

2025 Global Nodes Training Report

Externado University, Bogotá Colombia

16-17 October 2025



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Executive summary

GBIF organized a two-day nodes training workshop just prior to the global nodes meeting and GB32. 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: Efficient data access for data reporting; GBIF Hosted Portals; Emerging publishing model: DwC-DP; and Metabarcoding data.

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 developed the materials and delivered the training and the workshop was attended by a further forty-seven participants from the nodes community and eight from the GBIF regional support teams.

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 were most satisfied with the topics of *Emerging publishing model: DwC-DP* and *Efficient data access for data reporting*. There was also a strong level of satisfaction for peer exchange, the trainers, course coordination, 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.

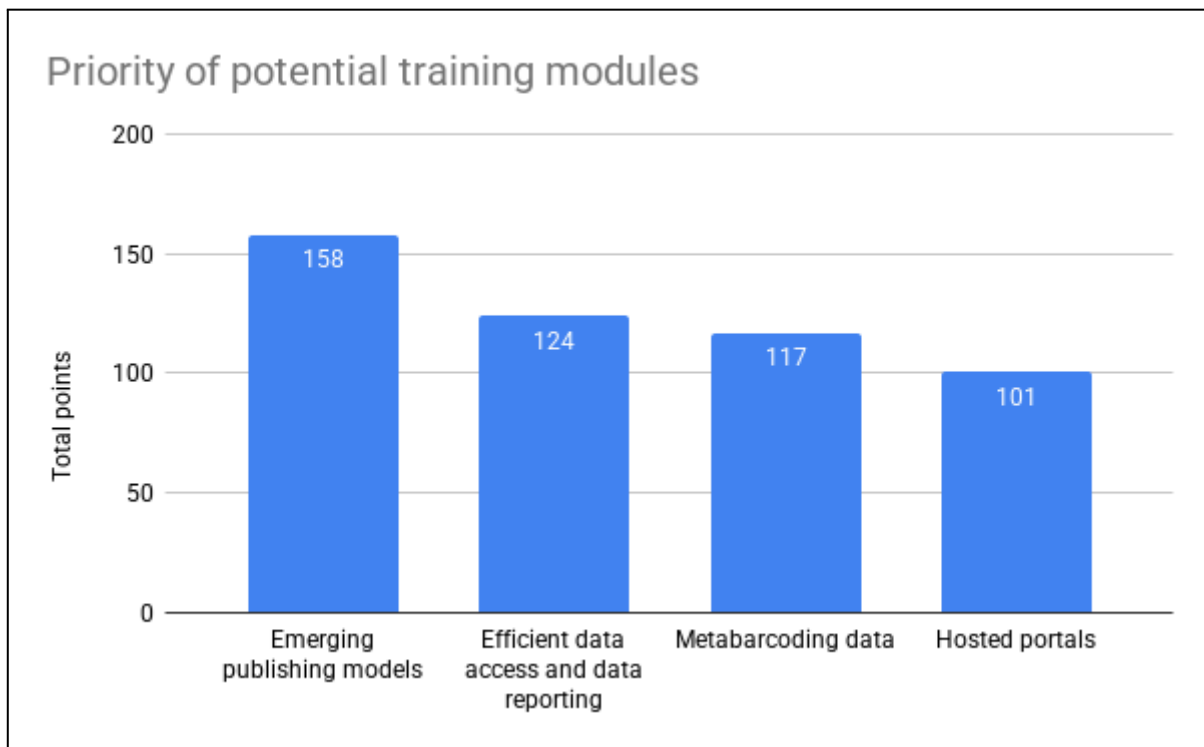
Workshop preparation

In November 2024, 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. Fifty node managers/staff 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 five node managers, two former node managers, and one node staff was selected to develop and deliver the materials. Seven Secretariat staff served as topic consultants. The Secretariat Training Officer, Laura Anne Russell, began meeting with the trainers remotely in May to develop the training topics. Meetings continued remotely up to a pre-workshop planning day onsite in Bogotá just prior to the event.

The selected topics in order of preference were:

1. Emerging publishing models (focus on the Darwin Core Data Package)
2. Efficient data access and data reporting
3. Metabarcoding data
4. GBIF hosted portals

Figure 1: Prioritization of training topics confirmed by the NSG (Jan 2025)



Pre-training survey

A pre-training survey was sent to node managers, node staff, and GBIF regional support team members on 5 August 2025. The survey was closed on 17 August 2025.

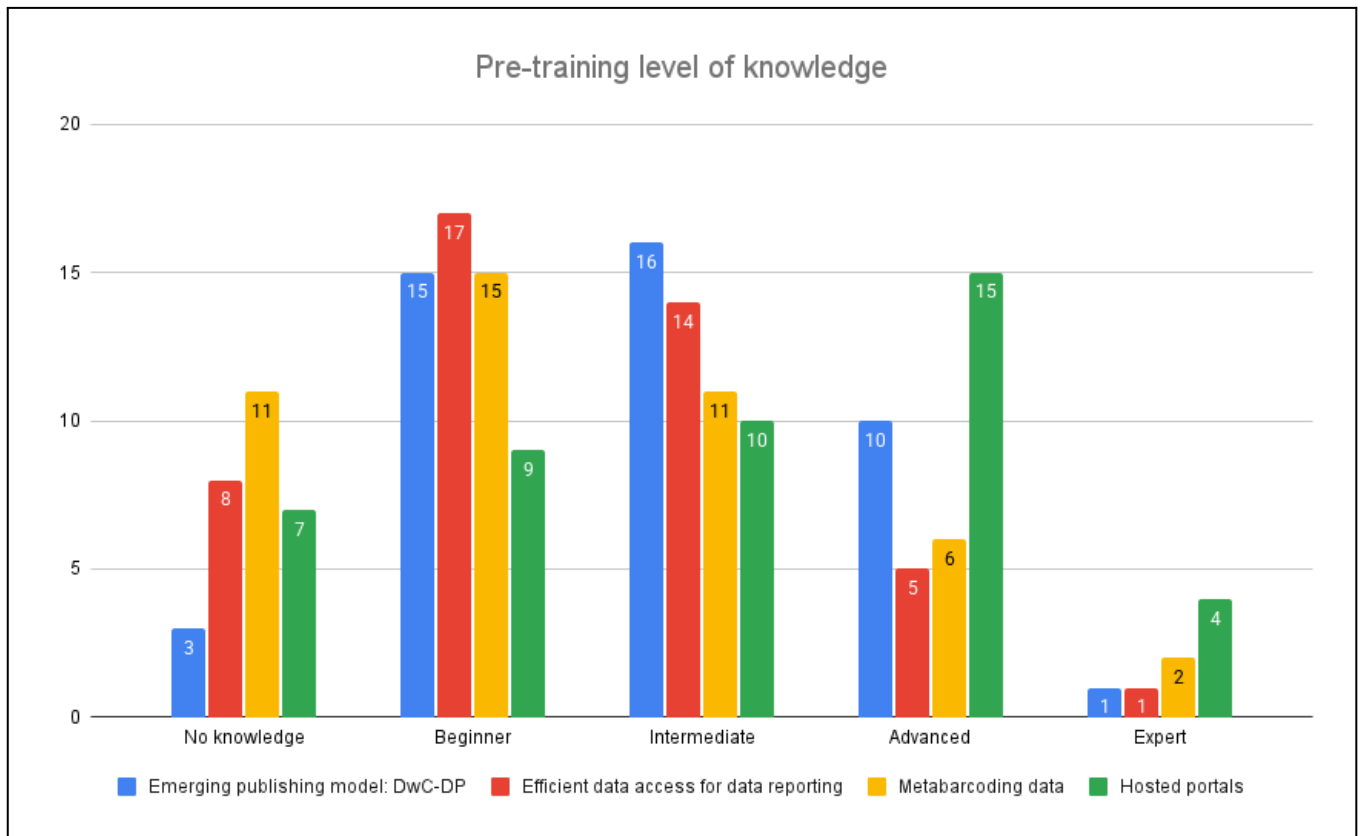
- 41 responses were received from 35 Nodes representing all six GBIF regions
- 4 responses were received from regional support team members (not associated with a node)

Baseline Skills

For each of the topic areas, we asked the respondents to report their level of knowledge. As expected the level of knowledge differed depending on the topic. We used this information as a baseline and repeated the question after the training.

These baseline skills were taken into account when designing the training materials in an effort to accommodate the varying levels of the trainees. It was decided to use hands-on exercises, case studies, and peer learning in addition to topical presentations to supplement the learning process.

Figure 2: Pre-training topic level of knowledge



Identified challenges

- Inconsistent access to resources create barriers to pre-training preparation and post-training implementation.
- The training is in-person only.

Recommendations

- Standardized content should be developed and used to ensure all nodes receive the same messaging and raise overall programme effectiveness.
- Tailoring modules to regional contexts improves relevance and engagement. The trainers should seek to expand examples and case studies from a wider variety of regions by encouraging nodes to share their experiences with the selected topics.
- An online launch prior to the training will provide pre-training orientation on the training topics and the training platform and all should be invited independent of registered attendance for the Global Nodes training and meeting. The recording should be sent to those that are unable to attend live.
- While we are unable to offer a hybrid solution to the training due to the nature of the hands-on and group activities, all materials will be available online and incorporated after the event as part of the Nodes development curriculum.
- Continue to review possibilities to establish follow-up learning opportunities to strengthen skills, retention and foster inclusion in the global community of practice. This includes continuing to develop new and existing modules as part of the Nodes development curriculum.

Conclusion

- Respondents indicated they were excited to learn and network, see great value in Global Nodes Training, want more hands-on technical guidance, and request better support for continuity and remote participation.
- The training is expected to improve coordination among nodes, provide stronger alignment with global goals, and provide increased confidence in using GBIF systems. By addressing gaps in tool familiarity and knowledge, the training can enhance the nodes ability to meet their goals.

Launch event

An [online community session](#) was held prior to the global nodes meeting and training on 16 September 2025 to launch the events and to introduce 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. Fifty-nine individuals registered for the event and forty-three individuals attended the event. The [recording](#) was made available to all after the event.

As part of the event, nodes were invited to share ideas and experiences through slides on the following two topics:

1. Efficient data access for data reporting - describe a data use case or data reporting example
2. Hosted portals - describe your experience in developing a hosted portal

Responses were shared as part of the training materials in their respective topic areas. [Four node responses](#) were received on the first topic and [seven node responses](#) were received on the second topic.

Materials

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

Programme

Thursday, 16 October	Friday, 17 October
08:15: Registration 08:45: Opening remarks and logistics	08:45: Opening remarks
Efficient data access for data reporting Trainers: Dag Endresen and Will Morris Secretariat consultants: Andrew Rodrigues and John Waller	Emerging publishing model: DwC-DP Trainers: André Heughebaert and Yi Ming Gan Secretariat consultants: Kate Ingenloff and Mikhail Podolskiy
09:00 Data access landscape (presentation) 09:20 Exploring data access and use cases (activity)	09:00: Intro to Darwin Core Data Package (presentation) 09:10: DwC-DP in practice (presentation) 09:30: Map a dataset with DwC-DP (activity)
10:30: Coffee/Tea	10:30: Coffee/Tea
11:00 GBIF data access options 11:20: Hands-on with data access and use cases (activity) 12:00: Group solutions/feedback 12:25: Wrap-up and action plan	11:00 Adopting DwC-DP (presentation) 11:20: Community role play and SWOT (activity) 12:00: Group presentation/feedback 12:25: Wrap-up and action plan
12:30: Lunch	12:30: Lunch
GBIF hosted portals Trainers: Anabela Plos and Carole Sinou Secretariat consultants: Mélianie Raymond and Morten Høfft	Metabarcoding data Trainers: Luke Jimu and Stephen Formel Secretariat consultant: Tobias Frøselv
13:30: Discover the hosted portal program (presentation) 14:00: Portal lightning talks 14:15: Portal scavenger hunt (activity)	13:30: Introduction to Metabarcoding data (presentation) 14:00: Decoding metabarcoding (activity) 14:30: Reporting and feedback
15:00: Coffee/Tea	15:00: Coffee/Tea
15:30 Parallel groups <ul style="list-style-type: none"> ● Group 1: engaging the community w/ hosted portals ● Group 2: create a hosted portal in real time ● Group 3: access to the hosted portal experts 16:55: Wrap-up and action plan	15:30: Metabarcoding data mobilization (presentation) 15:50: Exploring the Metabarcoding data toolkit (activity) 16:55: Wrap up and action plan
17:00: End of day (Group Photo)	17:00: End of day - thank you and certificates

Workshop participants

Learners

Fifty-five participants representing 31 nodes

Fullname	Role	Node
Ainsof So'o	Node Manager	Secretariat of the Pacific Regional Environment Programme (SPREP)
Anne-Sophie Archambeau	Node Manager + NSG Chair	France
Britt Andermann	Observer	
Camila Plata	Node Manager	Catalogue of Life Foundation
Carolina Castro Moreno	Node Staff	Colombia
Cat Chapman	Node Staff	iDigBio
Christian Elloran	Node Manager	ASEAN Centre for Biodiversity (ACB)
Christoph Häuser	Head of Delegation (Observer)	Germany
Clara Baringo Fonseca	Node Staff	Brazil
Claudia Czarneski	Node Manager	Brazil
Cristina Preda	Observer	
David Bloom	Node Manager	VertNet
Diana Hernández	Node Staff	Catalogue of Life Foundation
Dimitri Brosens	Node Staff	Belgium
Donat Agosti	Node Manager	Plazi
Eliana Walker	Node Staff	Uruguay
Esteban Marentes Herrera	Node Staff	Colombia
Eva Alonso	Node Manager	Netherlands
Fatima Parker-Allie	Node Manager	South Africa
Francisco Pando	Node Manager	Spain
Gandhi Ponce	Node Manager	Guatemala
Jean Cossi Ganglo	Node Manager	Benin
Joanna Czarnecka	Node Staff	Poland
Karolina Kuczkowska	Node Staff	Poland
Kristjan Adojaan	Node Manager	Estonia
Mao-Ning Tuanmu	Node Manager	Chinese Taipei
Meredith Mckay	Head of Delegation (Observer)	New Zealand
Patricia Koleff	Temporary Node Manager	Mexico
Patricia Mergen	Head of Delegation (Observer)	Belgium
Peggy Newman	Node Manager	Australia
Piotr Tykarski	Node Manager	Poland
Quentin Groom	Node Staff	Belgium
Raoufou Pierre Radji	Node Manager	Togo
Rasa Bukontaite	Observer	

Fullname	Role	Node
Ricardo Ortiz	Node Manager	Colombia
Rui Figueira	Node Manager	Portugal
Samanta Orellana	Node Staff	Symbiota Support Hub
Siosuia Latu	Node Manager	Tonga, Kingdom of
Sofia Wyler	Node Manager	Switzerland
Sophie Pamerlon	Node Staff	France
Stijn Cooleman	Node Staff	Belgium
Szu-Hsien Lee	Node Staff	Chinese Taipei
Tanja Melanie Weibulat	Node Staff	Germany
Veronika Johansson	Node Manager	Sweden
Victor Chocho	Node Manager	Ecuador
Wojciech Solarz	Node Staff	Poland
Wouter Addink	Node Manager	Distributed System of Scientific Collections (DiSSCo)

Trainers

Eight trainers representing six nodes (not represented above).

Fullname	Role	Node
Anabela Plos	Node manager	Argentina
André Heughebaert	Former Node manager	
Carole Sinou	Node manager	Canadensys
Dag Endresen	Node manager	Norway
Luke Jimu	Node manager	Zimbabwe
Stephen Formel	Former Node manager	
Will Morris	Node manager	Finland
Yi Ming Gan	Node staff	Scientific Committee on Antarctic Research

Regional Support Teams

Eight regional support team members.

Fullname	Region
Laban Musinguzi	Africa
Leonardo Buitrago	Latin America and the Caribbean
Lily Shrestha	Asia
Melissa Jean-Yi Liu	Asia
Oleg Borodin	Europe and Central Asia
Salza Palpurina	Europe and Central Asia
Tsiky Rabetrano	Africa
Vijay Barve	Asia

Secretariat staff

Seventeen Secretariat staff.

Fullname	Role
Anne Mette Nielsen	Head of Administration
Annie Elkjær Ørum-Kristensen	Communications and Events Coordinator
Javier Gamboa	Communications Officer
Joe Miller	Director
John Weiczorek	GBIF contractor
Kate Ingeloff	Scientific Officer
Laura Anne Russell	Training Officer for Community and Capacity
Maheva Bagard Laursen	Programme Officer for Community and Capacity
Marie Grosjean	Data Administrator
Matthew Blisset	Software Developer
Mélanie Raymond	Head of Community and Capacity
Mikhail Podolskiy	Software Developer
Morten Høfft	Web Developer
Sanja Novakovikj	Programme Administrator for Community and Capacity
Susanne Sheldon	HR Manager
Tim Robertson	Deputy Director and Head of Informatics
Tobia Guldberg Frøslev	Scientific Officer

Evaluation

Response

Workshop participants were invited to submit their evaluations using an online form. Thirty-three responses were submitted, representing 52.4% 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 respondents 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.

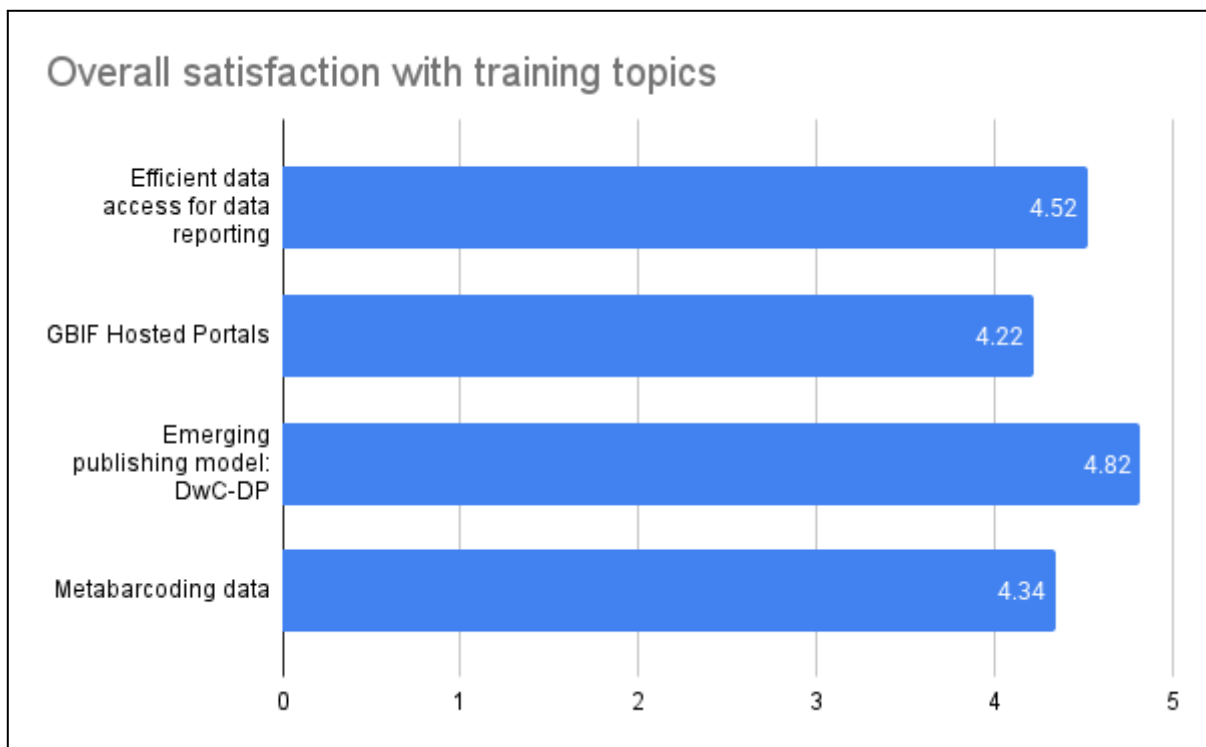
Of the topics relating to the workshop organization, *interactions with peers* was the highest rated with an average of 4.79, followed closely by *trainers* and *course coordination* with an average of 4.67 each.

Figure 3: Average level of satisfaction with the organization of the workshop, rated by 33 respondents.



The respondents were similarly positive in their evaluation of the four modules in the training workshop, with the highest average score of 4.82 going to the topic: *Emerging publishing model: DwC-DP*.

Figure 4: Average level of overall satisfaction with the four workshop topics, rated by 33 workshop respondents.



Respondents most frequently identified the *Emerging publishing model: DwC-DP topic* as the most useful for their work, highlighting both its immediate relevance and its growing strategic importance for the future. *Efficient data access for data reporting* was commonly described as the most valuable topic for day-to-day operational tasks. *GBIF Hosted Portals* and *Metabarcoding* were often mentioned as complementary topics whose relevance is expected to increase over time, with several respondents noting that the training itself significantly raised their engagement and practical involvement in these areas. Overall, while all four topics were considered relevant, DwC-DP and efficient data access clearly stood out as having the greatest impact on respondents' daily work and near-term priorities.

In terms of areas of most increased knowledge, the respondents most frequently cited the Emerging publishing model: DwC-DP topic as the area in which they most increased their knowledge.

Figure 5: Area(s) of most increased knowledge as reported by 30 respondents. Some respondents cited multiple topics.

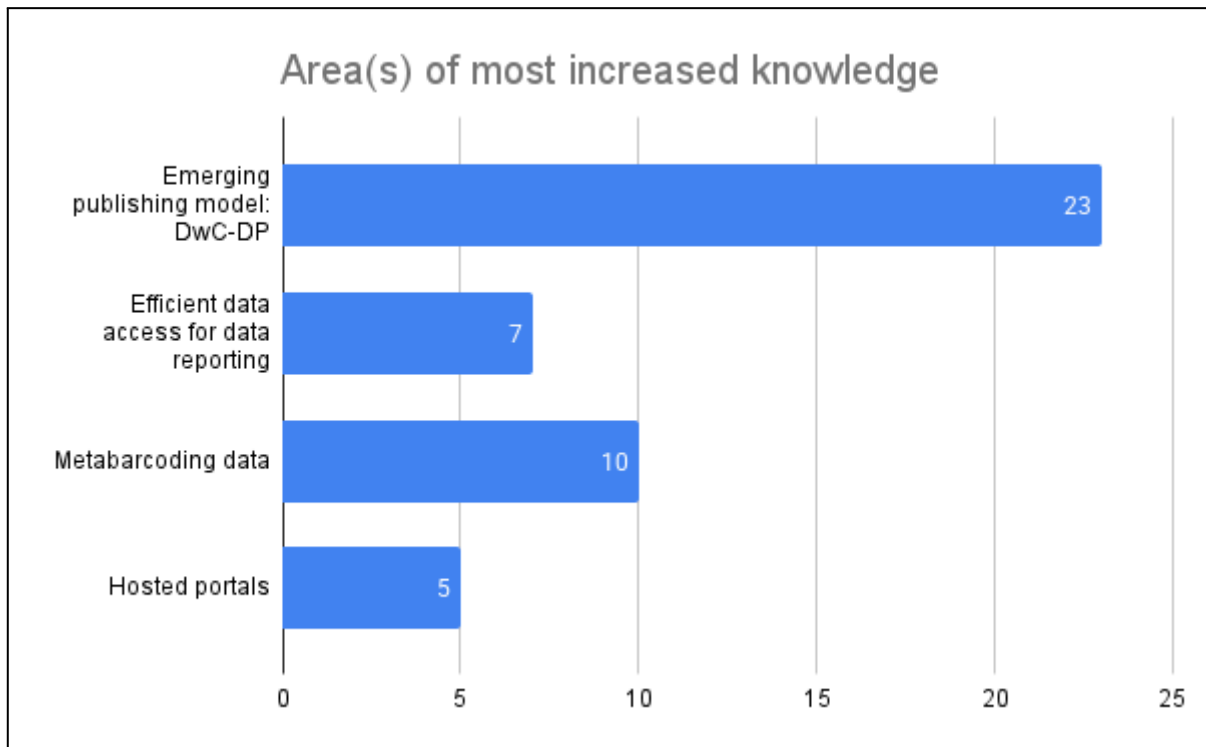
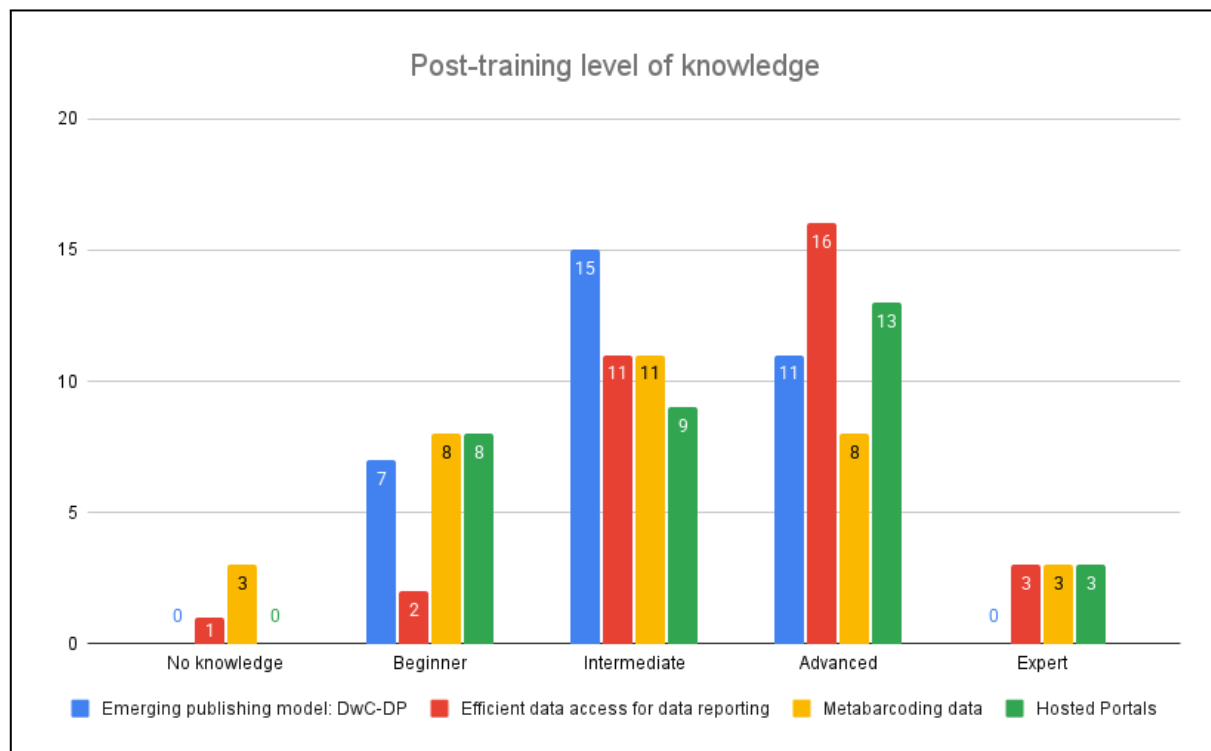


Figure 5: Post-training level of knowledge, self-assessed from 33 respondents. Not necessarily the same respondents as from the pre-training survey.



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.

General suggestions

- Simplify exercises and use cases
- Longer time to work in groups
- Maybe some post-training activities
- More technical. More advanced.
- The approach of using node managers as trainers was very good. Maybe an improvement could be to also include node staff whose more primary daily tasks are more focused on the respective topics. However, the challenge would obviously be the possibility for more people from each node to join in person.

Emerging publishing model: DwC-DP

- Easier use case for Darwin Core DP would help people to understand the model better
- More practical exercises

Efficient data use for data reporting

- The session on data use was, in my opinion, too short and a little unfocused. It is a very wide topic and it is difficult to get something meaningful out of it in two hours. Maybe in the future it could be a whole day, or a shorter session on a more particular subject.
- Tutorials for R would have been better than trying to create coding in the groups.
- More practical guidelines with more (redirections to github for pragmatic) R codes or SQL statements.

Hosted Portals

- I think topics such as “Hosted Portals” could include more engaging exercises that involve estimating potential costs, identifying challenges in creating a data portal, and defining development requirements with national stakeholders.
- Make a step by step presentation that participants can follow with time for trainers to help you progress. Some were stuck at first stages and could not continue.

Metabarcoding

- For the eDNA part, I suggest including more conceptual discussions and hands-on data analysis. We should cover topics like data quality and how eDNA data should be used in practice—for example, whether these datasets will be updated over time, and how to distinguish historical records from current data. Themes like traceability and the data lifecycle would also be very valuable, since many users often ask about these points.

Suggested topics for Nodes curriculum

Data Standards, Vocabularies & Persistent Identifiers

- Persistent identifiers (DOIs, identifiers for records, collections, and datasets)
- Vocabularies: how to find them, use them, and propose changes (advanced)
- How TDWG standards are created, maintained, and how to get involved
 - Guidance on proposing new terms, extensions, or task groups

Publishing Models, Workflows & Data Management

- Darwin Core Data Package (DwC-DP): continued and progressive training (beginner → advanced)
- Checklist publishing workflows (ChecklistBank, Catalogue of Life Data Package)
- Publishing checklists and monitoring data
- CamTrap-DP (beginner)
- MDT / metabarcoding data (intermediate)
- GrSciColl publishing workflows
- Introduction to data governance and data structuring (beginner)
- Use of open platforms (e.g. Wikimedia Commons) for multimedia linked to records
- How GBIF handles duplicates
- Tools useful for data managers (advanced)

Data Access, Use and Analysis

- Using GBIF-mediated data together with other data types
- Using GBIF data in R (beginner-friendly, step-by-step use cases)
- APIs for data reporting (beginner and advanced)
- Advanced API usage and reporting workflows
- SQL downloads and DataCubes (beginner)
- Ecological niche modelling
- Practical guidance on data use, quality, updates, and interpretation (including eDNA use in practice)
- Citation formats and best practices
- Traceability of data and the data lifecycle

Tools, Platforms and Technical Skills

- IPT management (advanced) - roadmap and updates: recent changes, upcoming features, and best practices for updates
- Hosted Portals:
 - Dedicated beginner training beyond the node community
 - Advanced and use-case-driven sessions
- GitHub for biodiversity data work (beginner)

Community, Engagement & Knowledge Systems

- Community and stakeholder engagement: methods and best practices
- Indigenous knowledge applications (intermediate)
- Knowledge co-production and governance considerations
- Translation of GBIF content (intermediate)

Emerging Technologies & Future Directions

- Preparing “AI-ready” and machine-readable biodiversity data
- AI use of GBIF data (beginner)
- Understanding implications of AI for GBIF data infrastructure
- Technical ideas and roadmap workshops or seminars (including open discussion with core developers)
- Cybersecurity basics for data managers (beginner)

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.

- Notes of appreciation for hands-on training.
- More time for exercises and discussion / Loss of time due to room changes.
- Dislike for an overpacked schedule (Nodes, Governing Board, Living Data) which included weekend hours that can't be claimed as work hours by some participants.
- Challenges for non-native English speakers.

Next steps

The next Global Nodes Training will take place in 2027 alongside GB34. 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 2025 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.