2023 Global Nodes Training Report

CSIRO offices, Black Mountain, Canberra, Australia

15-16 October 2023

Executive summary

GBIF organized a two-day nodes training workshop just prior to the global nodes meeting and GB30. This was the first in-person Global Nodes training since 2019. The workshop focused on enhancing node development by delivering four new modules as part of a training curriculum on node management, each supported by reusable learning materials, and fostering guided mentorship from experts in the nodes community on these four priority topics: engaging research communities for data mobilization and use; strengthening support services for collections communities; supporting national biodiversity commitments and the science-policy interface; and promoting open biodiversity data approaches within the business sector.

The event had a strong practical approach based on experience sharing and peer feedback. The official language of the workshop was English. A group of eight node managers and three Secretariat staff developed the materials and delivered the training. The workshop was attended by a further 31 participants from the nodes community.

The workshop was well received, with participants providing very high scores (over 4 out of 5 on average) to all the workshop topics in the evaluation. Participants indicated that they gained most knowledge in the areas of *Supporting national biodiversity commitments and the science-policy interface* and *Promoting open biodiversity data approaches within the business sector*. There was also strong support for the high level of peer exchange and opportunity for questions and answers throughout the workshop, which helped nodes to learn from each other's experience and find partners for ongoing collaboration and mentoring.

This report describes the preparation of the workshop, provides links to the materials online for their reuse, and summarizes the results of the workshop evaluation by the participants.

Workshop preparation

In February 2023, a survey was sent inviting node managers to reflect on training needs and register interest in contributing to the development of training materials and sessions, both for the longer-term development of a training curriculum on Node Management and for the specific sessions to be held at the global nodes training later in the year. Thirty-two node managers responded to the survey representing each of the regions and a mix of new and long-standing node managers. This information was reviewed with the Nodes Steering Group and a core group of eight node managers and three Secretariat staff (see below) was selected to develop and deliver the materials. The Secretariat Training Officer, Laura Anne Russell, began meeting with the trainers remotely in June to develop the training topics. Meetings continued remotely up to a pre-workshop planning day onsite in Canberra just prior to the event.
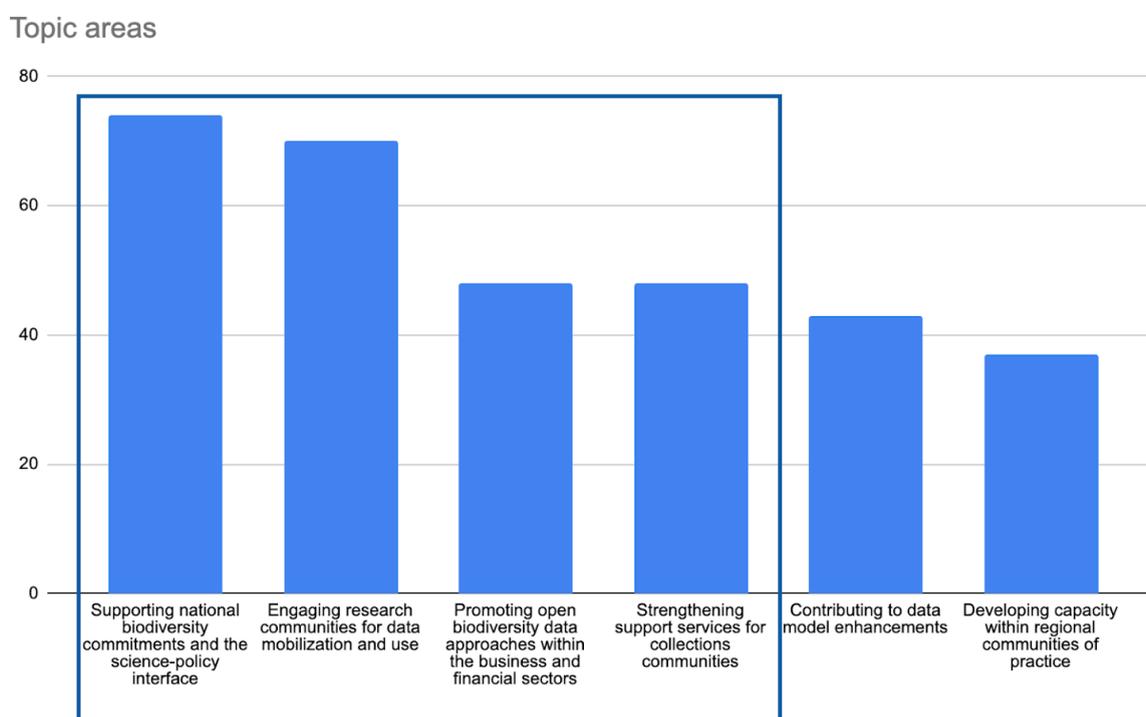
The selected topics in order of preference were:

1. Supporting national biodiversity commitments and the science-policy interface
2. Engaging research communities for data mobilization and use
3. Promoting open biodiversity data approaches within the business sector
4. Strengthening support services for collections communities

Two additional topics, were not selected, but were focus topics during the Global Nodes Meeting:

1. Contributing to Data Model enhancements
2. Developing capacity within Regional Communities of Practice

Figure 1: Prioritization of training topics by the NSG (Feb 2023)

Pre-workshop activities

In August 2023, nodes were invited to share ideas and experiences through slides and video presentations on the following two topics:
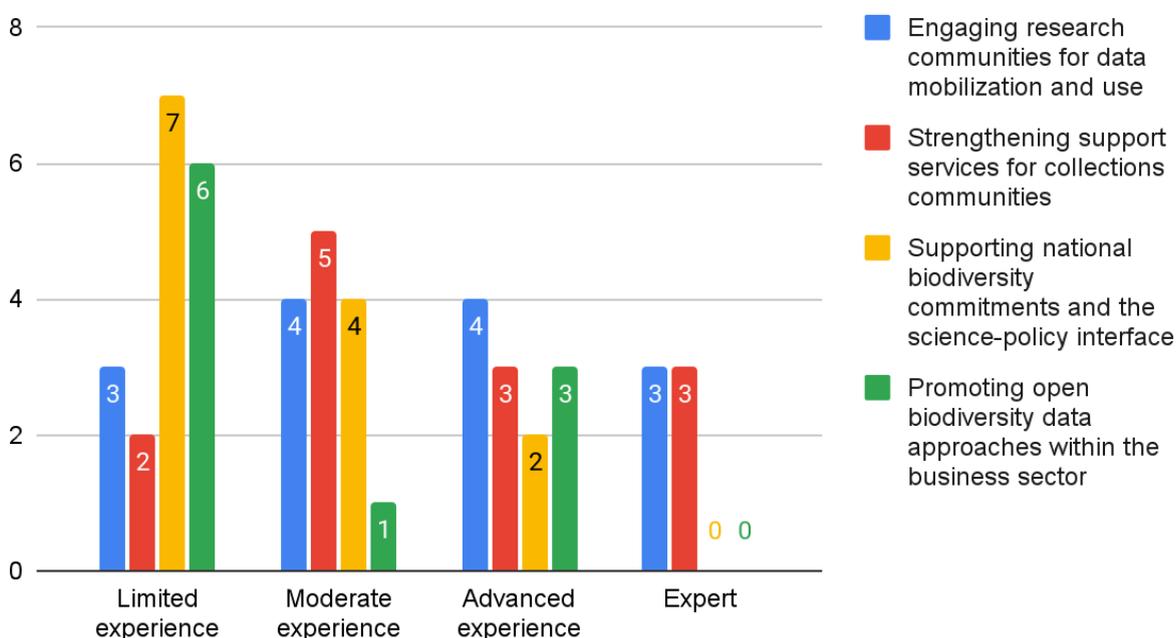
1. Node experiences in supporting national biodiversity commitments and the science-policy interface: sharing details on how nodes are currently supporting any of the following in their country:
   a. National Biodiversity Strategies and Action Plans (NBSAPs)
   b. National reports to the CBD and/or other biodiversity-related conventions
   c. National or subnational legislation and/or regulations relating to biodiversity
   d. Technical instruments, documents, or analysis for policy makers
2. Node experiences engaging research communities for data mobilization and use: sharing details on how nodes are engaging with the research community in their country and raising the visibility of GBIF and the node within this community.

Responses were shared as part of the training materials in their respective topic areas. Eleven responses were received on the first topic and nine responses were received on the second topic.

Additionally, attendees were invited to complete a pre-workshop survey describing their level of experience with the selected topics. Fourteen responses were received prior to the workshop. These showed a range of levels of experience across all four topics, indicating that there would be opportunities for peer exchange and learning on each.

Figure 2: Training topic level of experience

Launch event

A community webinar was held prior to the global nodes meeting and training on 19 September 2023 to launch the events, introducing the training topics, preparation activities and materials to all nodes. The Global Nodes website was also launched to provide context and objectives for each session. Sixty-one individuals registered for the event. The recording was made available to all after the event.

Materials

All materials from the workshop are available on the [event website](#), this includes [event photos](#).

Workshop participants

Learners

Thirty-one participants representing 24 nodes

Fullname	Role	Node
Wouter Addink	Node manager	Distributed System of Scientific Collections (DiSSCo)
Vijay Barve	Support contractor	Asia Regional Support
Claudia Czarneski	Node manager	Brazil
Christian Elloran	Node manager	ASEAN Centre for Biodiversity (ACB)
Dag Endresen	Node manager	Norway
Rui Figueira	Node manager	Portugal
Clara Baringo Fonseca	Node staff	Brazil
Yi-Ming Gan	Node manager	Scientific Committee on Antarctic Research (SCAR)
Christoph Häuser	HoD Observer	Germany
André Heughebaert	HoD Observer	Belgium
Knut Arild Hovstad	Node staff	Norway
Luke Jimu	Node manager	Zimbabwe
Mikheili Joglidze	Node manager	Georgia
Veronika Johansson	Node manager	Sweden
Daviti Kobakhidze	Node staff	Georgia
Patricia Koleff	Node manager	Mexico
Melissa Jean-Yi Liu	Node staff	Chinese Taipei
Liam Lysaght	Governing Board Chair	
Meredith McKay	HoD Observer	New Zealand
William Morris	Node staff	Finland
Jean François Moussa	Node manager	Cameroon
Peggy Newman	Node staff	Australia
Francisco Pando	Node manager	Spain
Sophie Pamerlon	Node staff	France
Katelin Pearson	Node manager	Symbiota Support Hub
Anabela Plos	Node manager	Argentina
Raoufou Pierre Radji	Node manager	Togo
Mao-Ning Tuanmu	Node manager	Chinese Taipei
Martin Westgate	Node staff	Australia
Aaron Wilton	Node manager	New Zealand
Zheping Xu	Node manager	Chinese Academy of Sciences

Trainers

Eight trainers representing five nodes (not represented above) and three Secretariat staff.

Fullname	Role	Node
Anne-Sophie Archambeau	Node manager	France
Dimitri Brosens	Node manager	Belgium
Jean Cossi Ganglo	Node manager	Benin
Tim Hirsch	Deputy Director	
David Jennings	Node manager	iDigBio
Michelle Judge	Node manager	Ireland
Leslie Melisa Ojeda Cabrera	Node manager	Guatemala, Republic of
Ricardo Ortíz Gallego	Node manager	Colombia
Niels Raes	Node manager	Netherlands
Andrew Rodrigues	Data Partnerships Officer	
Dmitry Schigel	Scientific Officer	

Secretariat staff

Eight Secretariat staff.

Fullname	Role
Maheva Bagard Laursen	Programme Officer for Community and Capacity
Matt Blisset	Software Developer
Joe Miller	Executive Secretary
Anne Mette Nielsen	Head of Administration
Daniel Noesgaard	Science Communications Coordinator
Mélianie Raymond	Community and Capacity Manager
Laura Anne Russell	Training Officer for Community and Capacity
Susanne Sheldon	HR Manager/PA to Director

Programme

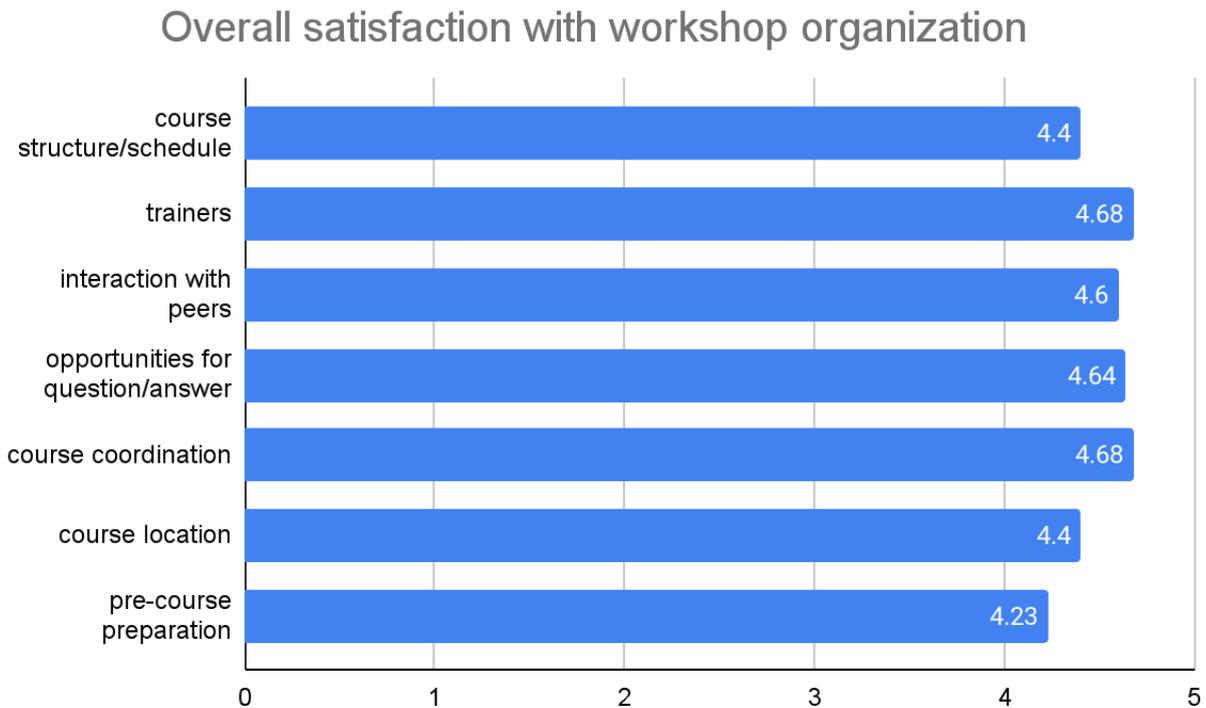| Sunday, 15 October	Monday, 16 October
08:15: Registration 08:45: Opening remarks and logistics	08:45: Opening remarks
Engaging research communities for data mobilization and use Trainers: Dimitri Brosens and Jean Ganglo Secretariat consultant: Dmitry Schigel	**Supporting national biodiversity commitments and the science-policy interface** Trainers: Michelle Judge and Melisa Ojeda Secretariat consultants: Tim Hirsch and Andrew Rodrigues
09:00: GBIF as a research infrastructure (Schigel) 09:20: Engaging research communities - Benin (Ganglo) 09:40: Discussion 10:00: GBIF use of data in your country (demo/exercise)	09:00: Introduction to CBD (Ojeda) 09:15: GBIF and CBD (Hirsch) 09:30: Node engagement with CBD - Ireland (Judge) 09:45: Discussion 10:10: National examples
10:30: Coffee/Tea	10:30: Coffee/Tea
11:00: Engaging research communities - Belgium (Brosens) 11:15: Community engagement BINGO! (exercise) 12:00: Discussion 12:15: National examples 12:25: Wrap-up and action plan	11:00: Supporting national reporting requirements (exercise) 12:00: Exercise reporting/discussion 12:25: Wrap-up and action plan
12:30: Lunch	12:30:Group photo and lunch
Strengthening support services for collections communities Trainers: David Jennings and Niels Raes Secretariat consultants: Andrea Hahn and Marie Grosjean	**Promoting open biodiversity data approaches within the business sector** Trainers: Anne-Sophie Archambeau and Ricardo Ortiz Secretariat consultant: Andrew Rodrigues
13:30: Stakeholder landscape (Jennings) 13:45: Identify community stakeholders (exercise) 14:15: Discussion 14:45: Community engagement (Jennings)	13:30: GBIF and the business sector (Rodrigues) 13:45: Business sector - France (Archambeau) 14:00: Business sector - Colombia (Ortiz) 14:15: Nodes experience (poll) 14:20: Discussion
15:00: Coffee/Tea	15:00: Coffee/Tea
15:30: Developing data mobilization strategy (Raes) 15:45: Design a data mobilization campaign (exercise) 16:25: Discussion 16:55: Wrap-up and action plan	15:30: Engaging stakeholders (exercise) 16:10: Discussion 16:40: **Key aspects for engaging the business sector (Ortiz)** 16:55: Wrap up and action plan
17:00: End of day	17:00: End of day - thank you and certificates

Evaluation

Response

Workshop participants were invited to submit their evaluations using an online form. Twenty-five responses were submitted, representing 64% of the workshop participants (includes trainers).

Satisfaction levels

Participants were asked to rate their level of satisfaction with the workshop on a scale ranging from 1 (lowest; very dissatisfied) to 5 (highest; very satisfied). The participants were overwhelmingly positive in their evaluation of the workshop organization and the four modules, with an average score of over 4 for each topic rated.
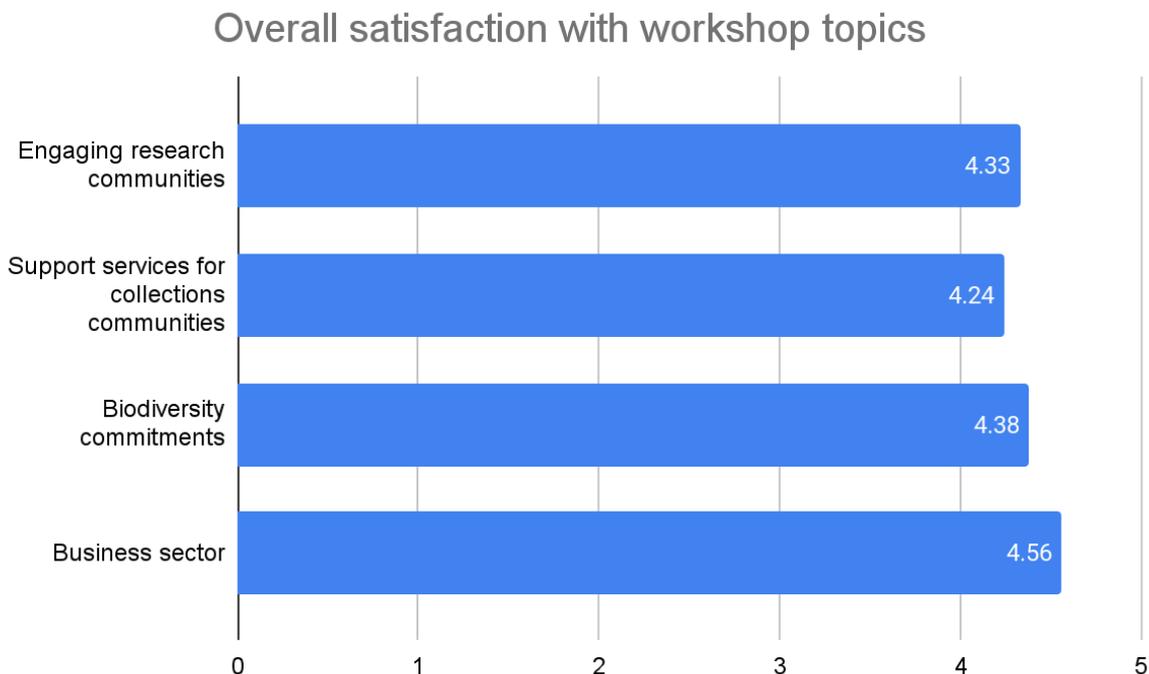
Of the topics relating to the workshop organization, *trainers* and *course coordination* were the highest rated, with an average value of 4.68 each, followed closely by *opportunities for question/answer* and *interaction with peers*.

Figure 3: Average level of satisfaction with the organization of the workshop, rated by 25 workshop participants.

Overall satisfaction with workshop organization

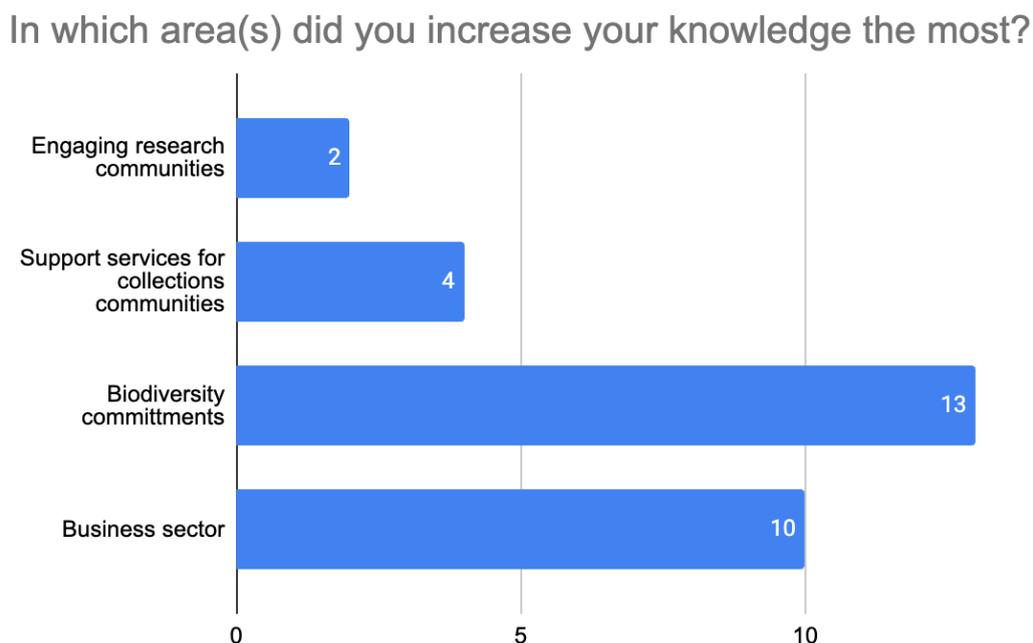| Topic	Rating
course structure/schedule	4.4
trainers	4.68
interaction with peers	4.6
opportunities for question/answer	4.64
course coordination	4.68
course location	4.4
pre-course preparation	4.23

The participants were similarly positive in their evaluation of the four modules in the training workshop, with the highest average score of 4.56 going to the topic: *Promoting open biodiversity data approaches within the business sector*.

Figure 4: Average level of overall satisfaction with the four workshop topics, rated by 25 workshop participants.

Overall satisfaction with workshop topics

Topic	Score
Engaging research communities	4.33
Support services for collections communities	4.24
Biodiversity commitments	4.38
Business sector	4.56

When asked on which topic they had gained most knowledge, participants most frequently selected *Supporting national biodiversity commitments and the science-policy interface* and *Promoting open biodiversity data approaches within the business sector*. However, four individuals indicated that they gained knowledge in several or all of the four topics.
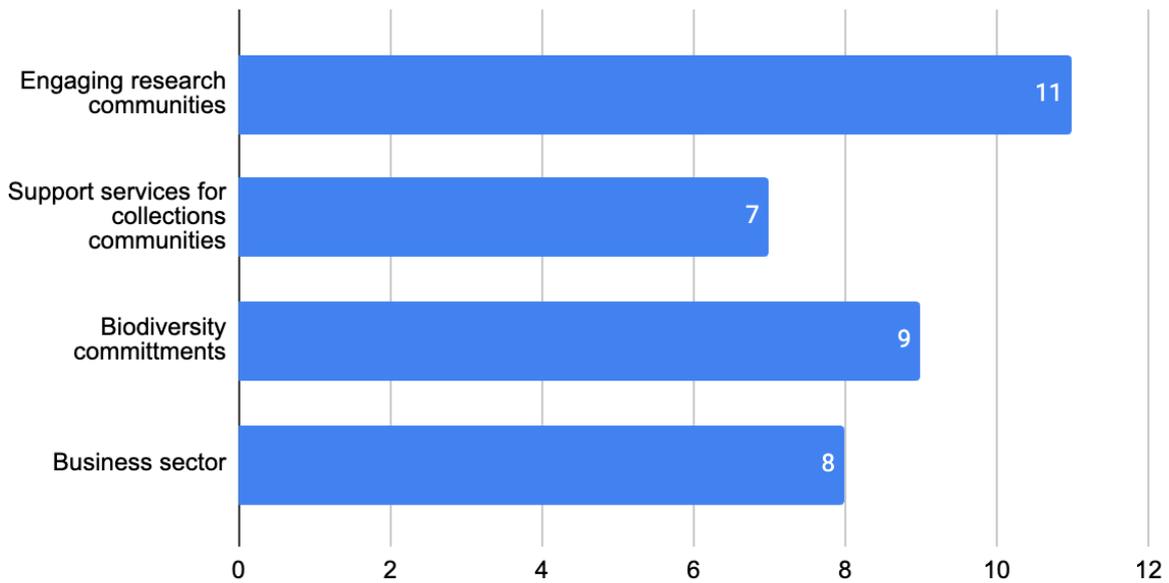
Figure 5: Area(s) of increased knowledge, counts accumulated from 23 workshop participants. Some participants included multiple topics.

In which area(s) did you increase your knowledge the most?

Area	Count
Engaging research communities	2
Support services for collections communities	4
Biodiversity committments	13
Business sector	10

Participants in general found all the topics useful in their daily work with *Engaging research communities for data mobilization and use* being selected as the most useful.

Figure 6: Topics found most useful in daily work, counts accumulated from 23 workshop participants. Some participants included multiple topics.

Which of the topics studied will be the most useful in your daily work?

Suggestions for improving the presented topics

Participants were invited to share any suggestions for improvement. Several responses related to the need to share examples that could be easily generalized, and the importance of enabling participants to reflect on how examples shared by the trainers could be implemented in their own node's context, for example:

> *More time to do the exercises from a national perspective. I will go through the sessions again and only focus on my national perspective. It is however valuable and interesting to get some insight into how other nodes and countries function.*
>
> *With the topics, I found the activities useful, but sometimes I found I really wanted to consider our own scenarios at the ALA rather than attempt to do the activity as a group. But then again, it was a great opportunity to connect with others in the network, and the materials are such that I can (and am) referring back to them later, and sharing them with others in the ALA. So, this is just a thought I've been having. It's overall really well done.*
>
> *Maybe a bit more focus on specific extant use cases?*
>
> *It would be helpful if more examples of nodes who had successful outreach or other proactive actions could be provided.*

Other responses targeted more specific topics:

> *I also wish that more examples of the science-policy interface learning objective could be provided, not just CBD. Because my country doesn't participate in CBD, this entire topic was less relevant to me."*

> *More information about CBD targets in link with GBIF*

> *Dive more into the technical topics of GrSciColl could be useful and maybe a practical exercise making changes in the registry for organizations and collections.*

Suggested topics for Nodes curriculum

Participants also shared ideas for future training topics within the node management training curriculum. Responses focused on **technical capacities** relating to the publishing of newer data types, data quality workflows, and use of GRSciColl; and on **functional capacities**, including engagement of funders, collaborative projects with other nodes, positioning of nodes in the broader landscape, and engagement of various stakeholder groups. The suggestions can help with the development of future modules and actions, both on the global and regional levels.

Technical capacities

eDNA/genetic sequence datasets publishing (beginner + advanced levels)

DNA information

Mobilisation of DNA based biodiversity data

Publishing eDNA data using the new tool developed in the new data model. (Advanced)

GBIF new data model (basic technical training + how to communicate about this topic/get publishers involved)

Dealing with the new data model.

IPT (beginner)

data use with pygbif / rgbif

rgbif (beginner)

Ecological Data

Analysis of GBIF data to facilitate integration into national reports

Frictionless DP and the implementation of Camera Trap's new data model. (Advanced)

GRSciColl advanced (including ROR IDs)

Hands-on GRSciColl hackathon

GitHub for community building - and learning how to respond and interact with GBIFS use of GitHub - advanced.

How can nodes effectively enhance data quality without spending hours and hours cleaning datasets?

Standards (Summary from TDWG), links with other platforms

Functional capacities

How to engage possible funders. Crowd source funding. Funding models. Basically node economy and how to improve it.

Sustainable funding of nodes activities.

What are the nodes' primary challenges (excluding funding) and what have they done to overcome those challenges?

How to build synergies with other nodes. (What if we had an activity where nodes list some of their primary activities, and everyone builds a network of similarities, like the yarn activity?)

Embedding your node in larger regional projects.

Finding your niche in the national landscape.

engagement with indigenous communities & indigenous data governance (not just sovereignty)

Courses on UN components in link with GBIF framework and working plan

How to reach out to relevant stakeholders (e.g., policymakers).

Engaging community for biodiversity data mobilization

It would be great to have an introduction to the organization for beginners. About the structure and activities. Even small activities that will facilitate the easy integration of new members

We can add topics that make it easier for a new participant to integrate. Getting to know the structure of the organization and it will be easier for him to understand the process.

We must not forget the basics, since there are always new people (NM) or new tools. In addition to the newest topics, it is important to maintain training with tools that facilitate the daily work of the nodes.

Final suggestions/comments

In their final suggestions and comments, participants generally shared positive impressions from the workshop, with several requests for more time and/or more topics, indicating the importance of such training events to the nodes community.

Very good sessions and especially the practical exercises.

I liked the action items listed at the end of each training, particularly, as they gave us something practical to try out.

Thank you very much for such a warm welcome. This activity is new for me and I feel a bit foreign. However, your training and information will help me a lot to make my work more productive and promote close cooperation between my country and GBIF.

More time for participants to showcase from national level

I thought the training was excellent overall. I liked that many topics were covered in a short period of time. This gave me the opportunity to learn about things I was previously unaware of, and then I could look into them in more detail later on. This mode of learning is what I personally prefer.

They were very good training days. Excellent trainers (I'm a little biased here ;)) and organization. I will go home with a lot of ideas to replicate training and materials

Excellent planning and exercises

I would also include at least one or 2 technical sessions (eDNA, New Data Model...)

Thank you for generating this space for work and exchange between the nodes, especially after so long without meeting in person.

The group discussions and exercises was the most useful and energising.

The science-policy interface was too basic after more than 20 years of GBIF

good mix of presentation, activity

More time for exercises.

3 days instead of 2

Perhaps have a synchronous virtual space prior to the workshop, to generate more commitment and exchange among participants.

Next steps

The next Global Nodes Training will take place in 2025 alongside GB32. Nodes are invited to continue to review the workshop materials and share them with their staff and are encouraged to complete the action plans available in each module. Completed action plans can be used as a sharing opportunity with Buddies if seeking feedback. We will continue to build out the 2023 topics as part of the Nodes curriculum and will roll out additional topics as they are available.

Additionally, we have a standing invitation to all nodes to share their experiences and success stories as guiding examples on the GBIF website (see example from [Benin](#)).

Any further suggestions are welcome. Please send them to nodes@gbif.org.