



Deliverable 2.4

RuralBioUp Dataset

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Abstract	The deliverable presents the dataset that is used in WP2 to feed the RuralSpot, implementing bioeconomy solutions, with a focus on small-scale solutions in rural areas.
Keywords	Bioeconomy, Rural Regions, Innovation, Online tools

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1 Executive Summary

RuralBioUp project aims at supporting innovators to scale-up inclusive and small-scale biobased solutions in rural areas. To this end, one of the specific objectives of the project is to map, harmonize, integrate and match existing data, scientific and practical knowledge in one digital tool to support stakeholders in taking informed decisions and ease the uptake of solutions according to regional resources.

The RuralBioUp One-Stop Shop tool, hereinafter called RuralSpot, match information at regional level about available biomass, business models and market applications, technologies, information on nutrient recycling for soil improving, practical knowledge and financial opportunities.

In Task 2.2, the template for data collection has been updated to include selected information from a long list of European projects and other sources. An update activity will continue during the project lifetime, based on new data and information collected (i.e. during regional Hubs activities, new outputs from other projects, new scientific publications). The data set has been structured according to 6 categories: i) biomass; ii) business model and market applications; iii) technologies; iv) knowledge on nutrient recycling and soil improving; v) practical knowledge and training resources; vi) financial support opportunities.

This document presents the data set that will be used to populate the RuralSpot following its validation during the Focus Group related to T2.4.



2 Introduction

The aim of the RuralBioUp dataset created in Task 2.2 is to provide innovators with a comprehensive tool for supporting the deployment of bioeconomy for small-scale solutions in rural areas by bringing together technical information, knowledge and good practices collected. The data set will help to highlight replicable solutions in regions with similar features, to facilitate the identification of exploitable value chains and to contribute to the identification of missing data that can be subsequently collected through the activities of regional HUBs.

The data and information have been collected starting from different sources, such as European Bioeconomy Library, European projects (Horizon, Interreg, LIFE, etc.), national or regional projects, scientific publications, regional database, on-line platforms, and tools, etc.

Starting from the Template for data collection developed in Task 2.1, the RuralBioUp data set will also include a long list of sources from where the existing materials and information on the different considered categories have been obtained. From the initial long list of sources, only those related to the main topic of the project have been selected and used to collect, analyse, and harmonize the data subdivide in six categories as follow:

- i. **Biomass:** collects the existing data on biomass regional availability in rural areas.
- ii. **Business model and market application:** collects available information and data on business models and market application and will help in analysing and identifying those with higher potential application for small-scale applications in rural areas.
- iii. **Technologies:** collects available information and data technologies that can be easily replicated or adapted for small-scale solutions in rural areas.
- iv. **Soil:** collects available information and data regarding the presence of possible integrated systems for recycling of the nutrients to soil improvement, as well as good practices to maintain or improve soil's health.
- v. **Knowledge:** collects available knowledge, like coaching, training, mentoring materials, and tools on different aspects of circular bioeconomy.
- vi. **Financial support** collects available information about financial support opportunities.



3 Methodology for data selection

3.1 Long list of sources

Project partners have been involved in selecting the different type of sources in order to maximize the impact and the reach from where the information related to the topics of interest could have been gathered.

Two main groups of sources have been created. The first one, named “Source_EU projects” includes European Bioeconomy Library as well as a list of EU-funded projects (Horizon, Interreg, LIFE, etc.) presenting information and data on the six categories selected. The second group, named “Sources_Other” includes a list of all the other sources separate from EU-funded projects (e.g. National project, Regional project, Online material, Publication, Other).

All the European projects selected have been categorised based on the “age”, as follow:

- **Ongoing projects:** these have been taken in consideration by direct contact, to understand if they have, or are working on, data, information, or materials that can be used in the RuralBioUp activities.
- **Recently finished projects** (finished in 2020-2022): the information coming from those projects has been considered reasonably up to date.
- **Older Projects** (finished in 2018-2019): the information coming from those projects have not been considered for the implementation of RuralBioUp One-Stop-Shop, except for specific materials that RuralBioUp partners will consider still useful and reliable.
- **Old Projects** (finished before 2018): they have not been considered as sources in RuralBioUp project.

More than 230 European projects and 135 Other sources have been selected to feed the long list of sources, with a total number of 365 sources. The number of sources that has been reported may vary during the course of the project since new sources, publications and databases will be available. The Table 1 includes the long list of sources subdivided by category, indicating the availability of information (one project can cover more than one category).

Table 1: Number of European projects and other sources divided by categories.

Categories	Source_EU projects	Sources_Other
Biomass	38	17
Business model & Market application	145	88
Technologies	113	84
Soil	32	9
Knowledge	32	49
Financial support	32	33



3.2 Selection of the data

During several WP2 meetings task partners have discussed criteria to select the most appropriate information to be included in each category of the data set from the long list of sources.

The selection criteria have been subdivided into:

a) General (related to all the categories)

- Projects/sources no older than 3 years.
- Projects/sources older between 3 and 5 years if the information considered is reasonably up to date.
- Projects/sources from the European Bioeconomy Library (<https://www.bioeconomy-library.eu/>).
- Reasonable amount of data to fill all the information required from the data set.
- Supportive and clear documentation (data accessibility)

b) Biomass

- Main principal biomasses to be applied for selected regions HUBs (classified at NUTS2).
- Biomass deriving from agro-forestry, agro-industrial and rural sectors at the regional scale.
- Potential and available biomass with priority to the residues and by-products over primary products, following the Food First Principle.
- Selected biomass in compliance with the biorefinery concept where integrated technologies are used for an efficient circular economy.
- Biobased products chains deriving from virtuous crops (cultivated in marginated soils) within full exploitation of biomass.

c) BM and Market applications

- Business Models based on their potential application in Rural areas.
- Best Practice cases implemented in previous projects.
- Examples collected on Business Model Canvas.
- Examples of Business Models that were successfully implemented.

d) Technologies

- Choose technologies based on their potential application in Rural areas such as animal and plant agriculture sectors.
- Technology sections that could be linked to Business Models and Biomass sections.
- Relevant information for Technologies such as Feedstock Used, Technology Readiness Level (TRL 7, 8, 9), Product Produced.

e) Soil

- Best practice cases for nutrient recycling that can be implemented on a small-scale.



- Examples from previous projects focussed on soil.
- Ensure there is a wide range of nutrient recycling examples including fertilisers, composting and anaerobic digestion.

f) Knowledge and financial opportunities

- Correlation to the topic categories selected within the RuralBioUp GA.
- Beneficial for bioeconomy practitioners, entrepreneurs or educators.

Only information that covered all the general criteria and some of the specific criteria have been added to the data set.

During the first phase of selecting the information to be added to the data set, only a small amount of data was selected with the aim of building and validating the functionality and user experience of the tool. The validation will be carried out within Task 2.4 with a special workshop to identify stakeholder needs and the presence of gaps. After the validation phase, the implementation of the data set will be put in place by adding all the relevant information for the stakeholders of the regional hubs.

3.3 Correlation between categories

One of the key aspects of the data set matrix, that will reflect on the tool user experience, is the capacity to interconnect some of the categories. As shown in **Errore. L'origine riferimento non è stata trovata.**, there is the possibility to link the type of biomass to the type of technology that use/transform a feedstock (general and/or specific). Moreover, the sector of the technology can be linked to the sector of the Business model/Market application. In other words, feeding the RuralSpot with information that find a shared contact point will help to structure already existing value chains and exploit new value chains at rural level.

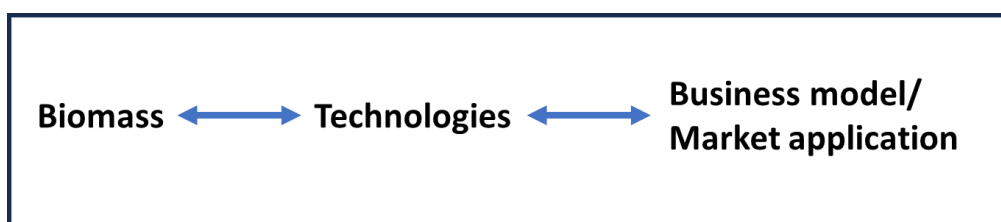


Figure 1: Model of correlation between biomass, technologies and business model and market application.



4 RuralSpot data set

The RuralSpot data set has been created in a form of an excel file in order to facilitate the data acquisition by the owner of the online tool. The data set will be continuously improved throughout the project lifetime. All the guidelines for data entry in the data set have been provided in D2.1.

The data set can be accessed by the following link:

DOI [10.5281/zenodo.10013957](https://doi.org/10.5281/zenodo.10013957)

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