## 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 provide food, fodder, medicines, water, clean air and other goods and services.

# The Biological Diversity Act, 2002

- ▶ The Biological Diversity Act, 2002 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 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 Biological Diversity Rules, 2004

▶ 24 Rules in all were notified on 15th April 2004.

## **Constitution of the Board**

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

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

- Advising the State Governments, subject to guidelines issued by the Central of its components relating to conservation of biodiversity sustainable use of its components and equitable sharing of benefits arising out of utilization of biological resources.
- Regulation 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.

The U.P. State Biodiversity Rules, 2010 were framed vide notification number 570/XIV-2010-57/2006 dated April 9, 2010.

## **Uttar Pradesh at a Glance**



**Geographical area**: 2,40,928 Km2 (7.3% of the total area of the country (3,287,263 Km<sup>2</sup>)

**Location**: between 23°52'N-30°4'N latitude and 77°05'E-84°38"E longitude. **Boundaries**: Lying in north India, it is a land locked state.

North: State of Uttarakhand and the

country of Nepal **East:** State of Bihar

**Southeast**: States of Jharkhand and Chhattisgarh

**South**: State of Madhya Pradesh

**West:** States of Rajasthan and Haryana and the National Capital Territory of Delhi.

**Climate**: The annual rainfall in the state varies from 1,000 mm - 1200 mm and temperature ranges between 5°C during winter to 45°C in summer.

\*Population: 199.58 million (16.49% of country's population-1.22 billion). Uttar Pradesh is the most populous state in the country, as per the census 2011.

\*Urban population : 44.50 million (22.27%)
\*Rural population : 155.31 million (77.73%)

**\*Tribal Population:** 1.13 (0.57%)

\*Average Population density: 829 per sq km

\*Livestock population (as per 18<sup>th</sup> Livestock Census): 60.27 million

\*Source: India State of Forest Report, 2013

**Major rivers**: The state is well drained by a number of rivers originating in either the Himalayas to the north or the Vindhya Range to the south. The Ganges and its main tributaries-the Yamuna, the Ramganga, the Gomati, the Ghaghara, and the Gandak are fed by the perpetual snows of the Himalayas. The Chambal, the Betwa, and the Ken, originating from the Vindhya Range, drain the southwestern part of the state before joining the Yamuna. The Son, also originating in the Vindhya Range, drains the southeastern part of the state and joins the Ganges beyond the state borders (in Bihar). The Gomti river starts from Pilibhit District.

## **Land Use Pattern**

Total geographic area	24,093	
Reporting area for land utilization	24,170	100.00
Forests	1,658	6.86
Not available for land cultivation	3,268	13.52
Permanent pastures and other grazing lands	65	0.27
Land under misc. Tree crops and groves	374	1.55
Culturable wasteland	440	1.82
Fallow lands other than current fallows	540	2.23
Current fallows	1,408	5.83
Net area sown	16,417	67.92

Source: Land Use Statistics, Ministry of Agriculture, GOI, 2008-09.

## **Forests in Uttar Pradesh**



### **Total Forest Cover:**

14,349 sq km.

Reserved Forest:

11,660 sq km (70.31%)

Protected Forest:

1,420 sq km (8.56%)

**Unclassed Forest:** 

3,503 sq km (21.12%)

## Total Recorded Forest area:

16,583 sq km.

\* Source: India State of Forest Report, 2013

# **State Symbols**

#### **State Tree**



English Name : **Ashok**; Hindi Name : **Ashok** Scientific Name : **Saraca asoca** 

#### **State Animal**



#### State Flower



English Name: Flame of the Forest Hindi Name: Palash, Dhak, Tesu Scientific Name: Butea monosperma

English Name : **Swamp Deer** Hindi Name : **Barasingha** 

Scientific Name : Rucervus duvauceli

#### **State Bird**



English Name : *Indian Sarus Crane* Hindi Name : *Sarus* 

Scientific Name : Grus antigone

#### State Fish



English Name : **Chitla**Hindi Name : **Chital, Mohi**Scientific Name : **Chitala chitala** 

# **Plant Diversity of Uttar Pradesh**

The floral diversity of Uttar Pradesh is represented by 6.45% of the country's flora with 2,932 species of plants. Preliminary data collection from secondary sources indicates the following observations in the plant kingdom in U.P.:

Groups of Plant kingdom	No. of Species in World	No. of Species in India	No. of Species in U. P.	% of Species in U.P. with respect to World	% of Species in U.P. with respect to India
*Algae	40,000	7,182	301	0.75	4.19
*Fungi	72,000	14,588	935	1.29	6.40
**Lichens	13,500	2,268	135	1.0	5.95
*Bryophytes	16,600	2,451	72	0.43	2.93
*Pteridophytes	10,000	1,236	41	0.41	3.31
*Gymnosperms	650	69	06	0.92	8.69
*Angiosperms	2,50,000	17,643	1,442	0.57	8.17
Total	4,02,750	45,437	2,932	0.72	6.45

Source: \* Saini et.al (2011). Floristic Diversity of Uttar Pradesh with special reference to Eastern Uttar Pradesh published by Uttar Pradesh State Biodiversity Board, Lucknow.

# **Animal Diversity of Uttar Pradesh**

The Faunal Diversity of Uttar Pradesh is represented by 2.76 % of our country's fauna with 2,387 species of invertebrates and vertebrates. The faunal diversity in the state is shown in table given below:

Groups of Animal Kingdom	No. of species in the World	No. of species in India	No. of species in Uttar Pradesh	% of species in U.P. with respect to World	% of species in U.P. with respect to India
Protozoa (Free-living + Parasi	31,250 te)	3,500	41	0.13	1.17
Nematoda (all)	30,028	2,902	140	0.46	4.82
Mollusca	66,535	5,169	47	0.07	0.90
Arthropoda (Insecta)	10,20,007	63,423	1,445	0.14	2.27
Arthropoda (Arachnida)	73,451	5,850	15	0.02	0.25
Pices	32,120	3,022	152	0.47	5.02
Amphibia	6,771	342	25	0.36	7.30
Reptilia	9,230	526	77	0.83	14.63
Aves	9,026	1,233	358	3.96	29.03
Mammalia	5,416	423	87	1.60	20.56
<u>Total</u>	12,83,834	86,390	2,387	0.18	2.76

**Source:** \* V.D. Hegde and K. Venkatraman (2014). Inventory of Faunal Diversity of Uttar Pradesh, published by ZSI with support from Uttar Pradesh State Biodiversity Board, Lucknow.



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# Uttar Pradesh State Biodiversity Board



<sup>\*\*\*</sup> Sanjeeva Nayaka and D.K. Upreti (2013). Lichens of Uttar Pradesh, published by Uttar Pradesh State Biodiversity Board, Lucknow.