Individual-based Value Assessment of Biodiversity in Policy Implementation (INVABIO)

A Data Management Plan created using DMPonline.be

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Project abstract:

The central objective of INVABIO is to strengthen biodiversity policies by tackling the implementation gap resulting from the complexity of assessing case-specific biodiversity impacts in permitting and sanctioning decisions. INVABIO will develop a novel value assessment framework that focusses on individual specimens or habitats to qualitatively and quantitatively assess impact gravity. Hence, we merge ecological, legal and economic perspectives into a unified interdisciplinary INVABIO framework aimed at increasing the effective implementation of biodiversity conservation law.

As a secondary objective, INVABIO will address the lack of detailed information on value assessment practices in permitting and sanctioning decisions by a coordinated data collection effort for Flanders and create a unique picture of the practical implementation of EU biodiversity legislation. We will evaluate and compare legally allowed (permitted) and illegal (sanctioned) actions in terms of their true biodiversity impacts.

Combining the INVABIO framework with the current assessment
strategies will allow us to identify the dominant perspectives used, comment on the scientific validity of these strategies and formulate promising avenues for improvement. INVABIO allows to identify priority areas for a better execution of biodiversity policies and to develop strategic guidelines for policymakers. Throughout we will be attentive to the applicability of research outcomes to other EU countries.

As to dissemination and valorization, INVABIO will construct a web platform which will bring together the different insights and outcomes. The INVABIO web platform will act as a decision support tool for regulatory authorities involved in implementing biodiversity-related legislation by providing access to a unique dataset. Moreover, and based on the INVABIO framework, an interactive tool will allow users to retrieve specific and science-based guidelines for assessing the gravity of biodiversity impacts.

Last modified: 07-03-2023

Individual-based Value Assessment of Biodiversity in Policy Implementation (INVABIO) Application DMP

Questionnaire

Describe the datatypes (surveys, sequences, manuscripts, objects …) the research will collect and/or generate and /or (re)use. (use up to 700 characters)

The present research relies on various data types.
• Numerical and text data derived from surveys: *.csv collected via Qualtrics among international ecological experts (survey 1) and Belgian and European practitioners (survey 2)
• Text documents: *.docx, *. pdf, original sanctioning and permitting decisions coming from various members of the Advisory Committee
• Nvivo projects: *.nvp, files generated in Nvivo derived from text analysis of implementation decisions
• Numerical and text data derived from structured analysis of implementation decisions: *.csv, *.dta variable creation as needed
• Audio fragments: *.mp3, *.wav, audio recordings of the interviews of experts in value assessment

Specify in which way the following provisions are in place in order to preserve the data during and at least 5 years after the end of the research? Motivate your answer. (use up to 700 characters)

1. Designation of responsible person (If already designated, please fill in his/her name.)
2. Storage capacity/repository
    - during the research
    - after the research

Sandra Rousseau (supervisor) is responsible for data storage, compliant with privacy law.
During the research, the data is stored on a secure server with access via a password-protected web platform (data privacy and safety are key criteria for subcontractor selection). The promotor will keep a copy of the data in an encrypted folder a corporate Onedrive folder of the KULeuven, which ensures secure sharing of the data between the co-authors and has integrated back-ups, which ensures data availability. Both datasets will be kept for at least 10 years after the completion of the project. Finally, the data collected will be made publicly available in an anonymous way (via web platform).

What's the reason why you wish to deviate from the principle of preservation of data and of the minimum preservation term of 5 years? (max. 700 characters)

The data will be stored for more than 5 years, and this for several reasons. In line with the KU Leuven Research Data Management policy, the data will be preserved for at least 10 years after the end of the research project. Many top journals ask for empirical research results to be verified.
Furthermore, the data obtained is very costly, both in terms of money and effort. Therefore, the data will be used as well for follow-up projects.
In line with the principle of data minimization (cf. privacy law), the audio fragments will be destroyed after the interviews have been transcribed.

Are there issues concerning research data indicated in the ethics questionnaire of this application form? Which specific security measures do those data require? (use up to 700 characters)

This research involves the collection and processing of personal data as all parties are typically named in permitting and sanctioning decisions. When possible, anonymous decisions will be collected from the source. Else, the decisions will be anonymized as soon as possible following a strict protocol and the original files will be destroyed.
During the research, data will be handled with confidentiality (i.e. aggregated analyses on pseudonymized data, aggregated and anonymous reporting of results). The processing of personal data will be registered in the KU Leuven register, and given the ethical issues, the research will be reviewed by the Ethical Committee of KU Leuven, SMEC. A PRET application will be completed.

Which other issues related to the data management are relevant to mention? (use up to 700 characters)

We limit access to the data to the researchers. In the offices, we have a strict clean desk policy, and KU Leuven has a strict office key policy.

Individual-based Value Assessment of Biodiversity in Policy Implementation (INVABIO) DPIA

DPIA

Have you performed a DPIA for the personal data processing activities for this project?

- Not applicable

Individual-based Value Assessment of Biodiversity in Policy Implementation (INVABIO) GDPR

GDPR

Have you registered personal data processing activities for this project?

- Not applicable

Individual-based Value Assessment of Biodiversity in Policy Implementation (INVABIO)
FWO DMP (Flemish Standard DMP)

1. Research Data Summary

List and describe all datasets or research materials that you plan to generate/collect or reuse during your research project. For each dataset or data type (observational, experimental etc.), provide a short name & description (sufficient for yourself to know what data it is about), indicate whether the data are newly generated/collected or reused, digital or physical, also indicate the type of the data (the kind of content), its technical format (file extension), and an estimate of the upper limit of the volume of the data.

				Only for digital data	Only for digital data	Only for digital data	Only for physical data
Dataset Name	Description	New or reused	Digital or Physical	Digital Data Type	Digital Data format	Digital data volume (MB/GB/TB)	Physical volume
		Please choose from the following options: • Generate new data • Reuse existing data	*Please choose from the following options:* • Digital • Physical	*Please choose from the following options:* • Observational • Experimental • Compiled/aggregated data • Simulation data • Software • Other • NA	*Please choose from the following options:* • .por, .xml, .tab, .cvs,.pdf, .txt, .rtf, .dwg, .gml, … • NA	*Please choose from the following options:* • <100MB • <1GB • <100GB • <1TB • <5TB • <10TB • <50TB • >50TB • NA	
Administrative sanctioning track	*administrative transaction proposals, fining decisions as well as decisions imposing remedial action*	• Generate new data (statistical analysis) • Reuse existing data (textual data)	• Digital	compiled/aggregated data	• *Text documents: *.docx, *. pdf* • *Nvivo projects: *.nvp, files* • *Numerical and text data derived from structured analysis of implementation decisions: *.csv, *.dta*	• <100GB	
Judicial sanctioning decisions	*verdicts from first instance court division Turnhout*	• Generate new data (statistical analysis) • Reuse existing data (textual data)	• Digital • Physical	compiled/aggregated data	• *Text documents: *.docx, *. pdf* • *Nvivo projects: *.nvp, files* • *Numerical and text data derived from structured analysis of implementation decisions: *.csv, *.dta*	• <100GB	500 decisions
Permitting decisions	*environmental impact assessments covering biodiversity aspects – permitting decisions*	• Generate new data (statistical analysis) • Reuse existing data (textual data)	• Digital	compiled/aggregated data	• *Text documents: *.docx, *. pdf* • • *Nvivo projects: *.nvp, files* • *Numerical and text data derived from structured analysis of implementation decisions: *.csv, *.dta*	• <100GB	
Qualitative data	*interviews with experts for valuation and surveys with ecologists*	• Generate new data	• Digital	• Transcripts • Aggregated (coding)	• *Numerical and text data derived from surveys: *.csv* • *Audio fragments: *.mp3, *.wav, audio recordings of the interviews of experts in value assessment* • *Nvivo projects: *.nvp, files*	• <100GB	

If you reuse existing data, please specify the source, preferably by using a persistent identifier (e.g. DOI, Handle, URL etc.) per dataset or data type:

We are reusing textual data for the judicial and administrative sanctioning decisions, permitting decisions and the laws with the parliamentary preparation .
Judicial sanctioning decisions: first instance court division Turnhout and arrestendatabank.be
Administrative sanctioning decisions: Through Advisory Committee
Environmental impact assessment: team MER databank (https://omgeving.vlaanderen.be/nl/omgevingsvergunning/milieueffectrapportage/mer-dossierdatabank)
Permitting decision: publicly accessible database together with input from members of the Advisory Committee (www.omgevingsloketvlaanderen.be/publiekloket)
Laws and parliamentary preparation: from the official vlaanderen.be legal database (https://www.vlaamsparlement.be/nl/parlementaire-documenten)

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? Describe these issues in the comment section. Please refer to specific datasets or data types when appropriate.

- Yes, human subject data

Aside from the collection and processing of personal data as described in the next question, there are no known ethical issues concerning the creation and/or use of the data.
See ethical approval reference number: G-2022-5934

Will you process personal data? If so, briefly describe the kind of personal data you will use in the comment section. Please refer to specific datasets or data types when appropriate.

- Yes

The following datasets will use personal data: Administrative sanctioning track , *Judicial sanctioning decisions*, *Permitting decisions* and *Observational data.*
This research involves the collection and processing of personal data as all parties are typically named in permitting and sanctioning decisions. When possible, anonymous decisions will be collected from the source. Else, the decisions will be anonymized as soon as possible following a strict protocol and the original files will be destroyed. During the research, data will be handled with confidentiality (i.e. aggregated analyses on pseudonymized data, aggregated and anonymous reporting of results). The processing of personal data will be registered in the KU Leuven register, and given the ethical issues, the research will be reviewed by the Ethical Committee of KU Leuven, SMEC.
See ethical approval reference number: G-2022-5934
DPIA submitted and approved on 15 February 2023 by Toon Boon

Does your work have potential for commercial valorization (e.g. tech transfer, for example spin-offs, commercial exploitation, …)? If so, please comment per dataset or data type where appropriate.

- No

Do existing 3rd party agreements restrict exploitation or dissemination of the data you (re)use (e.g. Material/Data transfer agreements/ research collaboration agreements)? If so, please explain in the comment section to what data they relate and what restrictions are in place.

- No

There will be agreements with the parties providing the data. This relates to the text documents being original sanctioning and permitting decisions coming from various members of the Advisory Committee. The providers for the data are for:

- *Environmental impact assessments: publicly accessible through the MER database (*vlaanderen.be/mer-dossierdatabank)
- *Permitting decisions: collected in cooperation with the government (www.omgevingsloketvlaanderen.be/publiek-loket)*
- *Judicial sanctioning decisions: we have a permission from the first instance court Turnhout to collect data granted by the public prosecutors' office. Judicial sanctioning decisions are partially available online (https://arrestendatabank.be/).*
  Administrative sanctioning decisions: these are not publicly available online. However, the sanctioning administrations store the decisions digitally and in a centralized way and access to these decisions is allowed by law for scientific purposes, when requested and in compliance with privacy law (GDPR).
- *Regularization orders: Agency for Nature and Forests (ANB). This will follow the same modus operandi as the administrative sanctioning decisions.*

Restrictions can be made in the form of anonymization.

Are there any other legal issues, such as intellectual property rights and ownership, to be managed related to the data you (re)use? If so, please explain in the comment section to what data they relate and which restrictions will be asserted.

- No

2. Documentation and Metadata

Clearly describe what approach will be followed to capture the accompanying information necessary to keep data understandable and usable, for yourself and others, now and in the future (e.g., in terms of documentation levels and types required, procedures used, Electronic Lab Notebooks, README.txt files, Codebook.tsv etc. where this information is recorded).

We will create a README.txt file in order to make agreements on naming the data, organize the data etc. It will also contain the methodology used in collecting the data.

Will a metadata standard be used to make it easier to find and reuse the data? If so, please specify (where appropriate per dataset or data type) which metadata standard will be used. If not, please specify (where appropriate per dataset or data type) which metadata will be created to make the data easier to find and reuse.

- No

Will be assessed for each dataset separately during the project implementation

3. Data storage & back-up during the research project

Where will the data be stored?

Sandra Rousseau (supervisor) is responsible for data storage, compliant with privacy law. During the research, the data is stored on a secure server with access via a password-protected web platform (data privacy and safety are key criteria for subcontractor selection).

How will the data be backed up?

The promotor will keep a copy of the data in an encrypted folder a corporate Onedrive folder of the KULeuven, which ensures secure sharing of the data between the co-authors and has integrated back-ups, which ensures data availability.

Is there currently sufficient storage & backup capacity during the project? If yes, specify concisely.
If no or insufficient storage or backup capacities are available, then explain how this will be taken care of.

- Yes

Through the Onedrive (each KULeuven employee has 2 TB available)

How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

We limit access to the data to the researchers. In the offices, we have a strict clean desk policy. KU Leuven, UAntwerpen and UHasselt have a strict office key policy. The data is stored on a secure server with access via a password-protected web platform (data privacy and safety are key criteria for subcontractor selection).

What are the expected costs for data storage and backup during the research project? How will these costs be covered?

If the OneDrive is insufficient, we will consider using a SharePoint on premise site which is a protected and secure collaboration platform hosted in the KU Leuven datacenters, that acts as a central space for storing and jointly editing documents, information and ideas. A SharePoint site supports online collaboration and information exchange within a group. This is approved for storing confidential data and has automatic backups.
The price is € 344,80 € for the first year, thereafter € 274,80 € / year. Extra storage at € 39,80 / 5GB / year. This can be paid through the project budget.

4. Data preservation after the end of the research project

Which data will be retained for at least five years (or longer, in agreement with other retention policies that are applicable) after the end of the project? In case some data cannot be preserved, clearly state the reasons for this (e.g. legal or contractual restrictions, storage/budget issues, institutional policies...).

All the data will be stored for longer than 5 years in order to maintain the publicly accessible database created as an outcome of the research.

Where will these data be archived (stored and curated for the long-term)?

This will be decided later. Several options will be considered after consulting the interactive storage guide.

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?

A considerable amount of the FWO-budget has been reserved for data preservation.

5. Data sharing and reuse

Will the data (or part of the data) be made available for reuse after/during the project? In the comment section please explain per dataset or data type which data will be made available.

- Yes, in an Open Access repository

A database, open to anyone, will be created and will be available through the project website (www.invabio.eu).
During the research and creation of the database, access will be restricted to the researchers and to the Advisory Committee for testing purposes.

If access is restricted, please specify who will be able to access the data and under what conditions.

Access to final dataset will not be restricted.

Are there any factors that restrict or prevent the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)? Please explain in the comment section per dataset or data type where appropriate.

- Yes, Privacy aspects

The judicial and administrative decisions will be (pseudo-)anonymized during the research and no personal data will be made publicly available.

Where will the data be made available? If already known, please provide a repository per dataset or data type.

It will be made available through a publicly accessible database on our project's website. This has yet to be created.

When will the data be made available?

During the last semester of the project (summer/autumn 2026)

Which data usage licenses are you going to provide? If none, please explain why.

Public Domain Mark
or Creative Commons license

Do you intend to add a PID/DOI/accession number to your dataset(s)? If already available, you have the option to provide it in the comment section.

- Yes

If possible we would like to do this. However, this may depend on the dataset - will be decided later during the project implementation

What are the expected costs for data sharing? How will these costs be covered?

This aspect is included in the project budget (accessibility of database through website)

6. Responsibilities

Who will manage data documentation and metadata during the research project?

Coordination: Sandra Rousseau; Implementation: entire research team

Who will manage data storage and backup during the research project?

Backup: Sandra Rousseau; Data storage: the entire research team

Who will manage data preservation and sharing?

Sandra Rousseau

Who will update and implement this DMP?

Sandra Rousseau, Edo Schoone