IBIS

Indian Biodiversity Information System

IBIS is a group of web-based, modular and searchable biodiversity portals, designed to bring together comprehensive information on Indian birds, mammals and flora in a readily accessible, free and user-friendly format.

Conservation science involves dealing with heaps of information on status and degradation of biodiversity for prioritising future conservation strategies. One of the fundamental issues in biodiversity conservation is the non-availability of adequate and reliable information on a single platform which could assist in developing conservation strategies. Although experts and researchers have contributed greatly to the study of flora and fauna in India, much of the data is not easily accessible in a user-friendly format nor available on a single location.

Indian Biodiversity Information System (IBIS), an initiative of Foundation for Ecological Security (FES), is a group of web-based, modular and searchable biodiversity portals, designed to bring together comprehensive information available on Indian flora and fauna in a readily accessible, free and user-friendly format.

Such a pool of data is expected to help experts involved in developing conservation strategies as well as spreading awareness about the conservation of species among the general public. IBIS is modelled on the concept of 'citizen science' – aspiring to facilitate the participation of amateurs in the gathering of data and building a free resource on Indian biodiversity. It foresees the involvement of various groups of stakeholders ranging from amateur naturalists to wildlife enthusiasts, to serious researchers, ecologists, wildlife scientists and photographers in this pioneering venture.

Salient Features

Some key characteristics of IBIS are:

- IBIS brings together detailed information on birds, mammalia, and flowering plants of the Indian region. Work on collating information about reptiles and amphibians is in progress.
- IBIS offers simple user-friendly online search and retrieval.
- Features to search data are as per user requirement. The IBIS portal allows users to have an access to external links to other dedicated databases and publications, as well as a bibliography with 5,00,000+ citations on Indian birds, mammals, reptiles, amphibians, and plants.
- IBIS collates information from the past alongside inputs from ongoing research, giving readers historical as well as contemporary perspective.
- Nomenclature in older literature is arranged in line with the latest, thus quickening the task of referencing. This also minimises the confusion that arises due to frequently changing taxonomy and nomenclature systems in biodiversity literature.
- IBIS has scientific data like taxonomic modules, excerpts from old and new literature, and database on museum collections.

- It includes general species profiles, which are public participatory but peer reviewed, and a list of copyright-free books on natural history.
- The portal utilises open-source software. IBIS is licensed under the 'Creative Commons Attribution 3.0 Licence', giving users an opportunity to choose a licensing policy for their contribution towards the portal.
- Social Networks functionalities assist in creating web-based conservation communities and exchange of information and knowledge.

Currently, IBIS hosts portals on birds (AVIS-IBIS https://indianbiodiversity.org/about-avis-ibis/), mammals (IBIS-Mammals https://indianbiodiversity.org/about-ibis-mammals/) and flora (IBIS-Flora https://indianbiodiversity.org/ibis-flora/).

AVIS-IBIS

AVIS-IBIS offers:

- Excerpts from 53+ copyright-free books and literature on birds and natural history.
- Web GIS based maps consisting of museum collection records and recent sightings overlaid on species distribution range.
- Bibliography of 1,40,000+ citations from across the world.
- An added feature of sound and calls (multimedia) data for bird species available has proved very popular; it has been produced in collaboration with Xeno-Canto (www.xeno-canto.org).
- An interactive bird identification feature.

IBIS-Mammals

IBIS-Mammals Offers:

- 75,000+ museum records of mammals in India.
- Centralised repository of bibliography having 45,000+ citations, covering all major publications from across the world.
- Geographical Information System (GIS) maps of all museum records as geo-spatial layers, overlaid on the Distribution Maps.
- An array of identification keys on habitat and sites for long term protection of the mammals.

IBIS-Flora

IBIS-Flora 0ffers:

- Gives baseline compilation and working checklist for the angiosperm flora of India.
- It includes database on 24,774 taxa, their status, distribution, synonyms and other information on a single platform.
- It contains distribution maps for 14,899 species, lists more than 50,000 references including original species descriptions, correct orthography of botanical names, and abbreviations of authors' names as per the international standards.
- A centralized repository of bibliography of around 1,65,000+ citations, covering major publications is also available.

Way Forward

IBIS is currently focusing on collation and hosting of species occurrence data from various sources (individuals, research institutes, organization, government departments etc.) thus greatly enhancing the existing data repository of IBIS.

We are on developing an information technology tool on the concept of citizen science, which will help populate occurrence of species using mobile devices. This will significantly expand the spatial and temporal scale of biodiversity monitoring.

IBIS realises the importance of a community (enthusiast, scholars, researchers and experts) collaborating together for conservation solutions. It therefore, has been envisioned as a platform to facilitate linkages and collaborations between individuals, regional, national and global information systems and networks to provide free and open access to data and analytics on Indian biodiversity for faster and informed decision making on ground.