



Bio Knowledge Agora: Developing the Science Service for
European Research and Biodiversity Policymaking

Connecting biodiversity knowledge and decision-making

The First Data Management Plan

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Kati Vierikko and Maria Söderholm (Finnish
Environment Institute)



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LIST OF ACRONYMS AND ABBREVIATIONS

Acronym / Abbreviation	Meaning / Full text
BDS	EU's biodiversity strategy
DMP	Data Management Plan
FAIR	The principles related to Findable, Accessible, Interoperable and Re-usable data
GDPR	General Data Protection Regulation
RIA	Research and Innovation Action
WP	Work Package

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1. Project description

The BioAgora RIA project funded by the Horizon Europe programme aims to make research on biodiversity better support environmental policy actions. The BioAgora project's mission is to establish a Science Service that brings together the biodiversity research community and the knowledge it produces to support decision-makers and other users with the information it provides. BioAgora has five main objectives to address these biodiversity knowledge needs:

1. The Science Service development consists of a technical web platform with channels and tools, and a network combining multidisciplinary, political and societal expertise and knowledge.
2. Development of multiscale demonstration cases (DCs).
3. Encouraging of just practices means promoting socially and environmentally just practices, taking into account a plural knowledge base, and developing of recommendations to integrate societal value choices alongside scientific knowledge in the Science Service.
4. Establish an inclusive governance model and feasible business model.
5. Promote capacity building and co-learning processes for an inclusive and functional Science Service.

These objectives naturally lead to specific data and information needs, and outputs, which are tentatively described in section 3.

2. Objectives of the first Data management Plan

This document presents the BioAgora project's first plan for managing data and other outputs. The plan provides an overview of the main data to be used and other output types that will be produced during and after the project and describes the general guidelines for managing the outputs of the project. During and after the kick-off meeting, the definition of data and other outputs and related data management practices will continue.

BioAgora is committed to good scientific conduct, governance and to valid legislation. Ethical standards and guidelines will be strictly applied. We will follow the guidelines issued by the ALLEA, the European Code of Conduct for Research Integrity. Personal data are processed in accordance with the European General Data Protection Regulation (GDPR). In addition, the management of data and other outputs will follow the general guidelines of the Horizon Europe programme and the FAIR data principles.

The Data Management Plan is a living document. As the project progresses, the plan will get detailed form and will be kept up to date to support project data/output management activities





during the project. The first updated version of this first plan, Deliverable 6.2, will be presented in December 2022.

3. Summary of data and other outputs

This is a preliminary description of data and other outputs BioAgora will produce. Once the WPs have defined their tasks and refined their work plan, data to be used and other outputs produced in the project will also be more precisely identified. So far, we have recognised the following data and other outputs:

Data related to networking

- The project will draw heavily on information based on existing activities, actors and their networks related to promotion of biodiversity. We will systematically collect network data from the very beginning of the project compiling information on experts and organisations, and projects thematically related to BioAgora.
- BioAgora will also establish a network within research, political and civil society actors to be able to build on their experience and to facilitate co-learning and capacity-building, and to integrate them fully to the Science Service development.
- The diverse network data will be collected and further enriched during the project, and to build the foundation for the future Science Service.
- Our project will also produce data on the activity of participation. This information is important, for example, when demonstrating engagement to the project and its impact.

Interview, workshop and survey data

- Interviews, workshops, co-creation events and surveys are also organised to gather information from different stakeholders, included with institutions having a crucial role for the implementation of BDS 2030. For example, we are interested in finding out how data, information and knowledge have been applied in policies to reveal best practices, gaps and preferences. The focus is to assess the transformative potential of networks and their capacity to support biodiversity-friendly decision making to ensure that the development of the Science service is on the strongest possible base.

Data on publications

- The project will analyse various publications such as research of previous and current policies, scientific publications and grey literature to create a common baseline of existing knowledge. The aims of the document analysis are similar to those of the other data collection for the project. For example, to assess the capacity of networks and the needs to support the BDS 2030 to be able to establish a strong Science Service. However, the analysis of rich written material gives its own perspective and understanding of the interlinkages between actors and policies.

Other outputs produced





The main outputs of the project fall into the following categories.

- Request service integrated to the Science Service to take up the requests from decision-makers on biodiversity.
- Publication-type outputs: Tailored summaries, knowledge synthesis, factsheets/briefs and reviews of biodiversity research outputs for diverse stakeholders.
- Tools ratcheting up BDS 2023 implementation.
- Web platform and related tools for the Science Service
- The Demonstration Cases (DCs) referring to processes and activities related to biodiversity management in areas such as the pollination, freshwater, nature-based solutions and urban green infrastructure. The cases themselves include the following outputs: projections/forecasts, integrated models, scenarios and pathways.

Existing data and other information used in the project

There is a wealth of data and other information available to support the establishment of the Science Service, which will be processed and synthesised for the use of the project. For example, we use the following sources:

- The information flow frameworks developed by GEOBON (Group on Earth Observations Biodiversity Observation Network).
- Initiatives such as the EBV (Essential Biodiversity Variables).
- the Policy Tools and Methodologies catalogue (IPBES).
- The data that address the objectives of the BDS 2030.
- The existing knowledge at EU and national level.
- The existing network data, e.g., on experts, organisations and projects.

4. FAIR data

4.1. Making data and other outputs findable and accessible

Most of our data and other outputs will be made publicly accessible. Only the open access to data and other outputs whose use is subject to conditions that prevent their openness will be restricted, e.g., IPR, confidentiality. The peer reviewed articles will be published in channels with immediate open access as well as the related research data when possible. To ensure the findability of data it will be documented using data specific methods and rich enough metadata will be provided. The adoption of good documentation practices is facilitated by fact that the outputs will be published in services that require and support the production of adequate metadata. Metadata will include, for example title, author/creator information, description (data) keywords, licenses and access information (especially data) as well as the provenance of data. Data and other outputs will also be published using services that provide persistent identifiers (e.g., DOI or URN). For example, to ensure permanent access to the peer reviewed articles, the latest possible peer-reviewed versions will be deposited immediately upon publication in a trusted repository/archive. We have planned to publish the data in Syke's local repository,





which metadata schema is application of the Geographic information standards (19115 and 19119), and European Zenodo repository which can be considered as trusted repositories. Syke's Helda publication archive can be used to archive the publications.

4.2. Making data and other outputs interoperable and reusable

To ensure interoperability and reusability of data we will adopt joint guidelines and practices. The data are collected and analysed in accordance with established practices appropriate to the data. Common guidelines for data collection, processing and analysis will be produced to ensure data consistency and quality. For example, guidelines for carrying out the interviews and document analysis will be provided. The guidelines are available to all participants in Teams. The re-usability will be ensured by depositing data and outputs that will be made openly available in commonly used/ non-proprietary formats, e.g., .txt., .csv., .docx, .pdf. Sufficient context information about data to be published will be provided using separate documentation or/and as a part of publications related to the data. Data, publications and other published outputs are freely available to all in the repositories and publication archives. The re-use of these outputs will be promoted by publishing them under the Creative Commons license CC-BY 4.0. and thus, retaining the sufficient IP rights also for the authors/creators.

5. Responsibilities and allocation of resources

Syke as the project coordinator has a general responsibility for data management and compliance with common guidelines and EC requirements and on the WP level the overall responsibility lies with the WP leader. In practice, all participants in the project are responsible for ensuring that the commonly agreed data/results management guidelines are followed. A data management manager appointed by Syke will be responsible for preparing the data management plan, drawing on the expertise of the partners and supporting the implementation of data management. The responsibilities of WPs and participants for managing the data and outputs will be further agreed when the next data management plan is written (M6).

Specific costs associated with data management between partners are described in the updated DMP (D6.2). First, the day-to-day data management practices are mainly integrated into research and included in the project budget as salary costs. We also don't purchase equipment or services, also the facilities are free of charge or provided by the partner organisations. For example, data repositories and archives, which are used to make data and other outputs openly available, are free of charge. In addition, Syke provides Teams/Sharepoint, which is used to share and organise data and documents and as a collaboration platform, without charging the project directly.





6. Data and information security

SYKE provides the Teams collaboration platform for the project and is therefore responsible for ensuring that partners are instructed to store and share only materials for which Teams is sufficiently secure. Pensoft together with Euronovia develops the content for the project website. The platform for website maintenance is provided by external service provider. It is still to be determined whether we need other common platforms and tools, and how to manage their maintenance.

In general, the ITC services of the partner organisations are responsible for providing secure storage and backup services for those working on the project. In line with good and secure practice, the backup is mainly done automatically on a regular scheduled basis. It is also good practice that the project participants can use password-protected servers in their organisations to store data and other materials, so that only authorised people have access to them. It has been provisionally agreed that data and other electronic materials will be stored on the servers of the partner organisations depending on which material or output is the responsibility of which organisation. Syke Teams is used in cases where data and other materials are shared within BioAgora and handled together. The needs of sensitive data and information, such as interviews, will also be taken into account and, if necessary, a special storage solution will be arranged.

7. Ethical and legal considerations

As the in the Description of the Action's chapter 4. Ethics self-assessment of BioAgora it is stated that human participants are involved in the research, and we produce and use personal data. These data include interviews, survey and contact information data. In addition we collect and handle discussion data and diverse materials from workshops and other events. All project partners are committed to generating and processing the personal data in accordance with good research practices, ethical guidelines and principles of EU General Data Protection Regulation (GDPR). Thus, we follow datamanagement practises that fully safeguard the identity of research subjects. The practices includes, for example that the participation in the study is voluntary, and the participants will give their informed consent to the participation. The participants are granted sufficient information (privacy notice) related to the study and all legal rights to the data concerning them, e.g. to review the data and stop participating in the data collection at any point in time. Also the data collection and handling methods as well as the data transfer will ensure the privacy: the collection of identifiers is minimized and only anonymised data is made openly available. Data containing personal identifiers will only be shared between project members using a secure transfer system. We also take into account the fact that the project involves participants from non-EU countries when sharing personal data.

