



GRANULAR

# ETHICAL GUIDELINES

## D 1.1

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# D1.1 ETHICAL GUIDELINES

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<b>Authors</b>	Berchoux T. (IAMM), Miller D. (HUT), Bock B. (WU), Tapia C. (NOR), Knies G. (TI), Sorichetta A. (UniMi), Kirsch A. (IAMM), Floyd J. (UoS), Panoutsopoulos H. (AUA), Weber C. (CNRS)
<b>Work Package Leader</b>	Mediterranean Agronomic Institute of Montpellier (IAMM)
<b>Project coordinator</b>	Mediterranean Agronomic Institute of Montpellier (IAMM)



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## Acronyms

AI	Artificial Intelligence
API	Application Programming Interface
CESSDA	Consortium of European Social Science Data Archives
CODE	Communication, Outreach, Dissemination and Exploitation
CV	Curriculum Vitae
ESOMAR	European Society for Opinion and Market Research
EU	European Union
GDPR	General Data Protection Guidelines
GRANULAR	Giving Rural Actors Novel data and re-Useable tools to Lead public Action in Rural areas
IAMM	Mediterranean Agronomic Institute of Montpellier
ICT	Information and Communications Technology
IPUMSI	Integrated Public Use Microdata Series
LL	Living Laboratory (Lab)
MAL	Multi-Actor Laboratory (Lab)
NGO	Non-Governmental Organisation
NSI	National Statistical Institutes
REA	Research Executive Agency
REC	Research Ethics Committee
RL	Replication Laboratory (Lab)

## Executive Summary

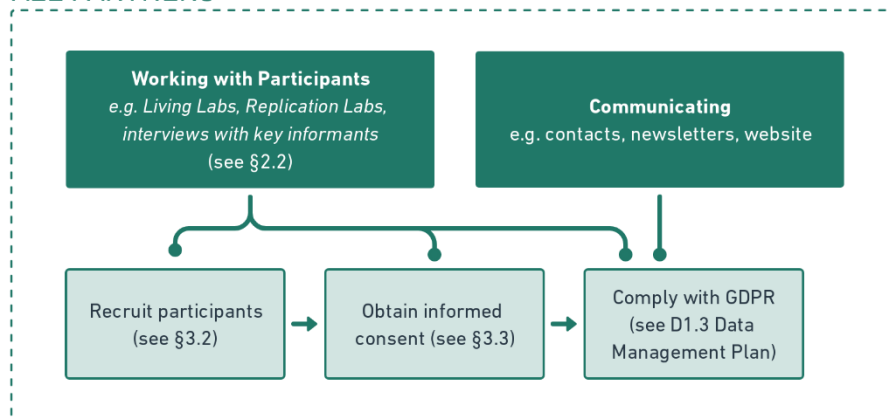
This document presents the ethics guidelines that GRANULAR partners need to follow in the implementation of the Project's activities. It provides the regulations related to the collection and handling of primary data, the use and processing of secondary data, as well as all relevant EU requirements and best practices in research procedures.

Lead investigator(s) or Representatives of each partner organization are responsible for ensuring that the project's work follows best practices, including ethics regulations. They are responsible to comply with all relevant national or institutional regulations related to the involvement of human participants in project activities before the activity takes place. If a partner does not have a Research Ethics Committee (REC), they must submit an Ethics Assessment form to the project's Ethics Committee. On the other hand, if a partner has their own procedures for obtaining ethics approval, they must provide evidence of approval for individual activities to IAMM to be kept on file.

During primary data collection, efforts will be made to protect user anonymity, minimize data collection, and safeguard the rights and freedoms of participants. Recruitment processes will follow guidelines for obtaining informed consent in accordance with GDPR. A template for obtaining informed consent from participants in project activities, along with an accompanying information sheet, has been provided. Participants have the right to withdraw from the activity or have their information deleted at any time, and the GRANULAR consortium will honour these requests. Research Partners that will use secondary data will ensure that these are in an aggregated form, which does not allow for the identification of individual participants.

All partners will need to follow general guidelines and regulations (as detailed in §Introduction). In addition (Figure 1), all Partners that will conduct activities with Participants will need to comply with the requirements of Primary Data Collection (see §Primary data, §Recruitment of participants, §Obtaining informed consent). Lead Investigators carrying research with Primary data or Secondary data will also need to get Ethical Clearance (see §Ethical Clearance Processes). A summary of the main activities carried out in GRANULAR and their corresponding ethical requirements is provided (§Ethical Requirements), and in more detail in Appendix E.

### ALL PARTNERS



### LEAD INVESTIGATORS

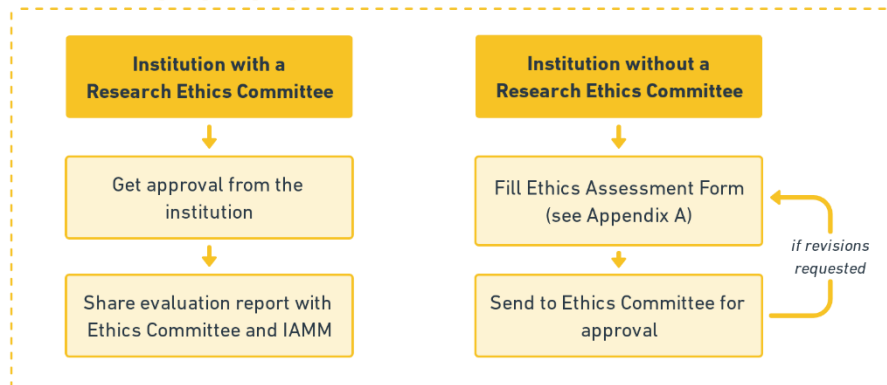


Figure 1: Summary of ethical requirements for GRANULAR Partners

## 1. Introduction

The GRANULAR project aims at generating new insights to characterize rural diversity, by generating novel tools, datasets and methods to better understand the characteristics, dynamics and drivers of rural areas to support the design of tailored place-based policies. GRANULAR develops a multidisciplinary methodology, with co-creation and multi-actor engagement at its core. The project will run 16 Multi-Actor Laboratories (MAL) in different regions of Europe that will bring together actors from science, policy and civil society, to co-design, test and validate methods and tools.

This document introduces the background for adhering to ethics in research, and provides specific guidelines to manage ethical issues in the activities involving human participants foreseen by the Project. Its preparation precedes any involvement of research participants external to the consortium, summarising the guidance on how the project and its partners will comply with the requirements of research ethics in a EU Horizon Europe project.

It summarises:

- the requirements for research involving human participants;
- the ethics requirements of the work in GRANULAR;
- the research activities to be carried out in each Work Package and the associated procedures and documents needed to satisfy the ethics requirements in accordance with EC procedures or those of the relevant countries and organisations.

The procedures followed by GRANULAR will ensure that ethical processes in activities involving human participants will be observed, and that all such activities administered are, or will be, approved before a relevant activity commences (i.e. prior to the recruitment process, not just the collection of data). A Glossary of terms pertinent to the protection, handling or security of data is provided in Appendix F.

### 1.1. Ethical guidelines and relevant legislations

Compliance with research ethics is an integral part of activities in GRANULAR. Partners are bound by the requirements to adhere to best practices regarding ethical standards and contemporary processes as they may evolve over the period of the project (c. 2022 to 2026). GRANULAR will comply with processes and approach to ethical clearance set out in Regulation (EU) 2021/695, establishing the Horizon Europe, Framework Programme for Research and Innovation (2021-2027) as documented in the Official Journal of the European Union, Articles 18a and 19 on ethical principles and ethics. Of particular relevance to GRANULAR are the principles of: proportionality, the right to privacy, the right to the protection of personal data, the right to non-discrimination.

GRANULAR activities will meet the following, which is in line with its Second Guiding Principle of impartiality and transparency:

- Project activities will be planned, designed, reviewed and undertaken to ensure integrity, quality and transparency of the research process.
- Participants and research staff will be informed fully about the purpose, methods and intended possible uses of the research, what their participation in the research entails and what risks, if any, are involved.
- Research participants should participate voluntarily, free of any coercion. Any damage or harm to the research participants should be avoided.
- The confidentiality of information supplied by participants in project activities (e.g. citizen engagement) and the anonymity of respondents will be respected.
- The independence of the research and project activities will be made clear, and any conflicts of interest or partiality will be explicitly mentioned.
- Efforts will be invested to prevent that our research methods (either quantitative, qualitative or hybrid) bring negative impacts to specific social groups or territories.

- Researchers must be honest, truthful and objective, ensuring that their research is conducted in accordance with the appropriate scientific research principles, methods and techniques.

The GRANULAR Consortium Agreement includes a requirement for all Partners to strictly adhere to the ethical standards and guidelines of Horizon Europe, regardless of the country in which the research is carried out. It includes reference to processes for the collection of personal data, and note that in some partner jurisdictions (e.g. UK), there is a requirement for a Data Protection Officer under the national data protections laws. Declarations of adherence to relevant data protection regulations will be provided by each partner, together with the contact details of the relevant person responsible for data protection at their organisation. These will be held by the Project Coordinator.

## 1.2. Ethics of data management

The management of ethics in any research project involving human participants is clearly framed by the European Charter of Fundamental Rights (European Union, 2010). In particular Articles 3, 7, 8 and 13 which refer respectively to: (i) the Right to the Integrity of the person; (ii) the Respect of Private and Family Life; (iii) the Protection of Personal Data; and (iv) the Freedom of the Arts and Sciences. These form the basis of ethics guidelines and support appropriate conduct of project activities.

The GRANULAR project will involve human participants (e.g. from stakeholders, in workshops) in the research through the collection of data using citizen science and through Multi-Actor Laboratories. It is expected that some personal data will be gathered in the Multi-Actor Laboratories, restricted to demographic information (e.g. age ranges, sex, area of residence), and employment or activities (e.g. type or place of employment; ranges of income). No personal data will be sought on issues such as health, ethnicity, genetic or biometrics, sexual orientation and gender identity, or religious or philosophical beliefs. Data will be collected without any intrusive methods from stakeholders through workshops in Multi-Actor Labs, and using citizen science applications.

Within the project, engagement (with participants but also with external audiences) will entail setting up a personal database for each Partner, which will contain minimal personal information, restricted to names, titles, contact details and field of expertise, in compliance with the EU General Data Protection Guidelines (GDPR) or equivalent that pertain in each partner country. This will include:

- Free movement of personal data – protection of the movement of personal data in order to preserve the rights and freedoms of natural persons.
- Lawfulness, fairness and transparency – personal data is processed lawfully, fairly and in a transparent manner.
- Data collection is lawful based on the free and informed consent (lawfully, fairly) of the data subject; the information provided to data subjects should be transparent and easy to understand (transparent manner).
- Purpose limitation – the data collected and subject to the consent of the participants should be treated based on specific, explicit and legitimate purposes.
- Data minimisation – the data collected must be adequate, relevant and limited to what is required.
- Storage limitation - the data retention period must be kept to a minimum, with the exception of data processed for archiving, scientific, statistical and historical research purposes, which can be kept longer, subject to safeguards.
- Integrity and confidentiality – the data must be treated by those responsible for the treatment in order to ensure its safety
- Accountability – it is the responsibility of the data controller to ensure activities comply with the GDPR regulations.

The Data Management Plan (Deliverable 1.3) and the Communication, Outreach, Dissemination and Exploitation (CODE) strategy (Deliverable 7.1) will include detailed guidelines to ensure that all partnership activities, and particularly stakeholder engagement, dissemination and communication activities, are conducted in accordance with EU GDPR.

### 1.3. National specificities

The Ethical Guidelines provide requirements that should be followed by default in the GRANULAR research environment. However, it is the responsibility of each partner to identify any additional national legislation that may apply in their country, and ensure compliance with these laws in addition to the EU GDPR. Partners should also consider the specificities and conditions of their national research context when defining procedures and research routines. The legal and practical consequences of noncompliance with EU and national laws and regulations will be determined on a national basis.



## 2. Ethics Principles

The GRANULAR project adopts an approach of co-construction to take into account the points of views of multiple actors through a consultative process, so as to highlight their vision of rural diversity, and gather their opinion on the issues they face. The Consortium recognises the need to ensure that data and knowledge generated through the project should cause no harm. For example, research findings may bring attention to previously unacknowledged problems within a community which could lead to negative consequences for its members. Or, research data could create potential exploitation of communities (e.g. where the community is used as a source of data without receiving any benefit from the research process). The ethical processes of GRANULAR are designed to avoid or minimise any such risks, as detailed in this deliverable.

In GRANULAR, researchers conducting participatory research action will prioritize building trust and collaborative relationships with the community. This was considered in the writing of the project proposal with the involvement of local territorial organisations in the research design process. GRANULAR will provide training and support to community members to enable their active participation in the research process, and ensure that research findings are shared with the communities, presented so that members of the public/people outside of their field can understand with minimal room for misinterpretation, and used to address their needs and concerns.

### 2.1. Knowledge-to-practice cycle

In its collection of data, GRANULAR will adopt a knowledge to practice cycle framework (see Data Management Plan, D1.3 for more details), which will provide an overarching approach to considering ethical issues in the Project. Such issues are expected to include power dynamics and contextual factors in decision-making, consent in research, responsible use of resources, respect for human, and the social responsibility of researchers and research.

It will be the responsibility of each researcher to check that data are collected and managed in an ethical way. At all stages in the research processes researchers in GRANULAR will follow good practices on how data is collected, stewarded, used and shared:

- collecting (i.e. processes);
- stewarding data (e.g. maintenance);
- using data (e.g. products and services, analysis and insights, or stories and visualizations) or reusing data;
- sharing data (within the Consortium, with external parties).

### 2.2. Primary data

The research in GRANULAR involves the collection and processing of personal data. These data will be protected in compliance with the EU Regulation No. 2016/679, which defines personal data as “any information relating to an identified or identifiable person” (for full definition see art. 4), and any other relevant national regulations. Within GRANULAR, primary data will be collected (e.g. name, address, email, CV, phone number) through face-to-face interviews, phone calls, email and workshops. Appropriate processes will be implemented to ensure the protection of all personal data of participants in the research. More details are provided about the processing of personal data within GRANULAR in Deliverable 1.3 “Data Management Plan”.

#### 2.2.1. Data minimisation

The collection and handling of personal data will follow the principle of data minimisation, as outlined in Article 5(1)(c) of the GDPR and Article 4(1)(c) of Regulation (EU) 2018/1725. This means that the personal data collected will be “adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed.”

For members of the Multi-Actor Laboratories, the data collected will be:

- Used to manage the lab (e.g. consent forms, invitations, agendas, discussion and position papers, feedback on documents, notification of changes in arrangements);
- Used to select actors for participation in discussions on certain topics;

- Limited to the purposes above with no extraneous information will be collected;
- Retained for the duration of the GRANULAR project and its reporting, or longer if it is in the public domain through agreement to being named in project documentation, websites, or dissemination materials. Otherwise, it is foreseen that the data will be barred from use and deleted from storage platforms 5 years after the end of the project. In the case that this period would change, it will be detailed in an update of the Data Management Plan.

For data relating to societal engagement, the data collected will be used for the following purposes:

- Managing consent forms and providing feedback if agreed to;
- Describing people providing feedback and the types of audiences reached.

As with the data collected for members of the Multi-Actor Labs, the data collected for societal engagement will be limited to these purposes and no extraneous information will be collected. The information will be retained for the duration of the GRANULAR project and its reporting, or longer if it is in the public domain through agreement to being named in project documentation, websites, or dissemination materials. Otherwise, it is foreseen that the data will be barred from use and deleted from storage platforms 5 years after the end of the project. In the case that this period would change, it will be detailed in an update of the Data Management Plan.

### **2.2.2. Protection of privacy and confidentiality**

Researchers in GRANULAR will take steps to ensure the protection of the privacy and confidentiality of individuals:

- Data will be de-identified, pseudonymized and/or anonymized before it is released to the researcher. This means that any personal information that could, potentially, identify an individual will be removed or obscured;
- Study subjects will be required to have given their consent for the use of their data. This will be achieved through the use of consent forms or other means of obtaining consent. It is the responsibility of each Partner to check and file the consent forms they collected;
- The outcomes of any analysis should not allow for the re-identification of participants, and results should be aggregated either spatially or categorically when feasible. Researchers will take steps presented in this deliverable to protect the privacy and confidentiality of individuals;
- The use of the data should not result in any harm or distress to the study subjects. Researchers should take care to minimize any potential negative consequences of their work.

### **2.2.3. Safeguarding rights and freedoms of Participants**

All GRANULAR activities will respect the rights and freedoms of participants and will take the following steps to protect these rights:

- Right to be informed: GRANULAR will provide an information sheet to participants, explaining the project, the use of the information collected through Multi-Actor Labs, and their rights. This information is also provided at the first meeting of the lab;
- Right of access: Participants can request information about the activities they contributed to (e.g. meeting documentation) and the information held about them (e.g. contact details);
- Right to rectification: Participants can request that inaccurate personal information be corrected;
- Right to erasure: GRANULAR will erase personal data if the data is no longer necessary for the original purpose or if the participant withdraws their consent for the data to be held;
- Right to restrict processing: this may involve removing published data from the GRANULAR website (e.g. as a member of a Multi-Actor Lab);

- Right to data portability: this may involve data that has been revealed in an interview for dissemination purposes;
- Right to object: GRANULAR will not use data for purposes that might be subject to a right to object (e.g. for direct marketing)
- Rights in relation to automated decision making and profiling: GRANULAR will not use data in any aspect of automated decision-making or profiling.

To safeguard these rights, participants can submit written requests to the Facilitator or Monitor of the Multi-Actor Lab, who will act on the request within one calendar month and provide the relevant information to the project Coordinator (IAMM) for records to be retrieved or updated accordingly.

### 2.3. Secondary data

Secondary data refers to information that has been collected previously for a different research project or purpose. The use of such data enables researchers to maximize the value of investments in data collection, reduce the burden on respondents, and ensure the replicability and transparency of study findings. Secondary data can originate from a variety of sources including official statistics, data collected by commercial organizations, and data from previous research projects. These data can be quantitative or qualitative in nature.

In GRANULAR such data will be used to explore the types of indicators it could support. All ethical issues which may arise when using secondary data will be considered. The potential benefits and risks will be considered, particularly with regard to the possibility of re-identifying individuals and disclosing sensitive information.

#### 2.3.1. Data from data service organisations

Many public and non-profit organizations that produce large amounts of data, such as national statistical institutes and research-led data collection enterprises, have established systems and infrastructure to archive, manage, and release data for secondary analysis in an ethical manner. These organizations are aware of the importance of protecting the privacy and confidentiality of study subjects and have put in place measures to ensure that data is de-identified and consent is obtained before it is released for secondary analysis. Examples of these organizations include Eurostat, all National Statistical Institutes (NSI), IPUMSI (Integrated Public Use Microdata Series; <https://international.ipums.org/international/>), in the EU and members of the Consortium of European Social Science Data Archives (CESSDA) in other European countries, which receive funding from the EU and national research councils or ministries.

These organizations ensure that all ethical conditions are met when releasing data for secondary analysis. This includes obtaining informed consent from study subjects, which may include provisions for sharing and the future use of the data. Data archives and public statistical agencies also have specific frameworks in place to minimize the risk of re-identification and disclosure of sensitive information connected to the use of microdata files for scientific research. These may involve strong anonymization techniques, such as re-coding, perturbation, and the production of synthetic data files, or the use of secure technological solutions that allow access to data in controlled environments. Most systems implement safe authentication through biometric identification, restrictions on downloading data, and checks on outputs before release. Access to data through these systems usually requires a detailed application process and the signing of contracts or terms of use that outline legal and ethical obligations. As a consequence, processing of such data will be considered as “without ethical risk” within GRANULAR.

#### 2.3.2. Other data sources

Researchers should be particularly careful when using data that was collected outside of established frameworks, such as data that was not collected with ethical approval or data for which ethical approval did not include provisions for secondary analysis. It is recognised that there are risks of misinterpreting the data if it was not appropriately documented by the data collector. Such data may also carry a higher risk of re-identification and disclosure of sensitive information, particularly if they are collected at the micro level. GRANULAR researchers will minimise the use of such data. In the unlikely case that it will be used, researchers will fill an Ethics Assessment (Appendix A) and submit it to the Ethical Committee in order to ensure that the use of the data is ethically responsible.

It is important to be aware that data from private-sector sources may raise intellectual property issues, as well as potential conflicts of interest. When working with data that might raise intellectual property right concerns, GRANULAR researchers will ensure that their use is subject to the licencing arrangements of the data, with consent sought by the participants as appropriate, the provenance of the data, risks of social profiling, and ensure that outcomes do not adversely impact a particular group or community. This will be mentioned in their Ethics Assessment to be submitted to the Ethics Committee.

## 2.4. Web-scraping

Web scraping is a method of collecting data from websites automatically. It involves using a program, often called a "bot" or "web scraper," to send requests for information to a website and then organizing the received data. This practice enables the easy extraction of publicly available data from the web.

The use of data obtained through web scraping can raise ethical concerns related to its use in research, such as issues of consent, privacy, anonymity, trust, and transparency. Confidential information and sensitive company data may be exposed, and the methods used to store harvested data may not be compliant with relevant regulations. APIs provided by companies (e.g. LinkedIn, Facebook, Twitter) may be bypassed in order to obtain more data than for which approval has been granted. Backward Google analysis may also lead to policy violations, which could be perceived as hacking, a breach of confidentiality, or the illegal use of data. Although web scraping that does not cause harm and is mindful of website performance is legal, the large-scale collection of data without permission or the unauthorized use of data for an extended period of time can violate laws.

To ensure that web scraping undertaken within GRANULAR is transparent and ethical, researchers will follow the following guidelines:

- Use a public Application Programming Interface (API) when available and avoid scraping altogether if the data required can be accessed through an API;
- Follow the web crawling rules defined in the robots.txt file of each website URL, if available;
- Provide identification of scraping bots by using a user agent string;
- Scrape data at a reasonable rate and reduce the number of requests per second to avoid overwhelming the server of the website owner;
- Collect and store only those data which are necessary for the research.

## 2.5. Use of Artificial Intelligence

In recent years, significant progress has been made in the development of Artificial intelligence (AI) techniques and their uses. AI has progressed from a largely theoretical concept with limited practical applications to become one of the fastest-growing technologies, and which is widely adopted in a variety of fields. In GRANULAR, AI will be used to generate data and indicators relevant to rural areas.

Three major ethical concerns about the use of AI are raised for society: privacy and surveillance, bias and discrimination, and the role of human judgment. These issues are closely related to the moral, social, and political implications of new technologies. The question of the role of human judgment in an era of rapidly advancing AI is particularly challenging and requires careful consideration. Bias in AI systems is a significant concern as it can influence the output of these systems in favour of certain social views.

In GRANULAR, AI applications will have a minimal or limited risk according to the Pyramid of Criticality from the Artificial Intelligence Act (European Commission, April 2021). Work will be undertaken conscious of the potential for bias and measures put in place to address it. These measures will help ensure that the output from AI systems is as fair and accurate as possible.

Researchers will adhere to the following ethical considerations when building and using AI systems:

- **Fairness:** AI systems can be influenced by biases in the data on which they are trained. It is important to ensure that the data used is as unbiased as possible in order to prevent the AI system from exhibiting biased behaviour.

- **Transparency and explicability:** Being open and transparent about the data being collected and used by the AI system will help to build trust with stakeholders. It is important to explain how the AI system makes predictions, and to provide examples of specific use cases.
- **Reliability and robustness:** Ensuring that the AI system produces accurate and reliable results is crucial for building trust. Regular testing and maintenance will help ensure that the system performs well under various conditions.
- **Accountability and responsibility:** Authorship and clear definition of the roles and responsibilities for the team working with the AI system will ensure that there is accountability for any issues created by use of the system.
- **Data privacy:** Protecting sensitive data used to train the AI system is crucial in order to protect the privacy of individuals. All systems developed in GRANULAR will comply with relevant data protection laws. Based on the Ethical assessments filed by Lead Investigators, the Ethics Committee might ask for a Privacy Impact Assessment (<https://www.cnil.fr/en/privacy-impact-assessment-pia>), which will be included in the Data Management Plan (Deliverable 1.3).

### 3. Ethical Clearance Processes

The responsibility for ensuring that activities meet the ethical principles as defined earlier is subject to appropriate ethics review. Their approval lies with the relevant project partner, for example exercised through its Research Ethics Committee (REC). Each Task Leader will identify if ethical clearance is likely to be required for the activities proposed by the Ethics Assessment (see Appendix A). These assessments will be reviewed as the project evolves, and monitored by the Executive Board, through the Work Package Leaders. Responsibility for the conduct of the activities rests with the lead investigator of the activity and their host organisation.

The strategy of GRANULAR to support and promote the capacity of research partners to handle ethical issues, in 3 steps:

1. **Data, methods and results analyses:** to increase the capacities of partners to identify ethical issues and propose an answer suitable with the standards required in the EU, partner countries and organisations;
2. **Impacts:** to identify positive and negative effects, and to take actions needed to minimize negative effects;
3. **Feedback, dissemination, transparency and legitimacy:** to inform and guide understanding of all partners of ethical issues throughout the project, to set up rules for dissemination, and to ensure transparency in project processes to reinforce confidence in the project.

#### 3.1. Ethics Committee

The Ethics Committee will ensure that all consortium partners are familiar with ethical guidelines and any legal requirements specific to the country where their research will be conducted. It is appointed by the Executive Board composed of an ethics representative of each team leading a Task within the Project. The Ethics Committee will provide oversight for all ethics related aspects for studies conducted in the context of GRANULAR. The Ethics Committee will convene virtually as often as necessary with a minimum of at least once a year over the duration of the project (4 years). Meetings will be set and organised by the Project Coordinator.

The missions and responsibilities of the Ethics Committee are:

- To ensure that all activities in the project have been subject to ethical review and approval:
  - For partners without a Research Ethics Committee: The Ethics Committee will evaluate the compliance of research activities with the ethics guidelines laid out in this Deliverable (i.e. review of the Ethical Assessment) and, when relevant, ask for modification in the activities to ensure compliance with relevant regulations and best practice;
  - For partners with a Research Ethics Committee: The Ethics Committee will compile the forms and proofs of ethical approvals;
- To assess potential ethical issues transversal to activities throughout the project;
- To seek advice from the Independent Ethics Advisor on ethical considerations for the project, when necessary.

#### 3.2. Obtaining ethical clearance

Project activities will be carried out in compliance with ethical principles (including the highest standards of research integrity), and applicable international, EU and national laws. In designing the processes for obtaining ethical clearance for activities within GRANULAR that include human participants or the use of secondary data, the current status of national or regional guidelines for research involving human participants and the existence of in-house processes for obtaining ethical clearance for project partners were reviewed.

Within the partnership, University of Southampton, University of Milan and James Hutton Institute each have a Research Ethics Committee. For most partners, there is no requirement for a Research Ethics Committee under relevant national laws or regulations thus a process is required to enable the project to comply with the requirements set out in the Grant Agreement.

Partners which have a Research Ethics Committee or equivalent institutional arrangement will follow their respective processes. Partners involved in the GRANULAR project who do not have a Research Ethics Committee or equivalent

will send an Ethics assessment form for review by the Ethical Committee (Appendix A), and if ethical issues arise, they will have to comply with the process at the level of the Task or Work Package Leader in which the research activity takes place.

### 3.3. Recruitment of participants

GRANULAR research activities will involve adult human beings, participating on a voluntary basis. The relevance of these participants will be due to their involvement in different rural sectors, and a wide range of stakeholders and experts involved in the design and implementation of policies that focus on rural development.

Examples of the types of participants foreseen in the research are: farmers, foresters, ICT businesses, rural entrepreneurs, advisors, stakeholders from NGOs, researchers, and policy makers and members of staff in administrative and financial agencies (both public and private).

For each research activity, criteria will inform the recruitment of participants. The specific criteria will be detailed in the ethical clearance processes of the relevant Tasks, but examples of those criteria are:

- experience connected to rural diversity (a specific topic of interest to a Multi-Actor Laboratory), rural policy, rural activities;
- relevance of expertise (e.g. geographic location);
- interest in GRANULAR (e.g. voluntary engagement in citizen science).

GRANULAR will not involve vulnerable groups, persons unable to give consent, under 18 years of age, patients or any other sensitive group and will not involve any physical or psychological interventions on participants.

### 3.4. Obtaining informed consent

Prior to the collection of any data, participants will be informed about the collection, processing and use of data provided. Relevant contacts in the Consortium (e.g. project teams facilitating Living Labs) will ensure that the required consent is provided.

A template that can be used in the project for recording informed consent of participants during face-to-face research activities is provided in Appendix B. If a project partner has an equivalent form which is part of their institutional process, then that form will be used, with the condition that it follows the general principles of what informed consent involves and what information needs to be made available to participants, in accordance with the “General Data Protection Regulation (GDPR) Guidance Note for the Research Sector: Appropriate use of different legal bases under the GDPR”<sup>1</sup> (European Society for Opinion and Market Research – ESOMAR, 2017).

The template is provided in English, to be translated into the languages relevant to the project activities so that it is usable in all of the Multi-Actor Labs. Completed copies of the consent forms will be kept on file by the relevant project partner, available for inspection if requested.

The informed consent form will be accompanied by an information sheet (Appendix C) which will describe the project background, and content of the project activity, and the rights of the participant to withdraw at any point during the activity (e.g. during an interview), and to have their data and their contact details removed from any documentation associated with the activity or project.

The information sheet will be sent to prospective members of the Labs together with a letter inviting their participation (Appendix D).

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<sup>1</sup>Available at: <https://esomar.org/uploads/attachments/ckv2fj3rh001jbw3vejg72q2-efamro-esomar-gdpr-guidance-note-legal-choice.pdf>



## 4. Ethical Requirements

A preliminary review of the activities in each Work Package (see Appendix E for full results) has identified the nature of any issues arising or ethical clearance required in each case.

WP	Leader	Data collected	Ethics consideration	Ethics requirements
WP1	IAMM	Primary (contact information)	Data minimisation, protection of privacy and confidentiality, safeguarding rights and freedoms of Participants	Consent forms + GDPR
WP2	WU	Primary (participants from MALs)	Data minimisation, safeguarding rights and freedoms of Participants	No
WP3	IIASA	Primary (MAL, EU participants)	Data minimisation, protection of privacy and confidentiality, safeguarding rights and freedoms of Participants	Consent forms + GDPR (for EU participants)
		Primary (web-scraping, citizen science)	Full anonymity of users, compliance with the terms of use stipulated by the system developers, server functionality	Submit GRANULAR ethics assessment form to Ethics Committee OR provide REC approval
		Secondary (satellite imagery, OpenStreetMap, Facebook mobility data)	Use of aggregated data (no identification possible). Use of AI for processing.	Submit GRANULAR ethics assessment form to Ethics Committee OR provide REC approval
WP4	NOR	Primary (contact information) + secondary (surveys, satellite imagery, data from WP3)	Use of aggregated data (no identification possible)	Submit GRANULAR ethics assessment form to Ethics Committee OR provide REC approval
WP5	HUT/ECR	Primary (participants from MALs/EU)	Data minimisation, protection of privacy and confidentiality, safeguarding rights and freedoms of Participants	Consent forms + GDPR (for EU participants)
WP6	UNIPi	Primary (participants from MALs)	Data minimisation, protection of privacy and confidentiality, safeguarding rights and freedoms of Participants	Consent forms, information sheets + GDPR
WP7	AEIDL	Primary (contact information)	Data minimisation, protection of privacy and confidentiality, safeguarding rights and freedoms of Participants	Consent forms + GDPR
		Primary (participants from MALs)	Data minimisation and anonymisation, protection of privacy and confidentiality, safeguarding rights and freedoms of Participants	Consent forms, information sheets + GDPR (if not already collected through WP6)



## 5. Conclusion

The GRANULAR project has developed ethics guidelines to ensure compliance with the project's Description of Action and the Ethics Review of the project proposal. The project will follow all relevant EU requirements and best practices in research procedures. Each partner will follow their institutional guidelines and national requirements, and the approach laid out in this deliverable. Partners without a Research Ethics Committee will submit an Ethics Assessment form to the project's Ethics Committee, while Partners with in-house procedures for obtaining ethics approval will provide evidence of approval for individual activities to IAMM to keep on file.

Primary data collection will follow the rules of user anonymity, data minimisation and will ensure that the rights and freedoms of Participants are safeguarded. Recruitment processes will follow the guidelines on obtaining informed consent, in compliance with GDPR. The use of secondary data in the Project will be limited to aggregated data with no possible identification of Participants.

Research ethics will form a standing item on the annual Assembly. Throughout the duration of the project, any new requirements or best practices published in research ethics will be monitored and implemented as appropriate.

## Acknowledgments

This report is compiled for the GRANULAR project (Horizon Europe Grant Agreement No. 101061068, UKRI Grant Agreements No. 10039965 and No. 10041831). Colleagues at partner organisations have contributed information on specific details relating to the types of data expected to be collected and processed, and any issues relating to ethics or data protection.

## Appendices

### A – Questionnaire for ethical assessment within GRANULAR

#### Sources

- Name/describe the key data sources, whether the data are being collected by the project partner or accessed via third parties.
- Are any personal data involved, or data that is otherwise sensitive?

#### Limitations in data sources

- Are there limitations that could influence project outcomes?
- Issues considered are:
  - bias in data collection, inclusion/exclusion, analysis, algorithms
  - gaps or omissions in data
  - provenance and data quality
  - other issues affecting decisions, such as team composition

#### Sharing data with others

- Will the data be shared with other organizations? If so, which ones?
- Is there an intention to publish any of the data?
- If yes, under what conditions?

#### Ethical and legislative context

- What existing ethical codes apply to the sector or activity? What legislation, policies, or other regulation shape how the data will be used?
- What requirements do they introduce?
- Issues to be considered are:
  - the rule of law;
  - human rights;
  - data protection;
  - Intellectual Property and database rights;
  - antidiscrimination laws;
  - data sharing,
  - public policies,
  - regulation and ethics codes/frameworks specific to sectors (e.g. health, employment, taxation).

#### Rights around data sources

- From where did the data originate? Was it produced by an organization or collected directly from individuals?
- Was the data collected for GRANULAR or for another purpose?
- Is there permission to use the data, or another basis on which its use is permitted?
- What ongoing rights will the data source have?

#### The reason for using the data

- What is the primary purpose for collecting and using data in GRANULAR?
- What are the main use cases?

- Does the research activity and the use of the data collected make things better for society? If yes, how and for whom?
- Is this project replacing another product or service?

### **Communicating the purpose of the research activity**

- Do people understand the purpose of the research activity, especially those about whom the data is about or are impacted upon by its use?
- How have the purposes of the research activity been communicated?
- Has this communication been clear?

### **Negative effects on people**

- Is there anyone who could be negatively affected by this research activity in GRANULAR?
- Could the way that data is collected, used or shared cause harm or expose individuals to risk of being re-identified? Could it be used to target, profile or prejudice people, or unfairly restrict access (e.g. exclusive arrangements)?
- How are limitations and risks communicated to people? Consider: people who the data is about, people impacted by its use and organizations using the data.

### **Minimising negative impact**

- What steps will be taken to minimise any risks of harm to research participants?
- How could limitations in data sources be reduced? How and where are personal and other sensitive information being kept secure?
- How are potential negative impacts of GRANULAR being measuring, reported and acted upon?
- What benefits will these actions bring to GRANULAR?

### **Engaging with participants**

- How can participants engage with the research activity?
- How can participants correct information, appeal or request changes to the product/service? To what extent?
- Are appeal mechanisms reasonable and well understood?

### **Openness and transparency**

- How open can the project team be about the specific aims of a Task or activity?
- Could any of the following be published? Methodology, metadata, datasets, code or impact measurements?
- Can feedback on the project be sought from peers?
- How will the information about the project activity be communicated internally?
- Will the actions and answers to information about project activities be reported openly?

### **Ongoing implementation**

- Are the thoughts, ideas and considerations of people affected within GRANULAR being built into the project? If yes, then how?
- What information or training might be needed to help people understand data issues?
- Are systems, processes and resources available for responding to data issues that arise in the long-term?

### **Reviews and iterations**

- How will ongoing data ethics issues be measured, monitored, discussed and actioned?
- How often will responses to those ethics issues be reviewed or updated, and when?

**Actions**

- What actions will the project team take before moving forward with the activity? Which should take priority?
- Who will be responsible for these actions, and who must be involved?

## B – Template for obtaining informed consent

### GRANULAR Multi-Actor Labs – Consent Form

Funded by the Horizon Europe programme and the United Kingdom funds on research and innovation, GRANULAR project - which stands for “Giving Rural Actors Novel Data and Re-Usable Tools to Lead Public Action in Rural Areas” - aims to generate new insights to characterize rural diversity.

Led by IAMM, GRANULAR gathers 23 partners (academic institutes, international organisations, NGOs, rural networks and local authorities) and will use participatory methods in 16 pilot territories across Europe in order to capture **the complexity of challenges faced by rural areas with a local stakeholders’ perspective**.

**Please tick the boxes**

I confirm that I have read, or had read to me, and understand the information sheet dated ..../..../..... <sup>2</sup> for the GRANULAR project. I have had the opportunity to ask questions and these have been answered fully and explicitly.	
I understand that my participation is voluntary, and I am free to withdraw at any time without providing any reason and without my legal rights being affected.	
I understand that confidentiality will be maintained at all times, data will be pseudonymised at the earliest possible time and it will not be possible to identify me from any publications/outputs.	
I understand that this form relates to all of the activities to which I am contributing within GRANULAR project.	
I agree to take part in GRANULAR project.	
I agree to being contacted at a later date in relation to GRANULAR project.	
I agree for the information I provide to be recorded (e.g. audio, flipchart notes), transcribed and potentially translated.	
I acknowledge that I have read and understood the privacy notice (presented p.2 as below).	
I confirm that I will keep participant confidentiality in the context of the project	

Name of the participant

Signature

Date

<sup>2</sup> Please insert the date of the information sheet

## PRIVACY NOTICE

The *[Name of the organization in charge of the collection of data]* will use your personal data (name, age, gender, profession, employer, area of expertise, email) for the purposes of the research undertaken in GRANULAR project. Our legal basis for processing your data is that it is necessary for the performance of a task carried out in the public interest in relation to research co-funded by the European Commission (grant number 101061068) and UK Research and Innovation (grant numbers 10039965 and 10041831).

We are the Data Controller over your personal data. We will not share your personal data beyond the project consortium<sup>3</sup>, unless required by law and shall only retain it according to good scientific practice for as long as is necessary to fulfil the research undertaken on the project, to deliver project outcomes, and to fulfil the requirements of the funders. In particular, as a requirement of EU-funded project, data will be anonymised and made open access. You have rights in relation to your personal data as defined in *[relevant articles of your national data protection laws / regulations]*<sup>4</sup>. For further information, please contact *[add email address of person responsible for data protection]*.

Contact details:

*[Insert Name of the Organization]*

*[Address]*

*[Email address]*

*[Telephone]*

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<sup>3</sup> List of the consortium partners: Mediterranean Agronomic Institute of Montpellier (France), Nordregio (Norway), Wageningen University (The Netherlands), IIASA (Austria), University of Pisa (Italy), Agricultural University of Athens (Greece), AEIDL (Belgium), CZU (Czechia), CNRS (France), University of Paris-Cité (France), European Rural Development Network (Poland), Thünen Institute (Germany), Ecorys (Belgium), University of Vigo (Spain), Prepare (Belgium), Region Västerbotten (Sweden), Municipality of Opsterland (The Netherlands), Rural District of Val di Cecina (Italy), LUKE (Finland), Pays Pyrénées-Méditerranée (France), Koszalin University of Technology (Poland), Mediterranean Agronomic Institute of Chania (Greece), University of Milan (Italy), University of Southampton (UK), The James Hutton Institute (UK).

<sup>4</sup> To be completed by the organization in charge of collecting data with the relevant articles of your national data protection laws / regulations. For a checklist on the GDPR on EU level, please see <https://gdpr.eu/checklist/>

## C – Template for information sheet

### GRANULAR Multi-Actor Labs - Information Sheet

#### What is GRANULAR?

Funded by the Horizon Europe programme and the United Kingdom funds on research and innovation, the GRANULAR project - which stands for “Giving Rural Actors Novel Data and Re-Usable Tools to Lead Public Action in Rural Areas” - aims to generate **new insights for characterising rural diversity**.

Led by IAMM, GRANULAR gathers 23 partners (academic institutes, international organisations, NGOs, rural networks and local authorities) and will **use participatory methods in 16 pilot territories across Europe** in order to capture the complexity of challenges faced by rural areas with a local stakeholders’ perspective.

The project is structured in **7 work packages** with many inter-linkages and will contribute to current scientific discussions through:

- (i) advancement of concepts to characterise rural diversity and grasp rural proofing;
- (ii) novel methods to generate data relevant to rural areas, and new thematic datasets;
- (iii) empirical findings from Multi-Actor Labs and from data analyses for specific topics.

All partners will contribute to the design of data, indicators and tools. Co-construction will ensure that GRANULAR takes stock of local realities and needs, while fitting the findings in overarching policy frameworks. Data and tools emerging from the project will be developed through an open strategy that will ensure replicability and will be made available online through public repositories and a dedicated online platform.

In addition, GRANULAR will create a **Rural Compass**, that takes into account the factors affecting rural communities and their functional characteristics, informing policymakers and rural actors for the **design of tailored rural policies** for a just, resilient and inclusive development.

#### What is a Multi-Actor Lab (MAL)?

Co-creation and multi-actor engagement are at the core of GRANULAR approach. Multi-Actor Labs will gather a balanced mix of actors representing science, policy and civil society (e.g. local authorities, specialized governmental agencies, public statistic agencies, private sector companies, innovation networks, Local Action Groups, NGOs, researchers, citizens).

Two types of labs are differentiated:

- **Living Labs (LLs)** which will bring together actors from science, policy and civil society, to co-design, test and validate GRANULAR work (7 LLs involved - France, Netherlands, Italy, Poland, Spain, Sweden, United-Kingdom);

- **Replication Labs (RLs)** which will assess how to replicate the tools and methods of the project in other countries (9 RLs - Albania, Finland, Greece, Italy, Latvia, Lithuania, Moldova, Romania and Serbia).

LLs will be run by members of the GRANULAR consortium (**facilitators**) with strong practical experience in designing local policies or participating in decision making on the ground. LLs will be supported by **scientific partner** (based on geographical expertise). Facilitators will be responsible of the management, coordination and animation of the Living-Labs, while the scientific partner will guarantee scientific excellence (including representativeness of stakeholders) and interaction with the other work packages.

RLs will be led, coordinated and managed by GRANULAR scientific partners. These partners will host and be responsible for the animation of the lab.

#### What will the MALs do?

Multi-actor Labs (MALs) are a collaborative and participatory method using a multi-actor approach, which will be used to identify needs relevant to their levels of governance, co-design and test methods and tools, validate data and indicators, and to ensure their replicability.

The objective is to co-create relevant and validated knowledge with a diversity of local rural actors in order to equip rural policy makers and rural communities with the data and tools needed for better decision-making.

Living Labs will be embedded in an ongoing local policy process in order to co-design, test and validate data, methods and tools throughout the different stages of the policy making cycle. Replication labs will assess the replicability of the methods and tools developed in the living labs.

First, stakeholders will implement the rural compass and evaluate its effectiveness for "rural proofing" local policies. Then, the replication labs will validate and evaluate the outputs generated within the project, in order to critically assess their replicability to a wide range of contexts.

### **What are you being asked to do?**

We would like to ask you:

- to **sign a consent form**; and
- contribute to the running of MALs by **attending workshops and meetings of the MAL** to co-design, test and validate data, methods and tools throughout the different stages of the policy making cycle OR (for RLs) to assess the replicability of the methods and tools developed in the living labs.

### **How long will the activity last and where will it take place?**

Specific details about activity schedule, focus and location would be provided from the MAL Facilitator at the time of invitation to take part in a meeting or a research activity.

### **How long the information will be used?**

Information will be used for project purposes only. It will be analysed with other information collected through other activities from GRANULAR project.

Project results will be published in the form of reports to the European Commission, on topics discussed, articles in scientific journals, papers and presentations at technical or scientific events, and to project partner teams participating in GRANULAR.

Additionally, GRANULAR will disseminate research results to actors that the MALs find relevant in their country or region.

### **Pseudonymity and confidentiality**

We will ask for your name and contact details, which we will only use for our own project records, and so that we can contact you to share project outputs if you so wish. At any time, you have the right to ask for your contact details to be deleted from our records.

The information you give us will be treated as confidential and will be pseudonymised so that it cannot be linked to you personally. We will not disclose any details that could be used to identify you. If quotes are used in any output, these will be pseudonymised, unless else is agreed with the Facilitator of the MALs.

### **No obligation to take part**

Taking part in this study is entirely voluntary and you can withdraw at any time. During any activity, you are free not to answer questions without any explanations. You will be asked to provide a consent prior to joining the MAL to show that you understand your rights as a participant and that you are committed to take part in the MAL. This consent form will be sent to you by your MAL Facilitator if you accept to participate.

### **Reimbursement of eligible costs incurred**

For some of the activities in MAL, eligible costs for travel and accommodation to participate in a meeting can be reimbursed. Further details will be provided from the Facilitator and Monitor of your MAL.

### **For more information, please contact**



- Facilitator of the MAL: INSERT Name, address and email address; or
- Work package lead of GRANULAR WP6: Michele Moretti, UNIPI ([michele.moretti@unipi.it](mailto:michele.moretti@unipi.it)) and Francesca Uleri, UNIPI ([francesca.uleri@agr.unipi.it](mailto:francesca.uleri@agr.unipi.it))
- Project Coordinator of GRANULAR: Tristan Berchoux, IAMM ([berchoux@iamm.fr](mailto:berchoux@iamm.fr)) and Aurélie Kirsch, IAMM ([kirsch@iamm.fr](mailto:kirsch@iamm.fr))

## D – Letter of invitation to participate in a Multi-Actor Lab

### GRANULAR Multi-Actor Labs – Invitation Letter

*Dear Facilitator of a GRANULAR Multi-Actor Lab, please translate to local language (if you find it necessary) and insert the following letter into an email to invite rural actors to join your MAL. Please also attach the information sheet to the email.*

#### Invitation to participate in a Multi-Actor Lab of GRANULAR project

Dear ADD Title and Name

The GRANULAR project – which stands for “Giving Rural Actors Novel Data and Re-Usable Tools to Lead Public Action in Rural Areas” – invites you to become a member of a Multi-Actor Lab (MAL) in *INSERT Name of the country*. The GRANULAR MALs gather a balanced mix of actors representing science, policy and civil society (e.g. local authorities, specialized governmental agencies, public statistic agencies, private sector companies, innovation networks, Local Action Groups, NGOs, researchers, citizens).

The interaction between science, policy and civil society will take place in 16 pilot territories across Europe in order to capture the complexity of challenges faced by rural areas with a local stakeholders’ perspective. The objective is to co-create relevant and validated knowledge with a diversity of local rural actors in order to equip rural policy makers and rural communities with the data and tools needed for better decision-making. The activity in each MAL is supported by a facilitator and the meetings and activities will be carried out in *INSERT language*.

GRANULAR is a research project funded by the EU via Horizon Europe programme and the United Kingdom funds on research and innovation. The project is carried out by a consortium of 23 partners coordinated by the Mediterranean Agronomic Institute of Montpellier (IAMM).

#### What is in it for you?

Multi-actor Labs (MALs) are a collaborative and participatory method using a multi-actor approach, which will be used to identify needs relevant to their levels of governance, co-design and test methods and tools, validate data and indicators for better decision-making, and to ensure their replicability.

The Multi-Actor Labs will provide a living space to a diversity of actors for interactive innovation on data and tools needed by rural communities and rural policymakers. They will provide interactions among participants based on face-to-face and online activities.

We would value your perspective and contribution as a member of one of these MALs. As a minimum, this means participating in meetings and workshops. For some of the activities in the MAL, travel costs can be reimbursed. Please see the *Information Sheet* for more details.

You are cordially invited (upon your acceptance of this invitation), to become a member in the MAL in *INSERT Name of the country*. To confirm your willingness and availability to participate, please send me your answer by the end of *ADD date month and year*. Members of the MALs will also be asked to sign a *Consent Form* to formalize participation.

Please do not hesitate to get back to me for any questions. I look forward to hearing from you.

Yours sincerely,

Facilitator of the MAL in *INSERT Name of the country*

ADD Title and Name, email address and phone number

## E – Results from the Ethics Rapid Assessment

### Task number

3.1

#### What data will be used?

Data collected with participants (incl. multi-actor labs, citizen science)

#### Provide a brief outline of the research to be carried out.

We will be scanning the data landscape to obtain an overview of potential datasets and related methods that could ultimately feed into new rural indicators

#### If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.

We will collect various forms of data - all of the above actually. Data collected with participants will be done via LLs and other groups. Consent is provided upfront during the data collection stage. In terms of secondary data, existing data licences will be followed. The use of web scraping will be minimized.

#### If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.

Difficult to estimate at this point.

### Task number

T3.2.

#### What data will be used?

Data collected with participants (incl. multi-actor labs, citizen science)

#### Provide a brief outline of the research to be carried out.

EU level => Possibly general EU level screening: interviews / reaching out to different data providers, incl. Eurostat, JRC, different DGs (Agri, Employ, Envi, etc.) etc.

National level: project partners will be consulted / help with filling out matrices & possibly interviews with national level actors

Local level: Consultation and co-design with local stakeholders (from LL) to prioritise requirements and identify options to be tested.

#### If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.

See above

**Task number**

3.3.2

**What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

**Provide a brief outline of the research to be carried out.**

Mobility data, as well as the spatial and non-spatial drivers of mobility, will be used to characterise rural and functional areas in order to assess the drivers of mobility within and between them.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.****If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Facebook Movement data are processed by Facebook to administrative units (admin 1 and admin 2), as well as 1-km tiles. Facebook has paid for bespoke administrative units and tiles to process their movement data. Data are downloaded monthly for all available time periods. These data are publicly available (once access is applied for and approved by Facebook) and the data are deleted from their public server every 90 days. All user data are aggregated by Facebook and no individual or personally identifiable data are available to us.

**Task number**

Task 3.3.3. Nowcasting

**What data will be used?**

Web-scraping

**Provide a brief outline of the research to be carried out.**

The task deals with producing innovative nowcasted indicators. Nowcasting is a ML technique used to produce "real time", "almost real time" or, more generally, indicators at higher frequency than official statistics. The indicator to produce will involve the use of assorted data, ranging from official statistics to news feeds. These data are used to train and deploy the predictive M model.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

We will make use of public datasets and accessible APIs as much as we can, but there might be occasional use of web-scraped data. If this is done, we will make sure that the task takes place under high ethical standards, ensuring: (1) full anonymity of users, in the unlikely case that personal data is used, (2) compliance with the terms of use stipulated by the system developers, and (3) server functionality (avoiding overloading the sites with a large number of queries).

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

Ethical principles related to the trustworthiness, unbiasedness and transparency of research will be ensured by following internal peer review processes and by making research accessible and reproducible.

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

At this point, it is not possible to list the secondary data that will be used for the simple reason that the indicators still need to be identified and discussed within the project.

**Task number**

T3.3.4 Earth Observation

**What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

**Provide a brief outline of the research to be carried out.**

Based on the needs and requirements from the MALs (WP6), this task will use Earth Observation satellite imagery to derive indicators relevant to rural areas, such as land-use, landscape structure, thermal footprints. Artificial Intelligence algorithms will be developed to detect change and to process images.

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

We will ensure that the AI applications developed will be fair, transparent and the algorithms explicable and robust.

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Copernicus products will be used (Sentinel 2B, Sentinel 3) or NASA equivalents (Landsat, MODIS) in the case of the absence of a relevant Copernicus product. Artificial Intelligence algorithms will be developed to detect change and to process images. Maximum spatial resolution will be of 10m, ensuring that no individuals can be identified.

**Task number**

T4.1 Environmental resilience and climate hazards in rural areas

**What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

**Provide a brief outline of the research to be carried out.**

The task deals with the analysis of factors increasing environmental resilience of rural communities. Analyses will be based on the needs and requirements from MALs (WP6). Topics of analysis will include the associations between landscape structure and the provision of ecosystem services, biodiversity indices.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

Not relevant

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

As in other tasks, our research will be transparent, explicable and should not contribute to further stigmatise certain regions.

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Most of the data used in this task will be retrieved from WP3. Other datasets, such as harmonised statistics, will be retrieved from official established banks (Governments, Eurostat, EEA).

#### **Task number**

Task 4.2 Rural resilience and inequalities

#### **What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

#### **Provide a brief outline of the research to be carried out.**

The task deals with the analysis of rural resilience and rural inequalities. The two subtasks will apply different methodologies and will use specific datasets. In the case of rural resilience will probably use official statistics at regional/municipal level to develop some sort of multidimensional index or classification of territorial units (municipalities or NUTS3 regions). In the case of rural inequalities will look at the issue mostly from the perspective of income and accessibility to services. The income strand will produce structural (e.g. within and across inequality indices) and longitudinal analyses (e.g. club convergence) to track socioeconomic inequalities in rural areas. The accessibility strand will base on the data produced in WP3 to explore accessibility to basic services (health, education, etc.).

#### **If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

Not relevant

#### **Are there any additional ethical considerations or other information you feel may be relevant to this study?**

As in other tasks in the project, our research should not contribute to further stigmatise certain regions or social groups.

#### **If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Most of the data will be retrieved from official established statistical banks with harmonised statistics at regional levels (Eurostat, OECD, etc.). For the inequality analysis we might also use Eurostat microdata on household income and living standards. The accessibility data will be produced in WP3.

#### **Task number**

T4.3 Food systems and land tenure models

#### **What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

#### **Provide a brief outline of the research to be carried out.**

This task explores the properties of European food systems and their sustainability. It will characterise the spatial signature of foodsheds and the degree to which a territory might be self-sufficient. Other analyses will include dynamics of soil sealing and land tenure in rural areas, using Earth Observation imagery.

#### **If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

Not relevant

#### **Are there any additional ethical considerations or other information you feel may be relevant to this study?**

As in other tasks, our research will be transparent, explicable and should not contribute to further stigmatise certain regions.

#### **If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Data used in this task will be retrieved from WP3 and official established banks (Governments and relevant agricultural agencies, Eurostat).



**Task number**

Task 4.5 Rural attractiveness

**What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

**Provide a brief outline of the research to be carried out.**

The task deals with the analysis of the factors contributing to explain regional attractiveness. It will base on an econometric model where the dependent variable will be a demographic indicator summarising the rural attractiveness of the territorial units (municipalities or NUTS3 regions) and the explanatory variables will be a collection of territorial factors including as many dimensions as possible, focusing on those pinpointed by the literature as being more relevant drivers of rural attractiveness. There is a parallel strand looking at the influence of housing and accommodation on rural attractiveness. This strand might be proxied in the model through some kind of price-to-income-ratio, upon availability of harmonised data at the EU level.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

Not relevant

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

As in other tasks in the project, our research should not contribute to further stigmatise certain regions or social groups.

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Most of the data will be retrieved from official established statistical banks with harmonised statistics at regional levels (Eurostat, OECD, etc.). We also expect to include in the model the indicators produced on previous tasks in this WP, as well as several others generated in WP3. Housing data might be retrieved from local statistical sources. There is also a possibility that this analysis will be run in one of the living labs using web scrapping techniques. If so, the same ethical principles mentioned on task 3.3.3. will hold also here.

**Task number**

T5.1

**What data will be used?**

Data collected with participants (incl. multi-actor labs, citizen science)

**Provide a brief outline of the research to be carried out.**

Workshops at EU level and a subset of Multi-Actor Labs to test the rural proofing framework, requiring completion of a questionnaire using a template to be supplied.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

No recruitment specific for the Task. Actions use the forums recruited elsewhere in the project.

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

No.

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

No secondary data expected to be used.

**Task number**

T5.2

**What data will be used?**

Secondary data (incl. large surveys, satellite imagery, crowd-sourced data)

**Provide a brief outline of the research to be carried out.**

Testing potential indicators for which secondary data may be relevant. No new data is expected to be collected for the Task, and no data collection will involve human participants.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

Not relevant

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

No

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Secondary data may include that derived from third party sources (e.g. Eurostat, Copernicus, public agencies, etc.). No personal data will be used. No ethical issues are expected to arise.

**Task number**

T5.3

**What data will be used?**

Data collected with participants (incl. multi-actor labs, citizen science)

**Provide a brief outline of the research to be carried out.**

Workshops will be run in the Living Labs on priority policies for sustainability transitions.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

No recruitment requirement specific to the Task. Workshops will use forums set-up elsewhere in the project.

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

No

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

No secondary data expected to be used.



**Task number**

T5.4

**What data will be used?**

Data collected with participants (incl. multi-actor labs, citizen science)

**Provide a brief outline of the research to be carried out.**

Workshops with the EU and local Living Labs to co-construct a set of recommendations for policies on the sustainable transition of rural areas and communities.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

No recruitment specific for the Task. Forums to be used will be created elsewhere in the project.

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

No.

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

No secondary data expected to be used.

**Task number**

7.1, 7.2, 7.5

**What data will be used?**

Data collected with participants (incl. multi-actor labs, citizen science)

**Provide a brief outline of the research to be carried out.**

Task7.1. AEIDL will design the CODE strategy with contributions from all partners; including detailed implementation, monitoring and assessment principles and activities

T7.2 AEIDL will create and maintain the project website (launched in mo 03) which will host information about the project, partners, deliverables, updates and events, as well as all communication outputs. Further actions will include the development of a unique visual identity, templates for different types of documents (e.g. MS Word, PPT, etc.), editorial work, management of social media channels and media relations (e.g. drafting press releases, promoting articles in the media), production of multimedia material (videos, interviews, webinars)

Task 7.5 GRANULAR Knowledge Transfer Accelerator to boost dissemination (mos 1-48)

(Task Leader: AEIDL, Participants: AUA, IAMM, ECR, HUT, WU, ERDN, PRE, All other partners)

The GRANULAR Knowledge Transfer Accelerator (KTA) is a multi-faceted and transversal approach, which illustrates

an ambition to boost the dissemination, and the transfer of knowledge produced in the project. The KTA will be created, planned, coordinated, and monitored by an ad-hoc taskforce of WP leaders.

**If data will be collected, briefly explain the recruitment process (identification, how they will be approached) and how you will obtain consent.**

All data used in the above mentioned tasks will be collected from the Project Participants and their explicit consent. Additional data may be collected from open sources.

**Are there any additional ethical considerations or other information you feel may be relevant to this study?**

No

**If working with secondary data, please outline what data you might be using, the methods for processing and what are the associated ethical risks.**

Project partners will explicitly consent the sharing of data that is necessary to accomplish the above mentioned tasks in WP7 including the request not to share or disseminate further elements of such information (e.g. person names). Data may be stored in the Website that is foreseen in this project.

## F – Glossary

**‘Anonymous’** often means data which does not identify an individual; ‘anonymised’ means data which has been rendered anonymous; ‘

**Pseudonymised’** and ‘coded’ means data where obvious identifiers (e.g. names and addresses) have been replaced with indirect identifiers (e.g. numbers) in the main data set and the indirect identifiers are then held with the obvious identifiers in a separate dataset (known as the ‘key’). However, the concept operating in European data protection law is the **‘identifiability’** of an individual from the data. For European data protection law to bind research on personal and sensitive personal data one must ask: *“is the individual identified either immediately from the data or when that data are combined with other data in the hands of another person?”* This combination extends only to reasonably foreseeable linking of data. Therefore, data which is gathered anonymously without any identifiers will be outside the scope of European data protection law; data which is **pseudonymised** or **coded** will be within the scope of the law as it is possible to reintroduce the two separate data sets and identify individuals; data which was gathered as identifiable data and then anonymised is subject to the data protection legislation when it contains identifiable data (most importantly at the point of gathering the data, requiring the disclosure by the researcher to the participant of information including the purpose of the processing and contact details).

**Authentication:** A process of proving the identity of a computer or computer user. For users, it generally involves user name, password, electronic certificates. Computers usually pass a code that identifies that they are part of a network. In keeping data privacy, it is essential to ensure that the data, transactions, communications or documents (electronic or physical) are genuine. It is also important for authenticity to validate that both parties involved are who they claim they are.

**Backup & deletion:** All processes ensuring that a copy exists in case of loss of the original data through accidental deletion. Some examples are listed below:

- **Disaster recovery:** Disaster recovery involves the processes, policies and procedures including backups that are related to preparing for the recovery or continuation of technology infrastructure critical to an organization after a natural or human-induced disaster.
- **Database Shadowing:** A data backup strategy in which a full copy of the user’s database is maintained at a remote data centre. Update transactions to the primary database trigger a transmission and similar update to the remote database. A successful recovery is possible from near failure using the shadowed database.
- **Data Synchronization:** The process of accurately reproducing the state of critical information and data to a predetermined point in time before an interruption occurred.
- **Data Wiping:** Data wiping is the process of irreversibly deleting or erasing all data beyond recovery without destruction. It is technically difficult to truly delete information from a computer. Great care must be taken when a computer previously used for research data is reused for other purpose that no remaining identifiable data remains.

**Confidentiality:** Confidentiality is the basis of trust between parties that prevents disclosure of any data or information to unauthorized individuals or systems.

**Cryptography:** Cryptography is the study and practice of hiding information. It is a process that assembles principles, means, and methods for the transformation of information in order to hide its content, prevent its undetected modification and/or prevent its unauthorized use. It consists of transforming clear, meaningful information into an unintelligible, or ciphered, form using an algorithm and/or a key.

**Data Theft:** Data theft is the act of stealing any data for purposes and recipients other than those intended originally. This could be achieved internally by access to confidential data storage systems/insecure paper records. Data theft has become an increasing problem with the development of removable media devices, which are becoming smaller in size with increased hard drive capacity. Several types of data theft exist such as “thumb sucking” which is the intentional or unintentional use of a portable USB mass storage device to illicitly download confidential data from a network endpoint, “mp3 slurping” which is the act of using a portable

data storage device such as an mp3 to illicitly download large quantities of data by directly plugging it into a computer or “Bluesnarfing” which is the unauthorized access to information from a wireless device through a Bluetooth connection, using, for example, mobile phones.

**Data Breach:** Data breach involves the unauthorized disclosure of information that compromises the security, confidentiality or integrity of personally identifiable information.

**Electronic signature/certificate:** is any legally recognized electronic means that indicates that a person adopts the contents of an electronic message Encryption Within the framework of data protection, Encryption is an electronic procedure for transforming information through cryptography. The level of protection provided by encryption is determined by an encryption algorithm whose strength is measured by the number and size of possible code keys.

**File locking:** File locking is a technical mechanism that restricts access to a computer file by only allowing one user or process access at any specific time. The purpose of locking is to prevent unauthorised updating or interference with final data. File locking enforces the serialization of update processes to any given file. One use of file locking is in database maintenance where it can serialize access to the entire physical file underlying a database.

**Identity theft** (or “Id Theft”): This occurs when someone acquires personal identifiers in order to impersonate someone else with the objective of stealing money, concealing him (her) self from authorities or obtaining other benefits. The person whose identity is used can suffer various consequences when he or she is held responsible for the perpetrator's actions. It is believed to be one of the easiest ways to break security.

**Integrity:** is the property that ensures that data is not modified without authorization

**Mission creep:** This means information being collected with permission for one purpose and being used without permission for another reason.

**“Need to know basis” principles:** when access to the information must be necessary for the conduct of one's official duties.

**Non-repudiation:** in a computer science sense, is a process through which no user can deny either sending or receiving an electronic transaction.

**Password:** in computer science, a password is a secret word or string of characters that is used for authentication, to prove identity or gain access to a resource According to computer security experts should ideally contain a mix of letters, characters and numbers and be at least 15 digits long.

**Record Locking:** As for File Locking, Record Locking is a method of managing shared data on a network by preventing more than one user from accessing the same segment of data at the same time. In a multi-user system, when one person is modifying a record, the record locking properties can be set so as to lock other users out of the record or to verify changes made when two users edit the same record at the same time.

**Social engineering:** It is a method of accessing privileged information about a computer system or protected data by an unauthorized person masquerading as a legitimate user. It is often regarded as a form of non-technical intrusion that relies mostly on human interaction. One typical example of such trickery is called Phishing. Phishing consists of an e-mail fraud method in which the perpetrator sends out legitimate-looking email in an attempt to gather personal and financial information from recipients.

**Traceability:** a method of tracking all electronic and paper data activity.