

Lucknow (PN5): Wildlife Conservation Lab, Lucknow University's Zonlogy department and State Biodiversity. Board (Encknow) will observe World Wetlands Day on

sunday pioneer (wellands "Burstill, there are

(Unnao), Sandy (Haffin) Samuspur (Kac Barell Pland) om in Kannauj. These Welbands are protected and already declared Ramsar after, accord ing to Ramsar (Iran) conven-

any wetlands lying in and would lucknow which are Wetlands Day observed every year

Conservation of wetlands

TIMES NEWS HETWORK

sity in the wetlands in and around Lucknow. If preserved, it can boost the tourism potential of the state

> came to the above er carrying out a

different areas to hillities of conservds, which will not or the tour ism, but

TLANDS DAY

the flore and fadro Wetlands are lowh as a marsh or sturated with moiswhen regarded as

tat of wildlife. v the students from

WET & WILD

Wetlands in UP declared conserved (Ramsar sites)

Mawabgarii Bird Sanctuary in

- Sandy in Hardoi
- Samaspur in Rae Barell
- Gneol in Kannaui
- · Amphibians like slopper frog, turtle, dragonfly, and earthworm exist in the wetlands

places, Deen Dayal Upadhyay Park (near Sainth School, Sarojintragar). Mohanlalgan) and areas such as Parva (Barabanki), Nartiah). Ganhari Jacel (Barabanki), BKT and areas like Chandatipure (Mahoru), Nagar Choukwa, Tikorhar, Unnai, Gomtmager including Katourin Iheel Nawabgani Bird Senctuary (conserved), Purnin, Duhi, Bradosa in Unnao

On their visit, students studied the biodiversity and found a large number of flora and founs existing

others were also seen," sold a sto-dem. Besides, presence of smalls like apple entil, emphihians like skipper frog, turtle, drogontly, and earthworm were also seen

According to Kanaudia, variety of birds was found in these werlands From Lapwing to Whistling Duck to Little Cormorant and Peacock, there were many species of birds. Among other variety in-cludes Grey Log Goose Purple Moorhen, Common Pachard, Indi an Pond Heron, Furnie Beron, Little Grebe Asian Openbill, Painted Storks mid others

"After the survey we will present our report to the state government who can take some initiative in conserving these wetlands, which can be developed into tourist sites," said Kanauria. The team also concluded that various anthroposenic activthes such as cuttle grazing, use of pesticide, dumping garbeno must be prohibited in these wetlands.

Students also distributed painphlets among the citizens highlight ing the importance of wetlamis and

World Wetlands Day celebrated



of zoology und bota ation with the UP Board, a team of 25 Astriba Enquestia



LUCKNOW THURSDAY LAUGUST 30, 2012

International Vulture Awareness Day on Sept 1

SHARMILA KRISHNA . LUCKNOW

The UP State Bindsversity Beard in association with the Zoology Department of Lucknow University will celchrate the International Vulture Awareness Day by flagging off a cas from the Lucknow University which will distribute pempidets about valture awareness across the city and in various schools.

Deputy Conservator of Forests Presible Single, said that the flagging off the car would sake place from lanknow University.

Size said that the car would gu to more than 30 schools ligre and would be stationed at five locations from where pamphleis do vulture awareness would be distributed.

The loternational Vulture Awareness Day is celebrated on

every first Saturday of the September month and this time it will fall on September 1.

We will try to impolve young children in the process. or creating awareness about is being carried out. The pamphiets will also carry an addi-tional online of the bird which will be coloured by the students and the entries will be sent to the Biodiversity Board," said

Prottbha said that there were several causes for the dwindling number of val-

The primary reason has been the use of diclosenac but the other reason is late flying due to which the wings of the bird get destroyed by the man-iha (thread) which the people who fly them use. The habitat of this bird of prey is also get-

"WE WILL TRY TO INVOLVE YOUNG CHILDREN IN THE PROCESS OF CREATING AWARENESS ABOUT VULTURES AND SO THIS CAMPAIGN IS BEING CARRIED **DUT," SAID SINGH**

ting adversely affected because u sits on dead trees. But these tines are being removed for get-ting revenue, and Pratible

The Deputy Conservator of Forests said that there were over eight species of vultures to

the state of UP, including the Onestal white value, slender-billed value, long-billed valture, red headed vulture. Egyptian vulture, Indian Gritian vulture, Himalayan vulture and the bearded vul-

The Oriental white vul turn, the shinder-billed vulture and the long-billed valuer fall in the Schedule I Part I of the Wildhie Protection Act which means that billing of the tiger and the billing of the vidture can be put in the same bracket. One vulture cutt around 120 kg of rouen meat and thus plays an important role in maintaining the ecological bal-ance or otherwise the population of rats will increase. Vulnares are ecological incin-erators, and Pratible Singh.

She added that the Oriental white vulture, the slender-

billed vulture, the long billed vulture and the eed-headed valuure were in the criticallyendangered category as was declared by the TRCN

The Depoint Conservator of Forests said that four how harmful was the user of dictofrance in the declining population of vultures could be gauged from the lact that researches had shown that if our of the 760 curcasses even one carried dicintenac it would lead ura decline ur us popula-

While several countries have barried the manufacture and import of disclosius. no measures have been taken yet to control the asy and sale of this dangerous drug. What is again an area of concern as the movement of the human dictofenac in the vet dichafenac, the added.

SUNDAY HINDUSTAN TIMES, LUCKNOW SEPTEMBER 02, 2012

04 | metro | hindustantimes

LU sets 'save-vulture' drive in mo

HT Correspondent

LUCIONOW: Lucknow University's soology department and UP State Biodiversity Board celebraced the international vulture day by flagging off an awareness car and holding a host of programmes here on Saturday.

The vulture car was set in motion at 6.30am from the vice chancellar bungalow by view chancellor Manoj Kumar Milera and his wife Meens Misra.

The car drove past the National Botanical Research Institute took a turn towards Ram Manchar Lohiya Park, Regional Science City, Fun Republic, touched Wave Mall. Sahara Gan, turned towards zoo, Charbagh railway station,

THERE ARE 22 KINDS OF VULTURES WHICH INCLUDES 15 TYPES OF OLD WORLD VULTURES AND 7 TYPES OF NEW WORLD VULTURES

Aminabad, Chowk, Hazaratganj, and distributed awareness material to people.

Total 6000 pumphlets were distributed. In another ovens painting competition was also organised along with a display stall at Lucknow University's gate number, 4.

The programme concluded with the fun-fare, said associate professor Amita Kanaujiya.

INTERNATIONAL VULTURE DAY OBSERVED

species

RESIDENTIAL

- T) Gyps indicus (Long-billed) vulture)
- (Whitebacked vulture) Gyps tenuirostris (Slender-
- billed vulture) 6 Sarcogyps calvus (King vul-
- Neaphron perchapterus (Egyptian vulture)



MIGRATORY

- Acgypius monachus (Cinereous vulture)
- Oyps fulvin (Griffon yulture)
- Oyps himalayensis (Himalayan Griffon vulcine)

 (Above) Lucknow University vice- chancellor Manel Kumar Misra and his wife Meene Misra flaged off the Saturday

hindustantimes

HINDUSTAN TIMES, LUCKNOW SATURDAY SEPTEMBER OF 2012

VULTURE AWARENESS

Throw fleshy partie to make 'em breed

AVIAN CONSERVATION Animal carcasses would be kept at identified spots across the state to raise their depleting number

Ropey Mullick and Bicha

LUCKNOW: In order to sarract more vultures to the state, bio-diversity experts are making the introduction of sudure re-

types of most preferred by the

of the preserve with the server preserve with the nerth in these species. "The hunt for nuch species on," says Amita Kananjiya, an associate professor in the zoology department, LC.

She is one of the members of the State Volture Conservation. Society, forest department, LP as well as the principal investigator of the project 'Moultaring of roasting and breeding sites of voltures in Jhamsi, Lattipur, Jalain and Mahaba. The project is being funded by the LP State Biadversity Bannt.

Kennality explains: The idea to attract voltures and arrest them food that is free from She woos of the members of

them food that is free from diclofense. Despite a han the tirug is used extensively to treat antiquis. When the animals conmore it through cureass, it haves them. The concept of a vulture restaurant already causts in Gujarat and other pures of the COUNTY AND THE PROPERTY OF T

Started by Birds of Prey Programme in South Africa and the Hawk Conservancy Trust in England, it is now being cole

trrated all over the world. In Lucknow, a vulture aware-ness drive will be flagged off from Lucknow University, Pratibha Singh, IFS, stale biodiversity board will attend the event. Booklets on vultures, pumphicus, vulture kits will also be contribused in schools and colleges across the city.

WHAT ARE THE CAUSES OF POPULATION DEPLETION?



houses and han on dumping of carcasses in resulting in shortage of food supply in

WHAT WE CAN DO ...

FOR CONCERN

Bourse Salpai

LUCKNOW, There has been a considerable decrease in the number of vultures over the

As por the last three cen-as - August 2016, May 2011 and December 2011 the number of five Indian and three migratury species of val-tures remain just above 2,000 in the state. They are chiefly found in Substwo Wildiafe. Savetuary, 269 km from

"Voltures are helpful in checking dissesses which spread through bacteris and virus than food on dead animals. Their role is important In mointaining the ecology of the forest," and KK Jha, chief conservator forest.

Keeping in view the paper lation of the vultures the for-est department has been nurning several programmes for awareness on the importance

of the vultures.
Studies, have been con-ducted in collaboration with the blodlycraity board for exploring places for their rebabilitation and possibility of increase in their popula

The next conses of vultures in Uttar Products to due in December this year when decisions regarding implementation of programmes to provide them places to grow may be implemented.

Aldentifying a safe alternative drug to

Start conservation

breeding programme - Regular searches for

regions sources for oead votifiers at breed-ing sites and rousts within the zone source post-tion to fook for viscoral goor. Surveys at sales outlets and use by ver-

erinarians, and agreements signed to ensure unsafe drugs are not used, within a minimum 100 km radius of the focal point.

The sale • Removal of disdofenas or other numeral full drug stocks from pharmacies and voterinary organisations, through a swapping

programme for

Gyps Indiano (Javenia)

« Kidney failure due to widespread use of

the drup dictorance.
The logs of natural habitats
High temperatures
A new-virus hypomesis
Killed by feeding on polsomet carcasses hald by villegers for carnivores
Harassed and killed because they
destroy trans on which thousand destroy trees on which they rest and roost with their acrid excreta leaving the "hare poles" standing "Modernization of primitive slaughter

COLOUR AND WIN

Visit the state biodiversity board http:// Volt the state bookversity board http:// www.upbdb.org/international-vultum-awareness day.obg and downshad the picture of a vulture. Students of Classes 1 to 5 may colour this picture and all the entries may be sent back to Ramgee Srivastava, UP State Biodiverally Board, Jrd Boor, Pictip Bhavan, A Block, Genti-Nagar, Lucknow 226010 before Soptember 4, 2012. Best entries would be awarded.

ESSENTIAL FOR ECO-BALANCE

Voltaires have an important role to play in maintaining the ecological balance. If it weren't for voltaires, many parts of the world would look like junkyarus of boxes and retirn meat. They are nature's disposal of boxes and retirn meat. They are nature's disposal or "Inciderativa". Vultaires comy out a number of Services, most notably disposal of carrioniney also help control livestock diseases such as inucellusis, fuberculosis, and anthrax by disposing of infected carcasses. The extinction of vultaires would be an irreplaceable loss of a link in the food would be an irreplaceable loss of a link in the food chain.

Science Express arrives in city today

PIONEER NEWS SERVICE LUCKNOW

Principal Secretary, Forest, and Pchairman, Biodiversity Roard, VN Garg, will welcome the Science Express which will arrive here on Platform No 8, Northern Railway, Lucknow Junction, on Wednesday. The occasion will also see the presence of senior forest officials such as the Chief Wildlife Warden, officials from the Uttar Pradesh Pollution Control Board and Environment Directorate

The children from City Monresson School, Riverside Academy and TD Girls' Inter College will be present on the occasion.

Giving the details about the Science Express, Deputy Conservator of Forests, Biodiversity Board, Pratibha Singh, while talking to 'The Pioneer said "the state-ofthe-art exhibition aboard the SEBS aims to create awareness on biodiversity of India, climate change and similar issues among various sections of the society, especially the students. The exhibition, thus, targets a wide audience, including school and college students as well as teachers."

Pratibha Singh said that out of the 16 coaches of the SEBS (Science Express Biodiversity Special), eight supported by MoEF, were solely dedicated to showcasing the myriad biodiversity spread across the bio-geographical zones of India. "These include Trans-Himalayan areas & the Himalayas, the Gangetic plain, North East India, the Desert & Semi-Arid Zone, the Western Ghats, the Deccan peninsula, the coasts and the islands. The exhibition also covers various other facets like marine, coastal areas, forests, microbial, agro biodiversity and their linkage with livelihood besides challenges of conservation," she said.

In rest of the rake, one coach has an exhibition on climate change, biodiversity and water, while more exhibits on climate change, developed and supported by Swiss Embassy, have been put up in another coach. Yet another coach presents an exhibition on energy conservation while the

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Legacy of Sc most popul four phases.

Pratibha the coach, st experiments concepts in environmen ics in an inti centre-cum the same co teachers in ment, scient

At each planned in advance to engage different ages to reinforce

SEBS and th much-sough conducted in along with ir way platforr

Specific ducted in I associated Environme (NEAC) and In addition. rial is made amongst sc

Science exhibition n 16-couch A since Octo tour across iconic train Express unique co Departmen Ministry

info hub on wheels

SCIENCE EXP Sixteen-coach iconic train creating awareness on India's biodiversity

Science exhibition on wheels attracts











U.P. State Biodiversity Board

East Wing III'd Floor 'A' Block

PICUP Bhawan, Gomti Nagar, Lucknow

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