

generated January 2025

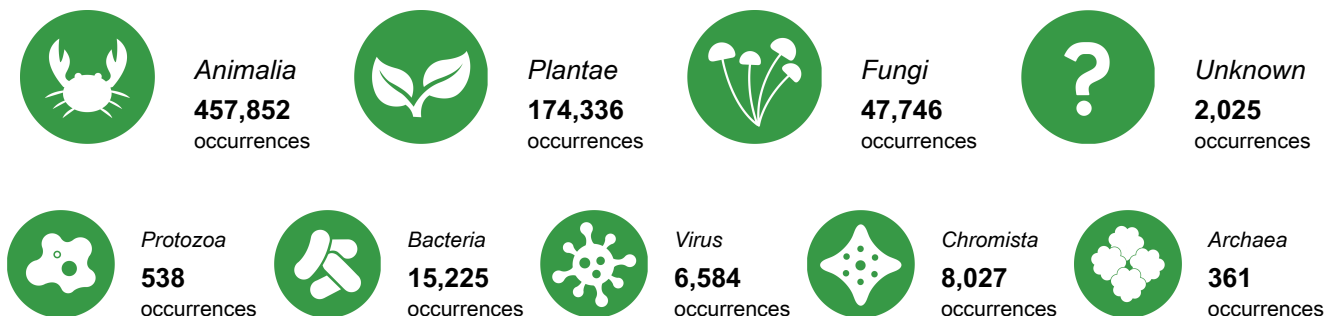
Pakistan

This report provides a series of summary charts, statistics and other details about the mobilization and use of open-access species data through the GBIF network, relating to users and participating institutions in Pakistan. These metrics show status at the time of report generation, unless otherwise noted. Taken together, the elements of this report can help guide and measure progress toward the information needs for biodiversity research, as well as for national commitments on biodiversity and sustainable development.

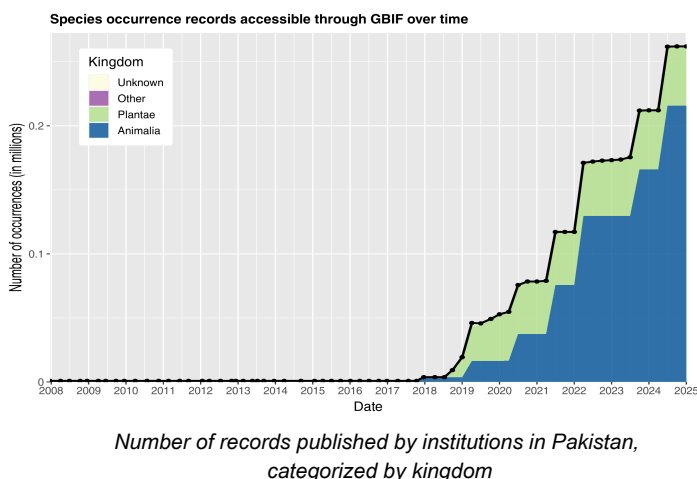
► Access and usage



► Data availability in Pakistan



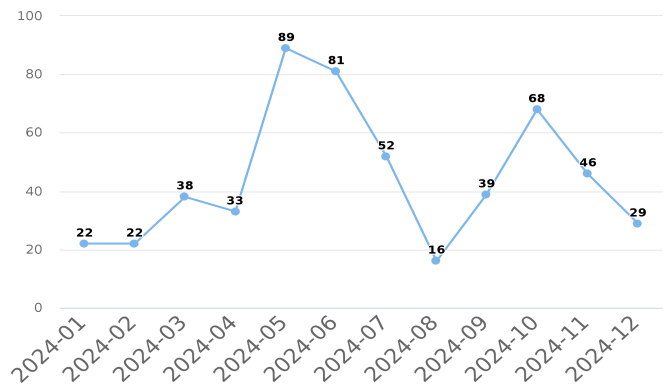
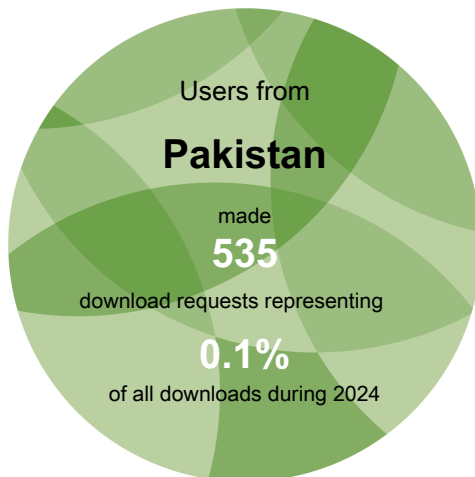
► Data mobilization





Access and usage

Data downloads on GBIF.org from users in Pakistan



Monthly downloads requested by users in Pakistan

Recent peer-reviewed articles using GBIF-mediated data by co-authors based in Pakistan

The GBIF Secretariat maintains and reports on an ongoing literature tracking programme, giving priority to substantive uses of GBIF-mediated data in peer-reviewed literature while identifying the countries or areas of the authors' institutional affiliations. The citations below represent the five most recent journal articles with at least one co-author from Pakistan.

Those interested in assisting the Secretariat in identifying additional peer-reviewed uses of GBIF-mediated data may forward relevant citations to comms@gbif.org.

Waheed, Haq, Arshad *et al.* (2024) *Xanthium strumarium* L., an invasive species in the subtropics: prediction of potential distribution areas and climate adaptability in Pakistan. *BMC Ecology and Evolution*.

<https://doi.org/10.1186/s12862-024-02310-6>

Wang, Zhuo, Ali *et al.* (2024) Predicting potential habitat distribution of the invasive species *Rhynchophorus ferrugineus* Olivier in China based on MaxEnt modelling technique and future climate change. *Bulletin of Entomological Research*.

<https://doi.org/10.1017/s0007485324000336>

Batool, Ayoub, Khan *et al.* (2024) Distribution of Mammalian Species in the Vicinity of Ramsar Sites of Pakistan. *Journal of Wildlife and Ecology*.

Otis, Huang, Kitnya *et al.* (2024) The distribution of *Apis laboriosa* revisited: range extensions, biogeographic affinities, and species distribution modelling. *Frontiers in Bee Science*.

<https://doi.org/10.3389/frbee.2024.1374852>

Hofmann, Rödder, Andermann *et al.* (2024) Exploring Paleogene Tibet's warm temperate environments through target enrichment and phylogenetic niche modelling of Himalayan spiny frogs (Paini, Dicroglossidae). *Molecular Ecology*.

<https://doi.org/10.1111/mec.17446>

See all research from this country or area
gbif.org/country/PK/publications/from



Data availability

Total data available for selected taxonomic groups in Pakistan



Mammals
15,024
occurrences



Birds
228,496
occurrences



Bony fish
5,950
occurrences



Amphibians
2,744
occurrences



Insects
153,528
occurrences



Reptiles
11,310
occurrences



Molluscs
11,166
occurrences



Arachnids
7,680
occurrences



Flowering plants
168,755
occurrences



Ferns
1,477
occurrences



Gymnosperms
1,366
occurrences



Mosses
1,906
occurrences



Sac fungi
31,034
occurrences



Basidiomycota
11,921
occurrences

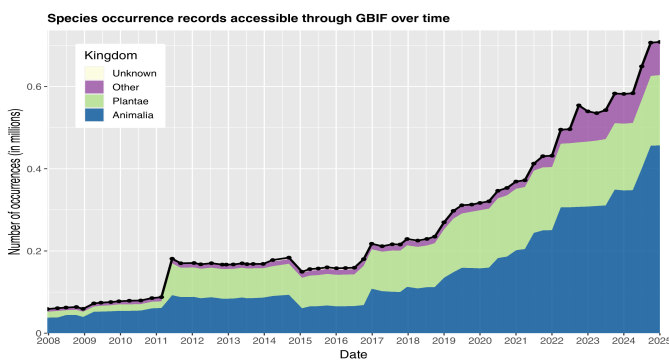
Mammals = Class *Mammalia*
Birds = Class *Aves*
Bony fish = Superclass
Osteichthyes p.p.
Amphibians = Class *Amphibia*

Insects = Class *Insecta*
Reptiles = Class *Testudines*,
Sphenodontia, *Squamata* &
Crocodylia
Molluscs = Phylum *Mollusca*

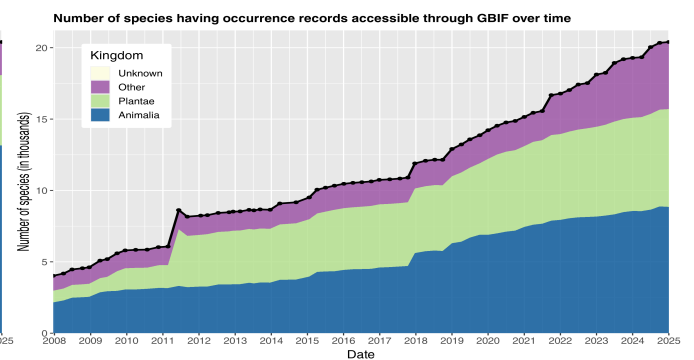
Arachnids = Class *Arachnida*
Flowering plants = Phylum
Magnoliophyta
Gymnosperms = Superclass
Gymnospermae

Ferns = Phylum *Pteridophyta*
Mosses = Phylum *Bryophyta*
Sac fungi = Phylum *Ascomycota*
Basidiomycota = Phylum
Basidiomycota

Change over time in records about biodiversity in Pakistan



Occurrence records available about species occurring in Pakistan



Species for which at least one occurrence record is available in Pakistan

WHY MIGHT THE AMOUNT OF MOBILIZED DATA DECREASE?

Datasets are sometimes removed by publishers, but more often decreases in the number of records are due to the removal of duplicate records and datasets.

SPECIES COUNTS represent the number of binomial scientific names for which GBIF has received data records, organized as far as possible using synonyms recorded in key databases like the Catalogue of Life



Most recent datasets from publishers in Pakistan

Occurrence records of the plant species at the Islamia University of Bahawalpur, Pakistan. *Published by Department of Botany, The Islamia University of Bahawalpur*
<https://doi.org/10.15468/6eyu94>

Rawalpindi Women University Herbarium. *Published by Rawalpindi Women University*
<https://doi.org/10.15468/5gza5b>

Hazara University Herbarium. *Published by Herbarium Hazara University Pakistan*
<https://doi.org/10.15468/ftemae>

Qarshi Botanical Garden Herbarium. *Published by Qarshi Botanical Garden, Qarshi Industries Pvt. Ltd, Pakistan*
<https://doi.org/10.15468/pjxa84>

University of Sargodha Herbarium. *Published by University of Sargodha*
<https://doi.org/10.15468/n4k5s9>

Dr. Sultan Ahmad Herbarium. *Published by GC University, Lahore*
<https://doi.org/10.15468/xaju4z>

University of Azad Jammu and Kashmir Herbarium. *Published by University of Azad Jammu and Kashmir*
<https://doi.org/10.15468/t4lkyc>

See all datasets from this country or area: gbif.org/dataset/search?publishing_country=PK

Newest publishers from Pakistan

Department of Botany, The Islamia University of Bahawalpur

Rawalpindi Women University

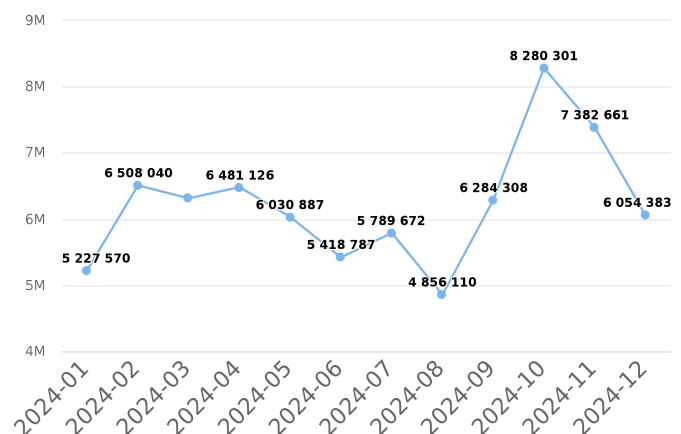
Herbarium Hazara University Pakistan

University of Sargodha

GC University, Lahore

See all publishers from this country or area
gbif.org/publisher/search?country=PK

Occurrence records downloaded from GBIF.org, published by institutions in Pakistan

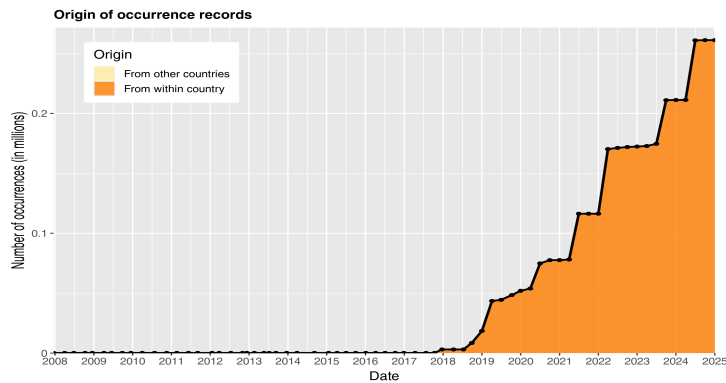


Number of occurrence records downloaded via GBIF.org published by institutions in Pakistan

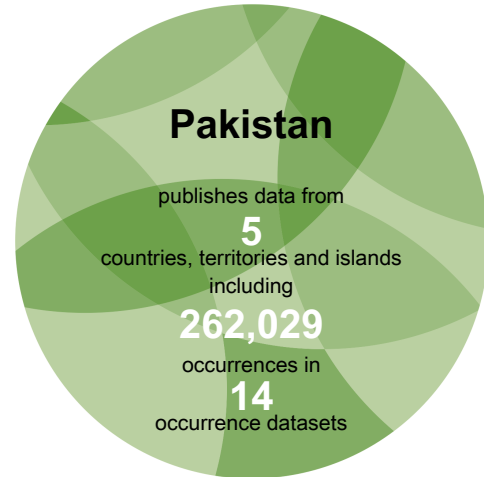


Data mobilization

Data sharing with country or area of origin by national institutions in Pakistan



Data sharing with country or area of origin



The chart above shows the number of records shared over time by publishers within Pakistan, with separate colours for records about species occurring within undefined and those occurring elsewhere.

Top data contributors about biodiversity in Pakistan

Rank	Country or area	No. of occurrences
1	Pakistan	261,170
2	International organization or unknown country	126,987
3	United Kingdom	90,345
4	United States of America	87,825
5	Switzerland	56,851
6	Estonia	40,365
7	Colombia	18,489
8	Germany	5,298
9	Netherlands	5,042
10	France	4,274

Table 1. Ranking of countries or areas contributing data about Pakistan

Top datasets contributing data about Pakistan

EOD – eBird Observation Dataset. 214,877 occurrences in Pakistan. (Last updated 27 Sep 2024)

International Barcode of Life project (iBOL). 111,802 occurrences in Pakistan. (Last updated 7 Aug 2024)

The Himalayan Uplands Plant database (HUP Version 1). 56,002 occurrences in Pakistan. (Last updated 18 Aug 2016)

INSDC Sequences. 40,130 occurrences in Pakistan. (Last updated 4 Jan 2025)

Quaid-i-Azam University Herbarium. 36,132 occurrences in Pakistan. (Last updated 30 Nov 2020)

See all contributing countries and areas or datasets: gbif.org/country/PK/about



Pakistan participates in the following projects coordinated by GBIF

Expanding the value and reach of plant data mobilization in Pakistan

BIFA: Biodiversity Information Fund for Asia, 2019–2020

<https://www.gbif.org/project/6LnVHo5YGGpEGSalApzjyF>

Georeferencing and mobilization of plant occurrence data from Pakistan

BIFA: Biodiversity Information Fund for Asia, 2018–2019

This project will activate herbarium collections in Pakistan to mobilize underrepresented plant occurrence data.

<https://www.gbif.org/project/5AVwgL7izSysQO2mquiYQ8>

See all GBIF projects

[gbif.org/resource/search?contentType=project](https://www.gbif.org/resource/search?contentType=project)