

Skills 4 eosc

MS3.2 - Round Table for Parliamentarians and PA in Brussels

Lead Partner:	Natural History Museum Vienna (NHMW)
Version:	V.02
Status:	Final draft
Dissemination Level:	PU: Public
Document Link:	https://doi.org/10.5281/zenodo.14506966

Deliverable Abstract

This document contains a report on the event in Brussels on 6th of November 2024, which was conducted in the framework of Task 3.4 for Milestone 3.2 "Round Table for Parliamentarians and PA in Brussels". The event entitled "Empowering Europe's Green Deal: Open Science Skills and Taxonomy for Sustainable Innovation" was organised in collaboration with another Horizon Europe project, [TETTRIs](#). It provided a unique opportunity to demonstrate and discuss how Open Science skills can enhance evidence-based decision making across various domains, such as policy, citizen science, education and training, industry, as well as research and research infrastructure. The focus on taxonomy provides a tangible example of how these skills can be applied to



Skills4EOOSC has received funding from the European Union's Horizon Europe research and innovation Programme under Grant Agreement No. 101058527 and from UK Research and Innovation (UKRI) under the UK government's Horizon Europe funding guarantee [grant number 10040140]

support key policy areas such as biodiversity conservation and the implementation of the EU Green Deal.

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DELIVERY SLIP

<i>Date</i>	<i>Name</i>	<i>Partner/Activity</i>	<i>Date</i>
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<i>Approved by:</i>			

DOCUMENT LOG

<i>Issue</i>	<i>Date</i>	<i>Comment</i>	<i>Author</i>
<i>v.01</i>	<i>2024/12/12</i>	<i>First draft</i>	<i>Isolde Gottwald, Megumi Kiesel, Clara Lines</i>
<i>v.02</i>	<i>2024/12/16</i>	<i>Final draft</i>	<i>Isolde Gottwald, Megumi Kiesel</i>

TERMINOLOGY

<https://eosc-portal.eu/glossary>

<i>Terminology/Acronym</i>	<i>Definition</i>
AI	Artificial Intelligence
CEBioS	Capacities for Biodiversity and Sustainable Development
CETAF	Consortium of European Taxonomic Facilities
DG	Directorates-General
DiSSCo	Distributed System of Scientific Collections
DNA	Deoxyribonucleic Acid
DoA	Description of Action
ECSA	European Citizen Science Association
EEB	European Environmental Bureau
EOSC	European Open Science Cloud
FAIR	Findable, Accessible, Interoperable, Reusable
GBF	Global Biodiversity Framework
GTI NFP	Belgian National Focal Point to the Global Taxonomy Initiative
PA	Policy Administration
RDA	Research Data Alliance
SMNS	Staatliches Museum für Naturkunde (EN: Stuttgart State Museum of Natural History)
TETTRIs	Transforming European Taxonomy through Training, Research, and Innovations

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1 Executive summary

This document contains a report of the event (MS3.2) that took place at the Vienna House in Brussels on the 6th of November 2024. The DoA provided for the organisation of a round table for parliamentarians and policy administration. However, as a joint initiative with another Horizon Europe project [TETTRIs](#) (Transforming European Taxonomy through Training, Research, and Innovations)¹, the event was expanded both in terms of content and target group.

The Stakeholder Forum was entitled "Empowering Europe's Green Deal: Open Science Skills and Taxonomy for Sustainable Innovation". Its objective was to provide policymakers with insights into how Open Science skills can enhance evidence-based decision making across various domains. A specific focus was placed on taxonomy, highlighting how these skills can be applied to support key policy areas such as biodiversity conservation and the implementation of the EU Green Deal.

The event targeted a broad range of stakeholders, including organisations from the fields of citizen science, education and training, industry, as well as research and research infrastructures. It aimed to explore how fundamental sciences centred around taxonomic research, combined with the overarching principles of Open Science and Open Collections, can contribute to societal advancements.

The programme followed a moderated discussion format, structured into two panel sessions with subsequent opportunities for audience engagement.

¹ <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/projects-details/43108390/101081903/HORIZON?order=DESC&pageNumber=1&pageSize=50&sortBy=title&keywords=TETTRIs&isExactMatch=true>; Project ID: 101081903, topic: HORIZON-CL6-2022-BIODIV-01. Further details on the project website: <https://tettris.eu/>

2 Organisational Overview

This chapter provides an organisational overview of the stakeholder forum. First, the collaboration with the project TETTRIs is outlined, followed by a summary of the participants and the structure, including the programme.

2.1 Joint Initiative with the Project TETTRIs

As outlined above, the stakeholder forum was originally planned as a round table for parliamentarians and policy administration within Task 3.4. During the preparation phase, the task team decided to collaborate with another Horizon Europe project, TETTRIs, which also aimed to organize a stakeholder event for policymakers in Brussels. The collaboration allowed to enrich the event and to highlight the potential of Open Collections for policymaking by merging the main themes of both projects: Open Science and biological taxonomy.

The event highlighted the essential role of scientific collections, taxonomic research, and Open Science skills in achieving biodiversity-related policy objectives and advancing evidence-based decision-making. The two projects aimed to explore new opportunities for innovation and impact, with a particular focus on enhancing biodiversity monitoring and advancing scientific progress.

Furthermore, the joint organisation of the event constituted an initial exchange between the two consortia, Skills4EOSC and TETTRIs, which opened up opportunities for future collaboration.²

² [CETAF](https://cetaf.org/) (Consortium of European Taxonomic Facilities, URL: <https://cetaf.org/>), the coordinator of the TETTRIs project, also contributed to a biodiversity case study in the booklet which was published in occasion of the Stakeholder Forum: Gottwald, I., Whythe, A., Linés, C., Evangelinou, B., Vohland, K. & Rainer, H. (2024): Advancing evidence-based policymaking through Open Collections and Open Science Principles. - 26 S., Wien (Verlag des Naturhistorischen Museums Wien). <https://doi.org/10.57827/978-3-903096-78-3>

2.2 Participants, Structure and Programme

A total of 40 participants attended the event, representing diverse sectors, such as policy administration (e.g., the European Commission's Directorates-General for Environment and Research and Innovation), citizen science, research and research infrastructures, funding organizations, education, and industry.

The forum was structured as a moderated discussion with two panel sessions, each featuring six panellists offering distinct perspectives. At the end of each session, the audience was encouraged to participate actively, fostering an interactive exchange of ideas across domains. This format allowed for key aspects to be highlighted from various perspectives, reflecting the practical experiences of participants. The programme of the event is outlined in Table 1.

The first panel session discussed the topic of "Interdisciplinary Taxonomic Capacity Needs in a Multi-Faceted Approach", including perspectives from scientific, environmental, educational, economic, and political dimensions. Contributors included representatives from the European Commission, the research infrastructure for natural science collections, [DiSSCo³](https://www.dissco.eu/) (Distributed System of Scientific Collections), the [EEB⁴](https://eeb.org/) (European Environmental Bureau), and the [ZOE Institute for Future-Fit Economies⁵](https://zoe-institut.de/en/home-2/).

The second panel session focused on the impact envisioned by ensuring trained experts, discussing global perspectives, the relevance for the biodiversity strategy in Europe, incorporating project outcomes into research infrastructures, raising awareness and engagement among Citizen Scientists, identifying synergies with industry, and the role of the next generation of taxonomists. Panellists included representatives from DG Environment,

³ <https://www.dissco.eu/>

⁴ <https://eeb.org/>

⁵ <https://zoe-institut.de/en/home-2/>

[ECSA](#)⁶ (European Citizen Science Association), [Wienerberger](#)⁷, and research institutions.

⁶ <https://www.ecsa.ngo/>

⁷ <https://www.wienerberger.com/en.html>

Moderators: Michael Magee (TETTRIs), Betty Evangelinou (Skills4EOSC)

08:30–09:15	Registration and Welcome Coffee
09:15–09:45	Opening & Impulse sessions <ul style="list-style-type: none"> Welcome: Michaela Kauer (Vienna House) Introduction from the organiser: Katrin Vohland (NHMW) Introducing CETAF and TETTRIs project: Ana Casino (CETAF) Introducing Skills4EOSC project: Sara Di Giorgio (GARR)
09:45–11:00	Session 1 – Interdisciplinary taxonomic capacity needs in a multi-faceted approach <ul style="list-style-type: none"> Scientific dimension: Colombe Warin (DG Research and Innovation) Environmental dimension: Frank Vassen (DG Environment, European Commission, Nature Protection Unit) Educational dimension: Milena Dobрева (University of Strathclyde⁸/RDA⁹ Working Group) Economic dimension: Lydia Korinek (ZOE- Institute for Future Economies) Political dimension: Bernhard Zlanabitnig (EEB) Collections as research infrastructures: Dimitris Koureas (DiSSCo/Naturalis Biodiversity Center¹⁰)
11:00–11:30	Coffee Break
11:30–13:30	Session 2 – What is the impact envisioned by ensuring trained experts <ul style="list-style-type: none"> Global Perspective: Pierre Huybrechts (CEBioS¹¹/GTI NFP¹²) Immersion in the biodiversity strategy in Europe: Andreas Gumbert (DG Environment) Integration of our results (Taxonomic work + Skills4EOSC) into research infrastructure: (Open Science collections): Patricia Mergen (Meise Botanic Garden¹³) Raise awareness and engagement with citizen scientists: Enrico Balli (ECSA) Synergies with industry: Rena de Mey (Wienerberger) Future dimension: Amelie Höcherl (SMNS¹⁴)
13:30–13:40	Closing remarks: Ana Casino, Sara Di Giorgio & Katrin Vohland
13:40	Goodbye aperitif Afterwards: Booth providing the opportunity for hands-on experience with species identification, exchange with taxonomists and biodiversity data gathering initiatives

Table 1: Programme of the Stakeholder Forum

⁸ <https://www.strath.ac.uk/>

⁹ <https://www.rd-alliance.org/>

¹⁰ <https://www.naturalis.nl/en>

¹¹ <https://cebios.naturalsciences.be/>

¹² <https://taxonomy.naturalsciences.be/>

¹³ <https://www.brusselmuseums.be/en/museums/meise-botanic-garden>

¹⁴ <https://www.naturkundemuseum-bw.de/en/>

3 Outcomes and Insights

The Stakeholder Forum offered a valuable platform for exploring the potential of interdisciplinary collaboration and knowledge exchange. The discussions involved a diverse group of experts, each contributing a wide range of perspectives, expertise, and experiences. This chapter outlines the key outcomes and insights from the event, followed by an evaluation and feedback from participants.

3.1 Summary of Two Discussion Panels

The first session, titled "Interdisciplinary Taxonomic Capacity Needs in a Multi-Faceted Approach", focused how Open Science skills and taxonomic research can meet the interdisciplinary needs for scientific, environmental, educational, economic, and political collaboration. The session emphasized the potential and relevance of integrating taxonomy with Open Science to address biodiversity and climate challenges. Data gaps, the decline in taxonomic expertise, and uneven data availability were discussed, alongside the importance of embedding and strengthening Open Science skills through projects like Skills4EOSC. The session also highlighted the need for new economic models that integrate social and environmental indicators as well as the need for strengthening the alignment between policy and science.

The second session, "What is the Impact Envisioned by Ensuring Trained Experts?" addressed how ensuring trained experts in Open Science and taxonomy can drive European biodiversity goals and foster cross-sector collaboration. The panel explored the role of Open Collections and taxonomic research in advancing global biodiversity frameworks, particularly the [GBF¹⁵](https://www.cbd.int/gbf) (Kunming-Montreal Global Biodiversity Framework), and the potential value for policymaking overall. The importance of preparing early-career researchers to contribute to Open Science initiatives and utilize their potential to support global biodiversity efforts and European policies, such

¹⁵ <https://www.cbd.int/gbf>

as the EU Green Deal, was emphasized. Research infrastructures for natural history collections, such as DiSSCo, were identified as crucial for advancing taxonomic research and ensuring transparency in biodiversity monitoring. The panel also explored how taxonomic data and Open Science competencies could be more effectively integrated into European research infrastructures to enhance interdisciplinary research and inform policy development. The growing role of citizen science was addressed, with a focus on how Open Science tools can assist citizen scientists in taxonomy and biodiversity monitoring. Additionally, the potential for collaboration with industry was discussed, particularly in using taxonomic knowledge and data to strengthen sustainability efforts.

The session furthermore highlighted the significant shortage of taxonomists, emphasizing the need for international collaboration, capacity-building programmes, and data-sharing initiatives to address this gap. Biodiversity monitoring in Europe currently relies heavily on citizen science. However, effective biodiversity monitoring requires standardized methodologies and a sufficient number of qualified professionals—a profession that is experiencing a decline. Training the next generation of taxonomists through initiatives such as TETTRIs is crucial for addressing these gaps. Opportunities for collaboration between citizen science and industry were also discussed, alongside concerns about balancing openness with the risks of cyber-attacks and the management of sensitive data. Finally, the growing role of AI (artificial intelligence) in biodiversity research was acknowledged, with calls for region-specific training and the continued importance of human expertise in research. Overall, bridging the gap between science and policy was identified as essential for translating scientific findings into actionable strategies.

3.2 Key messages

The panel discussions underscored the urgent need to strengthen taxonomic capacity and biodiversity monitoring through coordinated international efforts, sustainable funding, and innovative frameworks. The integration of

Open Science principles into the education of scientists and research practices, alongside fostering interdisciplinary collaboration and creating diverse professional opportunities for early-career taxonomists, were identified as key strategies for addressing biodiversity and climate challenges and facilitating evidence-based policy-making. Additionally, the importance of engaging in various science communication activities by scientists was emphasized as crucial for enabling informed decision-making. Empowering the next generation of taxonomists, supporting citizen science initiatives, and fostering collaboration with industry were further recognized as essential steps to ensure the long-term sustainability of biodiversity conservation. The key messages from the event can be summarized as follows:

- **Integrating Taxonomy with Open Science:** Taxonomy, integral to biodiversity conservation and climate action, requires integration with Open Science principles to enhance transparency, data usability, and innovation. Emphasizing FAIR (Findable, Accessible, Interoperable, Reusable) principles, cross-disciplinary collaboration, and targeted training emerged as key priorities for strengthening Europe’s taxonomic capacity.
- **Addressing Biodiversity Data Gaps:** Gaps in biodiversity data, unevenly distributed across countries, hinder effective monitoring and policymaking. Initiatives like the [LIFE programme¹⁶](#) and [EuroBirdPortal¹⁷](#) aim to address these challenges by improving data quality, coverage, and timeliness. Harmonized methodologies and improved collaboration are essential.
- **Transforming Research with Open Science:** Open Science fosters innovation and collaboration but requires embedding relevant skills into education systems. It was considered critical to develop Open Science expertise in taxonomy, facilitating interdisciplinary communication, and preparing future professionals.

¹⁶ https://cinea.ec.europa.eu/programmes/life_en

¹⁷ <https://eurobirdportal.org/ebp/en/#home/HIRRUS/r52weeks/CUCCAN/r52weeks/>

- **Restructuring Economic Models for Sustainability:** Current economic models fail to account for the full costs of biodiversity and climate crises. Sustainable frameworks incorporating social and environmental indicators, enforceable targets, and robust monitoring mechanisms are urgently needed. Policymakers and businesses must prioritize long-term ecological and societal well-being in their decision-making.
- **Strengthening Policy-Science Alignment:** Bridging the gap between science and policy is essential. Simplified communication, clear reporting standards, and active scientist involvement in policymaking are needed to align biodiversity strategies with actionable policy goals.
- **Citizen Science and Public Engagement:** Citizen science has proven effective in data collection and public engagement, particularly in biodiversity monitoring. Expanding public engagement initiatives can inspire young people and foster a connection to nature, which is considered essential for promoting environmentally sustainable behaviour. However, the reliance on citizen science must be balanced with the development of more sustainable and diverse professional opportunities for taxonomists.
- **Employment and Collaboration in Taxonomy:** The shortage of taxonomists poses a significant challenge to biodiversity efforts. Stable, diverse career paths and professional opportunities, supported by private sector involvement, are critical to sustaining the field. Efforts like the Taxonomist in Residence Programme¹⁸ and collaboration with businesses were highlighted as potentially promising solutions.
- **Digital Transformation of Natural Science Collections:** The shift to DNA-based materials and digitization of collections demands scalable support and coordination among stakeholders. Open and accessible digital specimens, aligned with FAIR principles, can enhance research and data sharing.

¹⁸ This format was developed within TETTRIs (Task 5.1, led by the NHMW). Details of the Taxonomist Residence Programme will be published in early 2025 in the deliverable D5.1 of TETTRIs project, D5.1 “1 Landscape analysis on taxonomic expertise needs and gap analysis on academic taxonomic training”.

- **Advancing AI and Technology:** AI offers potential in taxonomy, including species identification and data analysis, but requires region-specific resources and human expertise for effective implementation.

3.3 Evaluation and Feedback from Participants

The feedback summarized in this chapter was collected through informal exchanges encouraged during and after the event, as well as a post-event survey distributed to all participants and panellists. The combination of observations, direct interactions, and written survey responses provides a comprehensive overview of participant perceptions and insights.

Engagement was a key feature of the event. During audience engagement sessions, many participants actively referred to panel discussions, contributing their perspectives and engaging in dialogue with other attendees. Two structured audience engagement discussions followed the panel sessions, enabling meaningful exchanges. Informal networking during breaks and after the event was also well attended, with participants emphasizing the value of interaction across diverse professional groups. The unique setting of the event was frequently highlighted as a factor contributing to the quality of these exchanges.

The event was overall received as positive and successful. Participants expressed strong interest in the topics of taxonomy and Open Science, particularly in exploring their intersections. The collaboration and joint organization of two Horizon Europe projects were widely praised as a key strength of the event. Furthermore, the organization and preparation of the event were commended by participants.

A post-event survey gathered responses, providing further insight into participant experiences. The survey assessed dimensions such as topic balance, collaboration between Horizon Europe projects, event format, discussion questions, and overall organization. Most participants rated these aspects highly, with a majority assigning 4 or 5 out of 5 points. Written feedback offered additional context:

- **Most Valued Aspects:** Participants emphasized the diversity of speakers, the integration of EU-funded projects, and the thematic focus on intersections between the two topics. Networking opportunities were also highly valued, with participants noting the benefits of engaging with colleagues and hearing insights from European Commission representatives.
- **Suggestions for Improvement:** Participants suggested enhancing the involvement of political stakeholders to increase the event's impact. Additional follow-up activities, particularly aimed at supporting taxonomists' engagement with Open Science practices, were recommended. There was also a call for clearer and more concrete information about the EOSC (European Open Science Cloud), as some participants found it abstract. While the venue was appreciated for its aesthetic appeal, feedback indicated that it was not large enough to accommodate more participants or additional networking opportunities.