GBIF Work Programme 2026

Annual Update and Implementation Plan to the Strategic Framework 2023–2027

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Priority Area 1: Science and Research

Improving biodiversity evidence for scientific research and understanding

Activity 1.1: Drive mobilization and use of biodiversity data to support priority thematic areas of relevance

Projected outcomes for 2027

- Knowledge gaps are reduced by consolidating data coverage across the thematic areas of relevance
- GBIF's relevance to research is enhanced, through increased recognition and uptake of GBIF mediated data among researchers across additional scientific disciplines

Indicative tasks for 2026

- Consolidate scientific expertise across the GBIF network—including researchers from national
 participants, thematic community experts, the Science Committee and the GBIF Secretariat—to
 support development of strategic documents, communications and improvements to GBIF—
 mediated data and services
- Expand GBIF's relevance by engaging high-priority thematic communities of practice, including agrobiodiversity; support knowledge exchange, data flow and community engagement; and advance thematic reporting, data discoverability, and identification of data gaps and biases
- Explore and map established and emerging data practices in global research; assess the usability and accessibility of GBIF infrastructure for researchers; and recommend improvements to tools and processes
- Identify opportunities to integrate content from existing biodiversity data networks and repositories into GBIF while demonstrating the benefits of increased visibility through the GBIF platform
- Ensure GBIF's leadership by advocating for and participating in global initiatives that promote open science and open data

Activity 1.2: Increase GBIF's capacity to share biodiversity survey and monitoring data

Projected outcomes for 2027

- Reduce knowledge gaps by helping the network to set targets for consolidating data coverage across thematic, taxonomic, phylogenetic, spatial and temporal dimensions
- · Enable, expand and diversify the uptake and application of GBIF-mediated data

Indicative tasks for 2026

 Demonstrate publishing of survey and monitoring data in Darwin Core Archive (DwC-A) format from all continents and realms; explore streamlining data pipelines to enhance interoperability with new and existing publishers on the principles of cooperation with key networks (e.g. eLTER, NEON, EDI)

- Support the implementation and further development of the proposed Darwin Core Data Package (DwC-DP) format by developing use cases across biodiversity domains that inform documentation and training resources and demonstrated examples of content publishing (see §3.3)
- Inform infrastructure development that supports event-centric data in both DwC-A and DwC-DP formats, including data ingestion, discoverability, display and access
- Update existing and develop new training materials and use cases to support the publishing and access of survey and monitoring data through GBIF
- Showcase sampling-event data representation using both DwC-A and DwC-DP in GBIF; promote and support data mobilization through presentations and workshops at conferences and online platforms (e.g. Ecological Society of America, Society for Tropical Ecology, International Council for the Exploration of the Sea (ICES) Annual Science Conference, aiming for a wide geographical spread) (see §3.3)
- Run a data republication campaign to enhance existing occurrence datasets using the Humboldt Extension for Ecological Inventories

Activity 1.3: Improve taxonomic balance and interoperability of biodiversity evidence in GBIF through DNA-derived nomenclatures, metabarcoding and eDNA data

Projected outcomes for 2027

- Knowledge gaps are reduced by consolidating data coverage across the thematic areas of relevance
- GBIF's relevance to research is enhanced, through increased recognition and uptake of GBIFmediated data among researchers across additional scientific disciplines

Indicative tasks for 2026

- Continue engagement targeting improvements in data coverage and quality from DNA-derived research and monitoring, including through expanded interoperability with partner infrastructures
- Lead the development and implementation of infrastructure for sequence-based occurrence search and improvement of filtering and download options for DNA-derived data
- Prototype functionalities required for ongoing taxonomic reinterpretation and standardization of DNA-derived data
- Explore the feasibility of managing and/or hosting a global catalogue of DNA reference libraries to enhance the interpretability and reuse of sequence-based biodiversity evidence
- Engage with major data providers and repositories of DNA sequences to scale up and improve data publishing pipelines and mobilize additional DNA-derived biodiversity data into GBIF

Ongoing activities to support science and research

- Provide scientific advice and recommendations on feasibility and research relevance to support GBIF's involvement in relevant projects under the Work Programme
- · Maintain and update guides, training materials and other resources aimed at research audiences
- · Monitor the needs of data originators and users across the GBIF network, including survey and

monitoring partners, DNA data infrastructures, the eDNA community, and national and global initiatives

- Capture and incorporate feedback from research communities to inform ongoing developments of GBIF-led data standards
- Support the development and maintenance of community standards for priority data areas—such
 as invasive and alien species, species interactions, survey and monitoring data, and DNA-derived
 data—through TDWG and other relevant standards bodies
- Communicate progress on DNA-derived data, survey and monitoring efforts, and other thematic areas to the GBIF network and partners
- Maintain the GBIF literature tracking programme to document and communicate the use of GBIFmediated data in research
- Promote best practices for data citation using digital object identifiers (DOIs), including outreach to researchers and journal publishers
- Highlight and illustrate the use of GBIF-mediated data across scientific disciplines and thematic areas through GBIF.org and the annual Science Review
- Organize annual competitions such as the Ebbe Nielsen Challenge and Graduate Researchers Awards
- Coordinate the collection of peer-reviewed articles and other publications describing key concepts and components of the GBIF network and infrastructure
- Increase the academic visibility of GBIF data and contributions—by individuals, organizations (including funders), and projects—through integration with infrastructures such as ORCID, Research Organization Registry (ROR) and Open Funder Registry (OFR)
- Review and process submissions through the Suggest a dataset tool to expand thematic data represented in GBIF
- Ensure GBIF representation—including Secretariat staff, node representatives and regional contractors—at relevant scientific conferences, with appropriate materials, presentations and training workshops
- Support integration of GBIF data and training into higher education curricula and the professional development of early-career biodiversity researchers
 - Expected funding mechanisms and sources: Core funds: salaried staff; Supplementary funds

Priority Area 2: Policy and Partnerships

Developing partnerships that benefit policy and society

Activity 2.1: Expand and strengthen participation

Projected outcomes for 2027

- GBIF national participation is expanded across currently underrepresented regions, G20 economies and megadiverse countries
- Current Associate Participants have agreed pathways towards achieving or returning to voting participation
- GBIF is recognized as a key implementation partner for biodiversity-related projects supported by the Global Environment Facility (GEF)

Indicative tasks for 2026

- In consultation with delegations and nodes, draft updates to the GBIF five-year strategic framework and table of financial contributions
- Explore the use of regional meetings or other consultation formats to scope, strengthen and operationalize engagement with the UN Convention on Biological Diversity (CBD) regional and subregional support centres
- Finalize guidance documents for Other Associate Participants (see §3.2)
- Review roles and functions of Other Associate Participants to clarify partnerships and strengthen participation, in consultation with the Executive Committee
- Develop and promote a clear value proposition for funders that aligns regional and thematic engagement with GBIF's mission while identifying sources for directing funds into special purpose funds or targeted regional support mechanisms
- Develop and publish a practical guidance note for integrating GBIF tools and services into national biodiversity finance strategies and related funding frameworks
- Coordinate with UN agencies to ensure GBIF data services are reflected in at least one proposal under a national biodiversity strategy and action plan or other public funding mechanism

Activity 2.2: Support the science-policy interface

Projected outcomes for 2027

- GBIF-mediated data is consistently and transparently applied and cited across multiple indicators
 used to monitor progress towards the goals and targets agreed through the CBD and integrated
 into national platforms and reporting processes
- GBIF's value in supporting the UN Sustainable Development Goals (SDGs) is recognized and reinforced through strategic partnerships with relevant international organizations focused on climate change, food security, human health and well-being, and both terrestrial and marine biodiversity such as the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Indicative tasks for 2026

- Renew memoranda of cooperation with at least three key international partners, such as Group on Earth Observations Biodiversity Observation Network (GEO BON), UN Environment Programme (UNEP), UN Food and Agriculture Organization (FAO) and the European Commission (EC)) to support shared policy objectives and increase visibility
- Strengthen GBIF's contributions to CBD national reporting and Kunming-Montreal Global Biodiversity Framework (GBF) indicators through targeted collaboration with national focal points and indicator agencies while sharing examples with nodes and delegations to improve links to national-level policy engagement
- Consolidate and promote policy use cases from across the network on other multilateral
 agreements, such as the Convention on Wetlands (Ramsar), the Convention on International Trade
 in Endangered Species of Wild Fauna and Flora (CITES), the Convention on the Conservation of
 Migratory Species of Wild Animals (CMS) and the UN Convention to Combat Desertification
 (UNCCD), ensuring alignment with reporting frameworks and highlighting GBIF's role in supporting
 implementation
- Develop data cube use cases through the EU-funded Biodiversity Building Blocks for Policy project (B-Cubed) to refine cube specifications and promote further uptake

 Promote the use of the Catalogue of Life (COL) taxonomic services supported by ChecklistBank in international fora and infrastructures

Activity 2.3: Support nature-positive outcomes from decisions in the business, financial and productive sectors

Projected outcomes for 2027

- Lending agreements prepared by private agencies, financial institutions and public development banks include clear and unequivocal requirements for sharing biodiversity data
- Private companies, trade associations and consultancies in all global regions recognize GBIF as the preferred platform to share primary biodiversity data gathered through impact assessments and monitoring

Indicative tasks for 2026

- Increase targeted engagement with trade associations, certification schemes and environmental consultancies to introduce data sharing principles across their communities of practice
- Continue collaboration with the Taskforce on Nature-based Financial Disclosures (TNFD), including engaging as a data provider within the proposed Nature-related Data Public Facility (NDPF)
- Continue to engage corporate actors, financial institutions and public development banks to adopt best practices around sharing and acknowledging the use of data from the GBIF network
- Extend collaboration with Esri and build on support of integrated access to GBIF-mediated data within ArcGIS Desktop software

Ongoing activities to support policy and partnerships

- Attend CBD meetings, including COP 17 in Armenia, and contribute to consultations, working groups and subsidiary bodies on behalf of and in collaboration with GBIF delegations and nodes
- Continue engagement with IUCN to implement the Memorandum of Cooperation, including regular imports of checklist data from the IUCN Red List of Threatened Species and the Global Register of Introduced and Invasive Species (GRIIS)
- Manage participation processes relating to Heads of Delegation, including administration and communication
- Maintain outreach to the G20 Research Innovation Working Group and related science-policy platforms as opportunities arise
- Support national and regional engagement with CBD focal points and subregional support centres to align technical collaboration and data use with GBIF capabilities
- Maintain ongoing partnership coordination with GEO BON, OBIS and other global biodiversity data initiatives
- Continue to maintain and strengthen collaborations with key regional partners and contractors, including review and support for non-country participants
- Maintain bilateral engagement with multilateral environmental funds and agencies, including GEF, UNEP and FAO, to align funding strategies and support proposals

- Continue policy-level engagement and fundraising for One Health/Pandemic Prevention (Quadripartite: World Organisation for Animal Health (WOAH), FAO, WHO, UNEP)
 - Expected funding mechanisms and sources: Core funds: salaried staff; Supplementary funds.

Priority Area 3: Community and Capacity

Developing the GBIF network to meet future needs and challenges

Activity 3.1: Communicating the value of GBIF

Projected outcomes for 2027

 The GBIF network, its audiences and its wider communities of practice are equipped with robust evidence that demonstrates its value and relevance to science, policy and society

Indicative tasks for 2026

- Steward GBIF's brand identity and support its application and extension across the network
- Publish a paper detailing GBIF's governance, community, infrastructure and content that can serve as a general reference for citing GBIF as an infrastructure and describe GBIF after 25 years
- · Create, design and implement framework for GBIF annual reports
- Coordinate a consistent and structured approach toward community engagement and communication with nodes, thematic communities and other communities of practice
- · Evaluate the operations and effectiveness of GBIF awards programmes
- Assess options to ensure the future sustainability and impact of the literature tracking programme
- · Coordinate celebrations marking GBIF's 25th year of operations

Activity 3.2: Support and strengthen GBIF nodes

Projected outcomes for 2027

- GBIF nodes provide a strong and stable foundation for data mobilization and use through the network
- The role of GBIF nodes as hubs for data mobilization and use is better understood and supported, especially at national level

Indicative tasks for 2026

- Work with the Nodes Steering Group (NSG) to evaluate how to enhance the impact of the Node Awards programme in advance of its next implementation in 2027 (see §3.1)
- Support the organization of six regional nodes meetings
- Explore the role of regional support teams in onboarding new node managers and re-onboarding inactive nodes
- Refine handbooks for regional representatives and regional support team members by providing complementary practical guidance

- Continue support for the task group on Indigenous data governance and build on its recommendations for guidance materials to enable the GBIF community to implement the CARE Principles
- Incorporate training modules from the Global Nodes training into the node development curriculum and consult with nodes to plan new modules
- Assess and refine (as needed) the updated capacity self-assessment tool for national nodes with the NSG
- Update guidance and course materials to clarify the roles of both national and organizational nodes (see also §2.1)
- Recruit the nodes community to pilot tools and processes for publishing and using Darwin Core Data Packages (DwC-DP)
- Organize a virtual course on joining GBIF as a formal Participant and establishing a Participant node

Activity 3.3: Develop capacity and skills

Projected outcomes for 2027

- GBIF's ongoing capacity support programmes are successfully concluded, and new support programmes are scoped
- Additional training and guidance resources are available to the community in multiple languages covering both data mobilization and data use

Indicative tasks for 2026

- Develop materials and support training activities around the DwC-DP and the Humboldt Extension for Ecological Inventories
- Finalize the selection processes for the BID calls for proposals in and across target regions of Africa, the Pacific, and Latin America and the Caribbean (LAC)
- Launch BID-funded projects with regional kick-off webinars
- Work with regional support teams to deliver virtual and on-site training workshops to complement the work of the nodes and engage the broader community of practice
- Coordinate the work and skills development of regional support teams to ensure they provide effective support of data mobilization and use
- Organize three BID regional capacity enhancement workshops for funded project teams using updated and translated materials
- Use a new reporting format developed for the Capacity Enhancement Support Programme (CESP) grantees to monitor progress towards the goals in the capacity development framework
- Roll out capacity self-assessments and capacity indicators to monitor capacity and progress across all levels

Ongoing activities to support community and capacity

- · Organize annual calls for CESP projects
- Support for new node managers through the node onboarding programme
- Support proposals to the hosted portal programme

- Support the Living Atlases community, including financial contribution to support a technical coordinator
- Provide support for digital documentation and related community consultation processes
- Operate effective communications that produce and disseminate news items and thematic content via GBIF.org, newsletters, social media and other relevant channels
- Maintain biennial cycle of nodes meetings with 2026 regional meetings and planning for global node activities at GB34
- · Coordinate work of volunteers, including mentors, ambassadors, translators and reviewers
- · Maintain and refine GBIF's training curricula and support community reuse of these materials
- · Provide regular technical support hours for nodes
- · Support the GBIF Data Use club
 - Expected funding mechanisms and sources: Core funds: salaried staff; Supplementary funds.

Priority Area 4: Infrastructure and data products

Maintain and evolve infrastructure to advance biodiversity-related knowledge

Activity 4.1: Enhance robustness of the core GBIF infrastructure

Projected outcomes for 2027

• GBIF-maintained software and informatics infrastructure provides high, ongoing levels of availability and performance that keep pace with growth in data publication and use

Indicative tasks for 2026



Many previous tasks from §4.1 are now part of ongoing operations below

- Complete the adoption of ChecklistBank as part of the core GBIF services for indexing checklist datasets, including updated public GBIF APIs and documentation, with particular consideration of regional requirements (continued from 2025)
- Optimize the GBIF.org search infrastructure (Elasticsearch) through schema revision and by exploring configurations for dedicated indexing nodes
- Expand the infrastructure to support download capabilities for the emerging Darwin Core Data Package format
- Develop data processing pipelines to support ingestion of Darwin Core Data Packages
- Improve automation of full data reprocessing to support monthly updates to the taxonomic backbone
- Evaluate current processes and the impact of efforts to stabilize occurrence identifiers; revise approaches if necessary

Activity 4.2: Enhance support services for data publishers and users

Projected outcomes for 2027

- The expanding GBIF community of users are fully supported by a responsive help desk team and improved technical documentation
- The taxonomic and collections communities benefit from improvements in GBIF support to the Global Registry of Scientific Collections (GRSciColl) and the Catalogue of Life

Indicative tasks for 2026



Many previous tasks from §4.2 are now part of ongoing operations below

- Mature processes around the ticketing system for managing help desk requests, including training and onboarding regional and thematic contractors (carried over)
- Develop documentation and guidance for contributing to and migrating to the Extended Release of the Catalogue of Life taxonomic backbone
- Revise the data validator tool to support Darwin Core Data Packages and eDNA-specific datasets; incorporate user feedback and consider additional data checks in the future, e.g. those related to Indigenous data governance
- Develop supporting guidance and tools for publishing using the Darwin Core Data Package
- Support the GRSciColl editor community through training events, explore the feasibility of tracking citations for collections and institutions and provide regular training to node managers
- Continue expanding technical documentation, focusing on publishing and services using Darwin Core Data Packages, GRSciColl and the Registry
- Prepare and secure community input and review of updates to GBIF data user and data publisher agreements that comply with CBD COP Decision 16/2: Digital sequence information and genetic resources, with guidance on CARE Principles and relevant Indigenous data governance frameworks as appropriate

Activity 4.3: Enhance features and capabilities of the GBIF infrastructure

Projected outcomes for 2027

- Improved user interface to GBIF.org
- Improved capabilities for GBIF to handle ecological, collections, paleontological and phylogenetic data
- Data reuse increased through more stable GBIF identifiers

Indicative tasks for 2026



Many previous tasks from §4.3 are now part of ongoing operations below

 Develop the Metabarcoding Data Toolkit (MDT) through the ongoing pilot Metabarcoding Data Programme

- Improve usability based on community feedback
- Explore packaging options, such as support for local deployments
- Improve documentation and support pilot implementations
- Coordinate with communities working on metabarcoding data publication and standards
- Implement sequence-based occurrence search and improve filtering and download options for DNA-derived data
- Develop a prototype for continuous taxonomic interpretation of DNA-derived data using reference catalogues
- Expand capabilities to visualize, search and download records from event-based survey and monitoring datasets
- Implement support for processing Darwin Core Data Package (DwC-DP) datasets and improve visualisations that showcase their richness
- Improve processing of occurrence records to annotate them using checklist content (e.g. isMarine, isKnownInvasiveSpecies)
- Explore options for adding additional GIS layers (e.g. elevation, land use) to GBIF.org and hosted portal deployments
- · Add the ability to annotate species occurrence maps on GBIF to flag suspicious records
- Move the experimental "related records" functionality (clustering) into production APIs and services
- Explore options for marine and freshwater spatial filters and a vocabulary for water bodies, in support of the OBIS-GBIF 2024 Joint Action Plan for Marine Biodiversity Data
- Evaluate current processes related to occurrenceID stability and transition to more stable automation
- Continue implementing outcomes from the task group on Indigenous data governance, including adoption of Local Contexts labels at appropriate levels within the GBIF infrastructure
- Explore alternative sources to GADM.org for filtering records against global administrative boundaries

Activity 4.4: Drive data standards development

Projected outcomes for 2027

- The work to revise the data model used by GBIF is matured and applicable for use
- · All controlled terms used in GBIF processing are managed in the vocabulary server

Indicative tasks for 2026

- Complete the DwC-DP ratification process in TDWG and begin promotion, training and support across the GBIF network (see §3.3)
- Conduct a systematic review of all documentation to reflect changes in standards, GBIF.org and new publishing tools
- Continue work on habitat-relevant terms (Realm, Biome) and associated controlled vocabularies within the Darwin Core Task Group
- Continue exploring use cases that require data modelling work, particularly those related to improved taxonomic checklist publishing and the targeted use of aggregate data from GBIF.org

Ongoing activities to support infrastructure and data products

The following GBIF products and services are supported through coordinated processes, including:

- Requirements gathering through GitHub issues, community webinars, Nodes events, open forums and mailing lists
- Continuous feature development driven by user feedback and aligned with evolving data standards and best practices
- Community support via technical documentation, a responsive help desk, tutorials (e.g. GBIF Data Blog), training, reviews of datasets and guides, and coordination of regional support teams, volunteers and translators
- Software maintenance to address technical debt, updating frameworks and ensuring long-term robustness and security

Core Infrastructure and Tools

Integrated Publishing Toolkit (IPT)

- Widely installed data-publishing software used by GBIF Nodes and institutions
- Also offered as a fully managed, cloud-hosted service by the GBIF Secretariat, including updates, backups and support

GBIF.org indexing platform and APIs

- Ingests, indexes and processes data for quality control and enrichment using taxonomic and geospatial resources and controlled vocabularies
- · Supports search, filtering and download services, along with DOI-based citation tracking

ChecklistBank.org infrastructure

- Community repository for publishing and managing taxonomic checklists
- Includes editorial tools for projects like the Catalogue of Life, supporting the integration of source lists into unified taxonomies

Registry and Directory services

- Provides registration of institutions, datasets and access and authorisation services for users
- Indexes the dataset-level metadata and provides discovery services that enable external infrastructures to connect to GBIF
- · Coordinates the endorsement processes that support the business needs of GBIF

Global Registry of Scientific Collections (GRSciColl)

- Centralized GBIF-hosted registry of community-maintained information on physical scientific collections
- · Maintained by the GBIF Secretariat and edited by a global network of curators

Client libraries (rGBIF and pyGBIF)

Official R and Python libraries for accessing and using GBIF-mediated data

Hosted portals

Fully managed and hosted data portals offering curated access to subsets of GBIF data

Data snapshots and analytics

- Monthly snapshots of all GBIF data, delivered on Amazon AWS, Google BigQuery and Microsoft cloud infrastructure
- Quarterly processing of all historical data snapshots to provide ongoing data summaries and country reports

Data citation and impact tracking

- Infrastructure for assigning DOIs for data downloads and ensuring consistent dataset citation
- Citation tracking systems identify and categorize usage, with ~6 peer-reviewed publications referencing GBIF data each day
- Annual GBIF Science Review highlights the impact of shared biodiversity data

Data centre operations (Copenhagen University)

- Capacity planning and procurement for physical hardware (3 racks)
- · Server administration, including networking, monitoring, backup and security
- Ongoing upgrades to operating systems and distributed computing framework

Manage technical partnerships

- Liaison and participation within open standards development processes; in particular with Biodiversity Information Standards (TDWG)
- Coordination, collaboration and integration of GBIF software, vocabularies and services with other projects; notably the Living Atlases community and OBIS
- · Contribution to key Open Source Software libraries that GBIF relies upon

Colophon

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