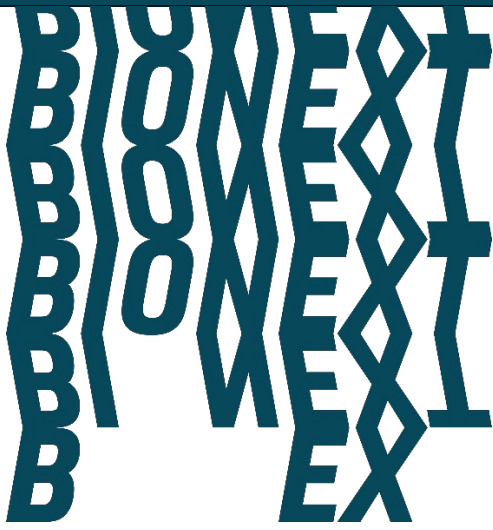




Data Management Plan (DMP)

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Biodiversity – at the heart of sustainable societies



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Acronym / Abbreviation	Meaning / Description
ALLEA	the European Federation of Academies of Sciences and Humanities
CESSDA	the Consortium of European Social Science Data Archives
DMP	Data Management Plan
IAP / dIAP	The Integrated Assessment Platform / Dynamic Integrated Assessment Platform
DoA	Description of the Action
DOI	Digital Object Identifier
FAIR	The principles related to Findable, Accessible, Interoperable and Re-usable data
GA	Grant Agreement
GDPR	General Data Protection Regulation
HE	The Horizon Europe funding programme
IPBES	The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPR	Intellectual property rights
NGO	a non-profit organization
SDG	The United Nations Sustainable Development Goals
WP	Work Package

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1. Project description

BIONEXT, The Biodiversity Nexus - Triggering transformative change for sustainability, funded by EU's research and innovation program Horizon Europe is a consortium of ten European organizations (Appendix 1. Partners of the BIONEXT project) lead by the Finnish Environment Institute. BIONEXT will develop knowledge, tools, and guidance to mainstream biodiversity into policy-making and provide concrete options for initiating, accelerating and upscaling biodiversity-relevant transformative change in society. Engaging diverse stakeholders from policy and decision-making sectors, along with the co-creation methods, is also a key part of the project. The project will create an innovative Nexus Modelling Framework that integrates scenarios and pathways through a co-production process with stakeholders. Through a database of transformative change cases, BIONEXT will involve policy- and decision-makers and allow them to explore the concept of just transformative change. The project's goal is a sustainable society, one in which the interconnections between biodiversity, water, food, energy, transport, climate, and health are acknowledged, and where nature and biodiversity are integrated into everyday choices and policymaking. Achieving the project's objectives will require the production of a broad and diverse knowledge base.

2. Purpose of the Data Management Plan (DMP)

This updated DMP (D6.5) outlines BIONEXT's plan for managing data and other project outputs. It describes the types of data that will be generated, compiled, and used in the project, and presents the practices and guidelines for managing these outputs.

In general, BIONEXT is committed to good scientific conduct, sound data management, and compliance with applicable legislation. Ethical standards and guidelines will be strictly followed, in line with the European Code of Conduct for Research Integrity issued by ALLEA. Personal data will be processed in accordance with the General Data Protection Regulation (GDPR). In addition, our data and output management activities are in line with the general guidelines of the Horizon Europe programme and are aligned with the FAIR data principles, which aim to make data Findable, Accessible, Interoperable, and Reusable. The primary aim of this Data Management Plan (DMP) is to describe as accurately as possible:

- The data collected and used by each work package (WP)
- What data will be shared with project partners and how
- What data will be made openly available and how
- The DMP also provides an overview of other project outputs and their planned management.

The DMP is a living document, so the identification of data and other outputs is ongoing, and the definition and refinement of management practices related to outputs are regularly updated to support effective data and output management.

3. Responsibilities and allocation of resources

The BIONEXT data management team at Syke has overall responsibility for data management and for ensuring compliance with relevant legislation, funder's requirements and common guidelines for data and other outputs. The team supports project-level data management tasks such as storage, sharing and publishing of data. The team is also responsible for completing and updating the DMP by ensuring the partners contribute and agree to the joint DMP. In addition, Syke provides joint guidelines for data management through the Project Handbook. The major decisions on agreeing common practices are taken by the Steering Group. At the work package (WP) level, the overall responsibility lies with the WP leader. The WP leaders ensure proper data management within their WPs, including data-level curation and quality assurance. They also provide support for data- or output-specific questions related to their responsibilities. In addition, WPs contribute their expertise to support others in collecting and using data and participate in maintaining the joint DMP. Each WP and Task is responsible for ensuring that information on the data generated, used, and other outputs produced is kept up to date in the DMP.

Our project has not identified any specific costs associated with data management, as these activities are integrated into the project's overall budget. The day-to-day data management practices are mainly embedded in research work and covered through salary costs. We do not anticipate purchasing equipment or external services for data management. Facilities such as data repositories and archives used for making data and other outputs openly available are free of charge. Similarly, storage and collaboration tools (e.g., Teams/SharePoint provided by Syke) are available without direct costs to the project. Costs related to data collection, such as outsourcing a survey, are also included in the budget.

4. Description of data and other outputs

The BIONEXT project will produce a wide range of new data, combining and using data from various sources. The synthesis and co-production methods will generate a large volume of data and other outputs. These outputs are described in Table 1, with the exception of publications, which are discussed in Section 5.3.1.

Table 1. Detailed description of data.

WP1: The biodiversity nexus: current and future interlinkages and their drivers					
Task	Title of data produced by the project	Description	Storage and sharing with partners	Publishing / reporting channel	Reasons for not making data openly available
T1.1	Literature review on nexus interlinkages	- Datasets and content analysis based on the review of the existing scientific literature on interlinkages between biodiversity, food, water, health, energy, transport and climate change. Data lists papers included in the review and relevant information extracted from the papers. - Formats: .pdf, .xlsx	Syke Teams	The literature review method and search terms, which allow the information searches to be repeated and the data to be obtained, are provided as supplementary material in the article (Understanding the role of biodiversity in ...). Literature database: https://www.zotero.org/bionextwp1/collections/I3RQ3NCH	Can be made available, provided to WP4
T1.2	Enriched SSP scenarios	- Covering socio-economic change scenarios based on the Shared Socioeconomic Pathways from present to 2100. The narratives and parameters build on the EU IMPRESSIONS project and have been enriched to include nexus interlinkages with biodiversity and nature. - Formats: .pdf, .csv	Syke Teams	All data reported in “Enriching the European Shared Socio-Economic Pathways with Considerations of Biodiversity and Nature Using a Nexus Approach” (preprint), https://essopenarchive.org/doi/full/10.22541/essoar.174000865.52109874	
T1.2	Natures Future visions	Generated through a stakeholder engagement workshop process and expert elaboration.	Raw data (prior to analysis): Server of	Raw data (prior to analysis) will not be published.	

		Formats: .pdf, .csv	organisation collecting data Anonymised aggregated data: Syke Teams	All anonymised aggregated data reported in “Envisioning nature positive futures for Europe: Inspiring transformative change at the biodiversity nexus” (preprint), https://eartharxiv.org/repository/view/7657/
T1.3	Models and output datasets - CRAFTY, IAP, JUNIPER	The NEXUS modelling tools being applied in BIONEXT - Formats: .csv, .tif (GeoTIFF) 1) The IMPRESSIONS Integrated Assessment Platform (IAP) / Dynamic Integrated Assessment Platform (dIAP) (IA/dIA-Platforms). Simulated data for future scenarios covering output variables for biodiversity, water resources, agriculture, forests, urban development and fluvial and coastal flooding. 2) CRAFTY-Europe. Simulated data for future scenarios (to 2100) for multiple nexus-related variables, including land use type and intensity, ecosystem service provision and biodiversity impacts. 3) A new system dynamics model for Europe – JUNIPER model. Various simulated data related to biodiversity, food, water, energy, transport, health and climate change.	N/A N/A N/A	The IAP model is available at https://tiamasg.ro/test/IAP2.1/ The CRAFTY model is available at: https://github.com/CRAFTY-ABM The final datasets from running the pathways through the IAP, CRAFTY, and JUNIPER models will be available after May 2026.

WP2: Triggering transformative change

Task	Title of data produced by the project	Description	Storage and sharing with partners during the project	Publishing / reporting channel	Reasons for not making data openly available
T2.1	Literature review on transformative	Datasets and content analysis derived from a review of existing	Full datasets with literature per nexus element: Syke teams	The list of reviewed literature and review methods are included and described in the deliverable D2.1.	

- a justice perspective. Outputs will be coded and aggregated.
 - Formats: .mp3, .docx, .excel
- coded and aggregated data: Syke Teams

Other outputs

T2.1	Conceptual framework on transformative change in the biodiversity nexus.	Full datasets and analysis: Syke teams	Captured in deliverable 2.1.: https://www.bionext-project.eu/d21-a-scheme-on-conceptual-framework-on-transformative-change-in-the-biodiversity-nexus	
T2.4	Action agenda for just transformative biodiversity governance	Anonymised draft texts for the Zine, based on earlier collected data: Syke Teams	A 'Zine' (a self-published magazine) is in preparation, which contain the key lessons from WP2 with an emphasis on just transformation. It will be freely and publicly distributed and disseminated	Some sensitive data (e.g. political information) that cannot be fully anonymised will not be included.

WP3: Demonstrating transformative change in practice

Task Other outputs

T3.1 & T3.2	Transformative change case studies, database and The BIONEXT App 1) Identifying and processing case studies Case studies identified from various existing repositories focusing on transformative cases addressing the nexus, e.g., biodiversity-, climate-, water-, food-, energy-, transport-, health-related cases. Information on case studies will be formatted to ensure a consistent analysis. Data generation is based on manual and automated identification and transfer from available online repositories. - Formats: .xlsx, .docx - Sharing with project partners while generating outputs: Syke Teams 2) Database of transformative case studies Database includes manually and automatically identified case studies focusing on the nexus. Cases are selected and coded for the database based on their transformative qualities. Database will include manually and automatically identified case studies focusing on the nexus. Cases are selected and coded for the database based on their transformative qualities.
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- Formats: .xlsx, .docx
- Sharing with project partners while generating outputs: Syke Teams

3) The BIONEXT App

An open user-oriented decision-support tool for exploring and comparing the transformative archetypes of the nexus case studies.

WP4: Knowledge and science brokerage for IPBES assessments and EU policy

Task	Data produced by the project	Description	Storage and sharing with partners during the project	Publishing / reporting channel	Reasons for not making data openly available
T4.1	Database of how BIONEXT knowledge has contributed to IPBES assessments	A spreadsheet identifying where BIONEXT knowledge and deliverables have contributed to IPBES assessments and deliverables, as well as potential contributions to the ongoing and future assessments.	Through Syke Teams	Forms part of Milestone 3.2 and described in Deliverable 4.1 for the public WP outcomes	Only the outcomes indicated as “public” by the authors have been described in the Deliverable, because that file could be shared outside the project.
T4.2	Legal and policy landscape review and analysis	Spreadsheet setting out the data of a review of 74 EU policy instruments. The spreadsheet contains information taken from the text of the policy instrument and analysis which nexus elements are addressed by the policy instrument	The spreadsheet is stored and shared through Syke Teams	A paper may be written for a legal journal but it will be utilised by other deliverables such as Deliverable 4.2	Can be made available once paper is published
	Synthesis of policy relevant outcomes from the BIONEXT project	WP4 will synthesise outputs from the entirety of the BIONEXT project and make these outputs available through the Deliverable on Guidance for the European Commission (D4.2). The core data and synthesis results will be made accessible through the BIONEXT Pathways App being developed in WP3	The data will be held within a container within the AI-based App developed in WP3	Forms part of D4.2, and the BIONEXT Pathways App (WP3)	Data will be made publicly available within the App

WP5: Facilitating nexus by networking, engagement and dissemination

Task	Data produced by the project	Description	Storage and sharing with partners during the project	Publishing / reporting channel	Reasons for not making data openly available
T5.2	Interviews and workshops with BIONEXT researchers and stakeholders	- Evaluation of knowledge integration conducted by the BIONEXT researchers and stakeholders. - Formats: Word	Pseudonymised interview transcripts, coded and aggregated data: Syke Teams	The results of interviews will be reported in deliverables and scientific publications.	The interview and workshop data are not published, as they contain personal data that cannot be fully anonymised.
Other outputs					
T5.1	BIONEXT Network of Scientists - An interdisciplinary network supporting transformative change through scientific evidence-based knowledge. BIONEXT Network of Knowledge - A network based on existing relevant networks and knowledge-holders from the non-scientific community.		The spreadsheet is stored and shared through OPPLA database The spreadsheet is stored and shared through Syke Teams		The contact information of individuals has been collected solely for the purposes of the project and will be used for project's internal development needs and project-related communication. For data protection reasons, permission to publish this information has not been requested.
T5.4	The BIONEXT Hub An open web-platform serving as the main entry point into the project for stakeholders and interested parties. The web-platform will host a repository of project outputs and additionally provide a 'co-production workspace' in support of stakeholder engagement activities. The networks of scientists and knowledge are based on this data.				

WP6: Project management

Title of data produced by the project	Description	Storage and sharing with partners during the project	Publishing / reporting channel
Project management data	▪ The data consists of outputs and results produced by the other WPs and project internal activity data. The data will be used in periodical reporting towards the EU Commission and in Policy Briefs summarising the results and findings of the project up to that date. The internal data include contact details of those working on the project, allocated working hours, budget data, etc. ▪ Data will be in text and numeric formats and includes graphs, tables, photos. ▪ Formats: .docx, .pdf, .txt, .xlsx, .mdb ▪ Sharing: Syke Teams	▪ Reporting will be done through the EU Tender portal and, where applicable, through open channels such as the project website, depending on the level of openness defined in the DoA.	

5. Data management practices

Our project follows the FAIR principles—Findable, Accessible, Interoperable, and Reusable—as the foundation of data management. These principles also guide the handling of other research outputs, where applicable.

To support FAIR data, we apply the following key practices:

- Findability and reusability are enhanced by publishing data in open repositories whenever possible, and by providing sufficient metadata and documentation.
- Accessibility is ensured by applying open licences (e.g. CC BY) to datasets that can be shared, which also facilitates their reuse.
- Interoperability is promoted by using open and widely supported data formats whenever feasible.
- We further support reusability by selecting repositories that follow FAIR data standards, such as providing persistent identifiers.

In the following sections we describe in more detail how the FAIR principles are implemented in BIONEXT.

5.1 Metadata and documentation

Metadata are produced from the start of the data collection and stored along with the data, for example as text documents or Excel files. A wide range of metadata/documentation is produced, due to the diversity of data due to its different uses and publishing channels (i.e., databases, repositories, archives, webpages).

First, metadata is produced to be able to describe the data in a repository. The discoverability of our public data is ensured by storing and publishing it in repositories, where a metadata schema allows a rich set of metadata to be associated with the data. The metadata required may vary from repository to repository. When the data is stored and published in a repository/database dedicated to that data, the metadata will also contain elements tailored to that data. Generic repositories (e.g., Zenodo and Figshare) usually also allow the storage of metadata specific to data, such as the domain-specific thesauri to describe data.

The repositories/archives we aim to use for publishing the data, typically cover the following metadata elements. The elements 1 to 3 should be used to describe the data from the moment it is generated/collected:

1. Basic information:

- Authors/ creators.
- Name of the data.
- Author affiliation(s)
- Year when data was created / period to which the data relates.

2. A brief description:

- A summary of the data to make it understandable and help users evaluate whether it meets their needs.
- Includes details such as the purpose of the data, origin, production, and processing.

3. Data ownership:

- Information about the owner or responsible party for the data.

When decided to publish the data, the following elements 4 to 6 are added:

4. License:

- Information defines terms of re-use (e.g. the funder (EU) recommends the CC-BY license, the most permissive CC license. Other licenses can be used as needed. If it would be about something other than data (or publications), there are other possibilities for licensing. E.g. MIT license for the code.

5. Access details:

- Specifies the level of openness, open access, embargoed, restricted, or request.

6. Keywords:

- Ensures that data is findable and understandable.

At the publication, a Persistent Identifier (PID) is assigned:

7. A PID, e.g., DOI and HANDLE

- A unique persistent identifier (PID) is assigned for the data that facilitates citation, ensures versioning, and provides a permanent link to locate the data in the repository/archive.

Second, specific metadata and documentation are produced when required for data understandability and reusability. This information describing the data can be embedded within the data file or in a separate document such as a read-me-file, as presented in Section 5.5, to increase data re-use.

Third, in BIONEXT a dedicated database of transformative case studies will be developed. This database will include metadata for identifying cases and other metadata relevant to BIONEXT. It will be accompanied by a separate metadata text file providing the database title, project name, authors, keywords, a brief description of the data, and an explanation of how the data was extracted and compiled. Once the case study information is shared via the BIONEXT App, the metadata file will also be made available online alongside the case study collection.

5.2 Storing and sharing data and other outputs within the project

The data collected and generated in BIONEXT will be stored in a distributed manner on the servers of partner organisations. In general, the ICT services of the host organisations are responsible for providing secure storage and backup services for project staff. In line with good data management practices, backups are typically scheduled and performed automatically on a regular basis. It is also considered good practice to use password-protected services to store data and other materials so that only authorised individuals can access them.

Microsoft Teams via SharePoint cloud-based collaboration platform, will be used in BIONEXT for managing, storing, and sharing documents and data. For example, the contact details of stakeholder participants and other knowledge-holders involved in BIONEXT will be shared using Syke's Teams environment. This data is limited only individuals who have consented to participate in interviews, group discussions, or BIONEXT networks. Teams is provided by Syke ICT.

Not all data in the project will be stored in Teams. As original personal data cannot be stored in Teams, materials such as interview recordings and transcripts will be stored in a password-protected system maintained by the interviewing organisation. Research data containing personal information will be shared within the project only for justified research purposes and only with authorised researchers. Before sharing, such data should be processed to remove personal identifiers, using methods such as anonymisation, pseudonymisation, or aggregation/generalization. Second, there may also be other aspects that restrain the use of Teams, or it is appropriate to use other tools and platforms.

Table 1 shows how the data is planned to be stored and shared with the project partners.

5.3 Making data and other outputs accessible

BIONEXT produces data, much of which can be made openly available in line with the principle of “as open as possible, as restricted as necessary”. However, we have identified that access to and sharing of

personal data may need to be restricted. Additionally, intellectual property considerations related to data and other outputs may also limit their availability.

5.3.1 Open availability of data and other outputs

Data and other openly published outputs will be made available in open repositories, archives or through other appropriate channels. Wherever possible, we will use trusted channels to ensure open access in line with the requirements of the HE and GA. When selecting an archive, we aim to meet the following criteria:

- The data can be assigned a persistent identifier (e.g., DOI or HANDLE).
- Metadata is openly available and licenced under the CCO license.
- Data can be published under CC-BY license.
- Data and metadata are accessible through a free and standardized access protocol.

We mainly use general-purpose data repositories such as Zenodo and Figshare for publishing data. If full anonymisation is possible of transcribed interview data is possible, we will publish it in a certified archive provided by the Consortium of European Social Science Data Archives (CESSDA). These data services provide platforms where metadata is both human-understandable and machine-readable, enabling metadata harvesting and indexing. See Table 1 for details on publishing and the reasons why the data cannot be made openly available.

The results of the project will be compiled and synthesised into various publications. Our publication plan will follow the principles of open science:

- 1) We aim to publish all results in open access publications, in journals and books.
- 2) The publications will be licensed safeguarding the IPR of the authors.
- 3) Archives/repository such as Zenodo are used if publication in scientific open series is not an option. Publishing in an archive/repository is preferred for single publications, e.g., reports, because publications can be attached with sufficient metadata to facilitate findability; Authors can be given credit, especially when the publication is assigned a persistent identifier.
- 4) Whenever possible, data related to the publication will also be made publicly available and referenced in the publication.
- 5) The peer-reviewed scientific publications will be
 - a) Submitted to Open Access journals to ensure immediate open access.
 - b) Published under the most permissive licenses, i.e., Creative Commons CC-BY.
 - c) Deposited in a trusted archive/repository (such as an institutional archive).

Project outputs and results are also presented through various communication channels, for example the project's web page and the BIONEXT Hub and social media channels (more detailed information in the project's Communication, Dissemination and Exploitation strategy).

5.3.2 Handling and publishing personal data

The personal data will be generated and processed in accordance with the General Data Protection Regulation (GDPR). Good personal data management practices include providing participants with adequate information about the research project, legal rights concerning personal data, and how their data will be processed before participation. To support this, joint templates for privacy-related documents have been developed. The documents are available to all partners on the BIONEXT Teams platform. While using these documents is not mandatory, partners must ensure that their documents align with the agreed project practices and applicable legislation. A detailed description of ethical considerations is available to all project members in the Project Handbook.

The raw original personal data collected through interviews, group discussions and focus groups will be stored, shared and published with special care. As mentioned above, personal data will be stored on a secure server by the partner organisation responsible for the data collection. Data will be retained only as long as necessary: until the end of the project, and for five years from the date of collection for data collected for research purposes. Anonymised versions of the data may be shared using Teams.

Particular attention will be paid deciding whether to publish data that originally contained personal information. Since personal data may include both direct and indirect identifiers, achieving complete anonymity may not always be possible, which could limit publication. However, every effort will be made to ensure that the data can be shared responsibly. To support this, we will apply following methods:

1. Minimise the collection of personal data by gathering only the personal data what is necessary for the project,
2. Anonymise the data whenever possible,
3. Provide aggregated versions of the data, such as summaries, spreadsheets, etc.

It should be noted that the decision to publish the data is based on scientific considerations.

Anonymised or aggregated data will only be published in the repository if it remains understandable and allows for valid interpretation. If the data cannot be publicly available, access will be granted for verification purposes in accordance with HE requirements.

5.3.3 The Intellectual property rights

In general, the ownership and IPR belong to the party that has generated the data and other outputs. Before data or publications are shared or made openly available, all results are protected by addressing copyright, privacy, and confidentiality considerations. Ownership of data and publications are recognized according to the “rights to first publication/authorship” rule. In practice, publication of data and results must be approved by the concerned partners. The data and peer-reviewed publications are published in accordance with HE guidelines under licenses that safeguard the intellectual property rights of authors or creators. When data originates from third parties (e.g., data related to existing publications), the applicable intellectual property rights and terms of use will be fully respected.

5.4 Making data Interoperable

The interoperability of data and other outputs will be granted by utilising standardised software and tools and by generating data and other outputs with commonly used protocols and methodologies. Examples include: the systematic mapping protocol (review data), the archetype analysis to identify common and divergent features (case study data), exploratory and target-seeking scenarios (for futures analysis) and MCDA tools (for analysing policy options). Aggregated interview data from the interviews and results will be processed using structured procedures, such as coding with dedicated software when appropriate (e.g., MAXQDA, Atlas.ti).

In BIONEXT we will develop new tools to support interoperability and findability, such as a case study database metadata schema for transformation information and a classification of future scenarios. When suitable existing vocabularies are available, they will be used to describe the data and outputs.

Data and other outputs will be stored and shared in formats appropriate to the content type and the software used to generate them. Whenever possible, data will be stored in non-proprietary formats to ensure long-term (re)usability. If that is not practical, widely used proprietary formats will be used.

5.5 Increase data re-use

Documenting data is essential for enabling (re)use and ensuring data validation. Metadata creation and data description begin at the time of data production or collection. Proper documentation also supports smooth archiving and ensures that published data is understandable and usable. During the project, documentation facilitates data exchange and helps project partners make effective use of the data. Data will be made publicly available as described in Section 5.3, where the data, metadata, and related documentation will be accessible to all.

The way documentation is provided in BIONEXT depends on the type of dataset. In some cases, documentation is embedded – provided directly within the data file, making it self-describing. In other cases, supplementary documents such as read-me files are included alongside the data. In general, documentation covers a detailed description of the methods used for data collection and analysis, variable definitions, and broader information about the project and the purpose for which the data was produced. Information about the software and tools used will also be included to support data reusability. Some datasets produced by the BIONEXT project are accompanied by specific metadata and documentation to ensure they are understandable and useful to others, as shown in Table 2.

Table 2. Documentation and metadata of specific data.

Type of data		Description of metadata and documentation
Interviews, Focus group discussions, Workshops		The documentation includes, e.g., aggregated/metadata information about the participants in the study, how the data is processed, what software is used to process the data and information to contextualise the codes used to process the data.
Model outputs	IAP/dIAP	- Metadata are included in the data-dictionary Excel file for each model contained in the platforms. Each data-dictionary (with some exceptions) contains information about Modeller name, Names of co-workers, Email, Model name and Version number, Modelling sector, Modelling approach, Model description, Study regions covered by the model, Time horizon of model simulations, Temporal extent to the future. Each data-dictionary also contains information about the input and output data used in the model including the definition of the data, the source of the input data, measure units, spatial and temporal resolution and other particular information on the model. - dIAP creates at the end of the run a specific input/output description file in CSV format where there is a description of each of the hundreds of resulting outputs. - The interlinkages between models inside of the platforms are described at general and detailed levels. - The platforms have been described in various scientific reports, scientific papers and PhD thesis.
	CRAFTY-EU	A general framework description and links are available at https://landchange.imk-ifu.kit.edu/CRAFTY.
	System Dynamic	These will be custom-made models constructed in STELLA Architect (ISEE Systems).

	Models - JUNIPER	Models have been described in scientific publications (e.g., Laspidou et al., 2020, Ioannou and Laspidou, 2022 and Laspidou and Ziliaskopoulos, 2022) and published datasets.
Review data		For example, a protocol and/or additional documentation about processing data and how the results are generated; metadata on publications information (authors, title, etc.).
Scenarios		Background information on the source of the data will be provided and metadata providing a brief description of the quantitative datasets.
Visions		Background information on the stakeholder engagement process and expert elaboration process to produce the data will be provided and metadata providing a brief description of the quantitative indicators.

6. Ethical considerations

The BIONEXT project involves human participants, as interviews, group discussions, workshops and focus group engagement are important part of the project and will be carried out throughout the project. In general, ethical standards and guidelines will be strictly applied. As pointed in the Ethics Review and DoA, BIONEXT is committed to good scientific conduct, governance and to valid legislation. We will follow the guidelines issued by the ALLEA, the European Code of Conduct for Research Integrity and instructions given by national and partner organisations. A detailed description of ethical considerations is available to all project members in the Project Handbook.

When generating and processing personal data, all project partners follow the applicable research practices and ethical guidelines, particular the EU GDPR. The guiding principle for data management is to safeguard the rights of research subjects. The implications for handling data containing personal information, such as data sharing and making it openly available, are discussed in Section 5.3.2. To ensure that BIONEXT's research practices align with good ethical conduct, an ethics clearance was obtained from the Scientific Advisory and Ethical Board (SAEB) of the Global Change Research Institute CAS. The SAEB approved the research and the proposed ethical mitigation measures presented to it.

BIONEXT pays particular attention to involving stakeholders from different backgrounds following the ethically sustainable and fair methods. The involvement of diverse stakeholders is done in a systematic and deliberate way by recruiting actors from different sectors of society, but also from ethnically and socio-economically diverse backgrounds. Special attention will be paid to gender balance. BIONEXT will use the [GenderWave](#) project management tool (developed in the H2020 [Baltic Gender](#) project) to make explicit how gender aspects are addressed in the project methodology and outputs. The tool will be applied to produce the gender mainstreaming plan as a part of the project management plan.

Appendix 1. Partners of the BIONEXT project

The coordinator:

- Finnish Environment Institute (Syke), Finland

The partners:

- Dutch Research Institute for Transitions BV (DRIFT), Netherlands
- Ústav Vyzkumu Globalni Zmeny Av Cr Vvi (UVGZ), Czech Republic
- Athina-Erevnitiko Kentro Kainotomias Stis Technologies Tis Pliroforias, Ton Epikoinonion Kai Tis Gnosis (ATHENA), Greece
- Karlsruher Institut für Technologie (KIT), Germany
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- WCMC LBG, United Kingdom
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