

Data Management Plan & Support Pack

Deliverable D6.3

GREEN/MEUP 



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GreenMeUp project

GreenMeUp – Green Biomethane Market Uptake is a Horizon Europe project that aims at providing a basis for policy-makers and stakeholders to develop more informed renewable energy policies and country-tailored market uptake measures, in order to improve and complement existing biomethane policy in Europe.

The core activity of GreenMeUp is to reduce the gap between countries with higher rates of biomethane production and countries with lower development rates, by analyzing and comparing their framework conditions and market dynamics and promote enabling policies and measures at country level. The project aims at providing societal acceptance of the biomethane value chain through science-based evidence and tools.



Executive Summary

GreenMeUp is not targeting to produce research data. However, an Open science and Data Management Plan (DMP) is developed, outlining the way the potential research or other data will be collected, processed or generated within the project; the methodology and standards to be adopted; whether and how this data will be shared and/or made open; and how this data will be curated and preserved during and after the project.

This DMP aims to ensure that GreenMeUp activities are compliant with the Horizon Europe Open Access policy and the recommendations of the Open Research Data pilot. Under this task an Open Access Support Pack will be developed translating the generic Horizon Europe requirements and recommendations into specific guidelines and advice that can be applied in the project.

Consequently, D6.3 is articulated in the following Chapters:

Chapter 1: 'Dataset collection' provides detailed information on the Work packages and Tasks where data are generated, the kind of data that are generated followed by their characterisation in terms of their content, format, size and accessibility.

Chapter 2: 'FAIR DATA'



Chapter 1. Dataset collection

Datasets that will be generated in GreenMeUp in four work packages, WP1, WP2, WP3 and WP4 and refer mainly to:

- Literature reviews (WP1, WP2)
- Interviews using questionnaires, surveys, telephone calls, etc (WP3, WP4)

More analytically:

Table 1. Datasets per Work package

<p>WP1. Market dynamics & framework conditions in advanced European and MI countries</p> <p>Objectives: To evaluate the framework conditions and market dynamics of the biomethane in 10 leading European countries, and in 5 MI countries.</p>

#1	Dataset title: Description of production routes and end-uses
Lead partner	EBA
Partners involved	DBFZ, CIB, RE-CORD and Biogest
Content	<p>Dataset 1 refers to Task 1.1 Description of production routes and end-uses (M1-M28), that will identify, list, and quantify all existing production and use routes for biomethane.</p> <p>This dataset will contain data from literature reviews and existing datasets. It will be built on existing data available in EBA databases, results from the H2020 REGATRACE project, other EU-funded initiatives. EBA's existing network of national biogas associations will be leveraged for this purpose. In addition, concise information from Mission Innovation (MI) countries will be collected and discussed during the International Advisory Board (IAB) meetings.</p> <p>From this analysis, new data will be generated regarding the trends in feedstock usage for biomethane production, current end-uses of biomethane in a bottom-up approach starting from analysis biomethane usage in the 10 European countries having the highest productions covering > 95% of the biomethane produced in Europe (Germany, UK, Denmark, France, The Netherlands, Italy, Sweden, Norway, Switzerland and Austria).</p>
Data format	Qualitative textual data in .pdf format Figures in .jpeg, .png, .tiff, .bnp Tables in .xlsx, .docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D1.1, D1.6 and other open access articles

#2 Dataset title: Policy frameworks and market dynamics	
Lead partner	EBA
Partners involved	DBFZ, CIB, CRES
Content	<p>Dataset 2 refers to Task 1.2 Policy frameworks and market dynamics (M1-M28), which will investigate policies and market dynamics which are successful in achieving biomethane production and use.</p> <p>The evaluation of the different policy frameworks will be made based on a defined set of criteria such as costs involved for the government, achieved production, perceived value of biomethane in the country, etc.</p> <p>This dataset will contain data from literature reviews and existing datasets. It will be built on existing data available in EBA databases, results from the H2020 REGATRACE project, other EU-funded initiatives. EBA's existing network of national biogas associations will be leveraged for this purpose. In addition, concise information from Mission Innovation (MI) countries will be collected and discussed during the International Advisory Board (IAB) meetings.</p> <p>From this analysis, new data will be generated regarding the policy framework and market analysis in the 10 European countries having the highest productions covering > 95% of the biomethane produced in Europe (Germany, UK, Denmark, France, The Netherlands, Italy, Sweden, Norway, Switzerland and Austria).</p>
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D1.1, D1.6 and other open access articles

#3 Dataset title: Midstream and downstream technological developments for biomethane and biohydrogen production and offtake	
Lead partner	RE-CORD
Partners involved	Biogest, EBA
Content	<p>Dataset 3 refers to Task 1.3 Midstream and downstream technological developments for biomethane and biohydrogen production and offtake (M1-M30), which will analyse and describe the technological developments along the value chain for biogas, bioCH₄ and biohydrogen production.</p> <p>This dataset will contain data from literature reviews and existing datasets and will cover technologies for biogas upgrading and injection into the gas grid, compression and liquefaction technologies for biomethane use in transport, gasification and fermentation, as well as technological routes for biohydrogen. Also, a review of technological developments needed to accommodate large scale introduction of biomethane from the infrastructure (TSO/DSO) perspective will be carried out.</p>

	From this analysis, new data will be generated regarding the technological developments.
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D1.2, D1.7 and other open access articles

#4	Dataset title: Technological developments on feedstock and feedstock potentials
Lead partner	CRES
Partners involved	EBA, CIB
Content	<p>Dataset 4 refers to Task 1.4 Technological developments on feedstock and feedstock potentials (M1-M30), which will analyse and report the technological developments on the feedstock for biomethane production.</p> <p>This dataset will contain data from literature reviews and existing datasets and will cover types of feedstocks, growth of sustainable feedstock supply thanks to improved waste management collection programs, usage of forestry residues and wood processing residues thanks to developments in the gasification technology and new potentials</p> <p>From this analysis, new data will be generated regarding feedstocks and feedstock potentials</p>
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D1.3, D1.8 and other open access articles

#5	Dataset title: Standardization
Lead partner	EBA
Partners involved	KM-IIC
Content	<p>Dataset 5 refers to Task 1.5 Standardisation (M1-M30), which will analyse the existing standards for biomethane</p> <p>This dataset will contain data from literature reviews and existing datasets and will cover Specifications for biomethane for injection in the natural gas network (EN 16723 – Part 1), automotive fuel specifications (EN 16723 – Part 2), hydrogen developed by CEN as well as the ongoing work by the various CEN Technical Committees on biomethane and hydrogen.</p> <p>From this analysis, new data will be generated regarding the various standards and developments and barriers related to Guarantees of Origin.</p>

Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D1.4, D1.9 and other open access articles

#6 Dataset title: Indicators for market integration	
Lead partner	DBFZ
Partners involved	EBA, CIB, RE-CORD
Content	<p>Dataset 6 refers to Task 1.6 Indicators for market integration (M9- 21), which will identify universally applicable indicators for the assessment of the market integration of biomethane at country-level.</p> <p>This dataset will contain data from literature reviews and existing datasets and will cover market constellations and the integration of biomethane within different dimensions based on the findings of the tasks 1.1 to 1.5.</p> <p>From this analysis, new data will be generated regarding indicators assessing political, economic, socio-cultural, technical, ecological and legal biomethane market conditions and impacts, based on the PESTEL method.</p>
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverable D1.5 and other open access articles

WP2. Market dynamics and framework conditions in target countries

Objectives: To evaluate the framework conditions and market dynamics of the biomethane in target European countries with low market penetration but high potentials (Greece, Spain, Poland, Czech Republic, Latvia, Estonia, region of Backa and Banat).

#7 Dataset title: Analysis of the existing production routes and end uses	
Lead partner	CRES
Partners involved	PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA
Content	<p>Dataset 7 refers to Task 2.2 Analysis of the existing production routes and end uses (M1-M28), which will identify, list, and quantify all existing production and use routes for biomethane in the target countries.</p> <p>This dataset will contain data from literature reviews and existing datasets, and will be built on existing data available in national databases as well as on EBA databases, results from the H2020 REGATRACE project, other EU-funded initiatives. Partners' existing networks of national biogas associations will be leveraged for this purpose.</p> <p>From this analysis, new data will be generated regarding the trends in feedstock usage for biomethane production, current end-uses of biomethane in a bottom-up approach for each of the 7 target countries.</p>
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverable D2.1 and other open access articles

#8 Dataset title: Policy frameworks and market dynamics	
Lead partner	CRES
Partners involved	PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA
Content	<p>Dataset 8 refers to Task 2.3 Policy frameworks and market dynamics (M1-M28), which will analyse the policy frameworks in relation with the market dynamics in the target countries, following the methodology used in Task 1.2.</p> <p>This dataset will contain data from literature reviews and existing datasets. Several sources will be used in each target country, such as indicatively the recently submitted National Energy and Climate Plans, the financed policy measures by the Operational Programs within the framework of the CAP at EU level and other scientific papers and technical reports. In particular, high priority policy issues such as Just Transition, Circular Action Plan (CEAP), FIT for 55 etc.</p> <p>From this analysis, new data will be generated regarding the policy frameworks and market dynamics for each of the 7 target countries.</p>
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D2.1, D2.4 and other open access articles

#9	Dataset title: SWOT analyses
Lead partner	DBFZ
Partners involved	CRES, PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA
Content	<p>Dataset 9 refers to Task 2.4 SWOT analyses (M12-M24), which will conduct a SWOT analysis in each target country.</p> <p>This dataset will contain data from literature reviews by each team, complemented by a survey with engaged stakeholders in each hub, in synergy with WP4. In addition, market indicators from Task 1.6 together with the findings of Tasks 2.2, 2.3 and 2.4 will be included.</p> <p>From this analysis, new data will be generated regarding the strengths and opportunities, threats and weaknesses as well as strategies to neutralise these or to use strengths and opportunities in synergy.</p>
Data format	Qualitative textual data in pdf format Figures in jpeg, png, tiff, bnp Tables in xlsx, docx Questionnaires in .doc, .xlsx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverable D2.2 and other open access articles

WP3. Stakeholders' engagement

Objectives: Stakeholders engagement and societal acceptance with the involvement of relevant actors representing all stages of the biomethane value chains through science-based evidence and tools addressing misperception phenomena from citizens.

#10	Dataset title: Mapping of stakeholders and establishment of stakeholder hubs
Lead partner	DBFZ
Partners involved	CRES, EBA, CIB, PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA, BIOGEST, EBA
Content	<p>Dataset 10 refers to Task 3.1 Mapping of stakeholders and establishment of stakeholder hubs (M1-M36), which will map, in synergy with WP1 and WP2, in both advanced and target countries key stakeholders involved in market uptake, feedstock use, technological developments of biomethane production (conversion, upgrading and injection) as well as the distribution networks</p> <p>This dataset will contain lists of stakeholders from each target country and at EU level, within or outside the GreenMeUp consortium.</p>
Data format	Qualitative textual data in pdf format Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset

Accessibility	Shareable data will be released as part of Deliverable D3.1.
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#11	Dataset title: Co-creation actions with engaged stakeholders in each Target-Country
Lead partner	DBFZ
Partners involved	CRES, EBA, ETA, CIB, PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA, BIOGEST
Content	<p>Dataset 11 refers to Task 3.2. Co-creation actions with engaged stakeholders in each Target-Country (M1-M36), which will maintain the stakeholders' hubs active throughout the project.</p> <p>This dataset will contain minutes from the co-creation activities. In addition, it will contain guidance for interviews with experts in each country to assess the replication potential of existing legislative and other measures in well developed countries and the results will contribute to WP4, as well as guidance for preparation and development of policy dialogues, in line with policy analysis carried in WP1 and WP2 and activities planned in WP4.</p>
Data format	Qualitative textual data in pdf format Tables in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D3.2 and 3.4.

#12	Dataset title: Societal perspectives related to biomethane
Lead partner	CRES
Partners involved	CIB, PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG
Content	<p>Dataset 12 refers to Task 3.3 Study of societal perspectives related to biomethane (M1-M36), which will explore social perspectives on different dimensions, namely the socio-political, the community, and the market in all target countries.</p> <p>This dataset will contain a literature analysis on existing research and a conceptual model that will present all the identified determinants and their interconnections.</p> <p>Sets of interviews and questionnaires for relevant stakeholders from all dimensions will be elaborated and filled in each target country and at EU level, within or outside the GreenMeUp consortium.</p>
Data format	Qualitative textual data in pdf format Tables in xlsx, docx Sheets of interviews and questionnaire in xlsx, docx
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverable D3.3.

WP4. Market uptake measures

Objectives: To design a set of market uptake policy measures that will complement existing policy and include regulations, financial mechanisms and actions related to increased awareness and improved public acceptance. The work will capitalise on the findings from WP1 and WP2 and join forces with WP3 to implement a participatory co-creation process.

#13 Dataset title: Policy aim and justification	
Lead partner	CRES
Partners involved	DBFZ, RE-CORD, PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA
Content	<p>Dataset 13 refers to Task 4.1 Policy aim and justification (M1-12), which will explore the need and rationale of future policy interventions and key issues to be dealt in all target countries.</p> <p>This dataset will contain a set of questionnaires and interviews for relevant stakeholders from all dimensions that will be elaborated and filled in each target country and at EU level, within or outside the GreenMeUp consortium.</p> <p>The dataset will also contain a comprehensive list of policy briefings</p>
Data format	<p>Qualitative textual data in pdf format</p> <p>Tables in xlsx, docx</p> <p>Sheets of interviews and questionnaire in xlsx, docx</p>
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D4.1 and D4.5

#14 Dataset title: Design policy relevant market uptake measures	
Lead partner	CRES
Partners involved	DBFZ, RE-CORD, CIB, PIGEOR, INCE, LBA, CZBiom, EstBA, AEBIG, DEDA, BIOGEST
Content	<p>Dataset 14 refers Task 4.3 Design policy relevant market uptake measures (M12-M36), which will define, together with stakeholders, the focus and typology of future policy interventions which can be developed and implemented in all target countries.</p> <p>This dataset will contain a comprehensive list of market uptake measures at national level for the 7 target countries, which will inform their national energy and climate plans (NECPs), as well as at EU level.</p>
Data format	<p>Qualitative textual data in pdf format</p> <p>Tables in xlsx, docx</p>
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D4.2 and D4.6.



#15	Dataset title: Anticipating policy relevant market uptake measures for biohydrogen
Lead partner	KM-IIC
Partners involved	DBFZ, RE-CORD, CRES
Content	<p>Dataset 15 refers Task 4.4 Anticipating policy relevant market uptake measures for biohydrogen (M30-M36), which will anticipate the policy market uptake measures necessary for the biohydrogen market development.</p> <p>This dataset will contain a comprehensive list of policy relevant market uptake measures for biohydrogen.</p>
Data format	Qualitative textual data in pdf format
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverable D4.4.

WP5. Outreach

Objectives: To raise awareness on the project giving strong emphasis on the opportunities it can unlock in terms of decarbonization of the energy sector and economic opportunities, while unveiling opportunities and pathways for potential adopters or producers. Facilitating the uptake of project results by third parties at scientific and industrial level. To reach out the EU and national policy makers as well as bioCH₄ market actors with the results and recommendations developed in this project

#16	Dataset title: Minutes from events and project publication
Lead partner	ETA
Partners involved	All consortium
Content	Dataset 16 refers Tasks 5.5 and 5.6 on project events and publications (M6-M36), which will be organised during the project and will contain a comprehensive list of all outreach activities
Data format	Qualitative textual data, leaflets, newsletters, articles, fact sheets, etc in pdf format Presentations in ppt and pdf
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D5.2, D5.3, D5.5 and D5.7

WP6. Coordination

Objectives: i) To coordinate and liaise the project with the European Commission. ii) To coordinate the General Assembly, International Advisory Board, organise the project meetings and day-to-day management of the project in order to ensure that all GreenMeUp beneficiaries and in particular the WP leaders will carry out the work plan as it has been scheduled. iii) To ensure proper implementation of the Work Plan and achievement of objectives, consolidate the GreenMeUp results into periodic reports, prepare the CA and financial statements.

#17	Dataset title: Minutes from International Advisory Board meetings
Lead partner	KM-IIC
Partners involved	CRES
Content	Dataset 17 refers to Task 6.3 International Advisory Board (M1-M36), which will be organised during the project and will contain minutes in the form of reports from the members of the IAB.
Data format	Qualitative textual data, in pdf format Presentations in ppt and pdf
Data size	It is not defined yet the final size of dataset
Accessibility	Shareable data will be released as part of Deliverables D6.5 and D6.6

Chapter 2: FAIR PRINCIPALS

This chapter contains the strategy of GreenMeUp project to promote the generation of FAIR data,, so that data are Findable, Accessible, Interoperable, and Reusable.

2.1 Findable

The produced data in GreenMeUp will be stored as metadata. To make the metadata files findable persistent identifiers will be used (project title, authors, type of data, short descriptions) in any format that the files will be. The same rules will apply to project reports, deliverables, presentations, newsletters and any other dissemination material will be developed. Files will be named as follows:

the project – discriptive name – date – version

e.g GREENMEUP – D1.1 Overview of production routes and end-uses of renewable gases and existing policy frameworks in advanced European and MI countries – 01.01.2022 – v1

For the presentations in project meetings and dissemination events the same rule will be followed:

the project – name of event – date – version

e.g GREENMEUP – Policy event #1– 01.01.2022 – v1

For the excel files, questionnaires file names will be as follows:



Project name – task name – name fo the questionnaire – date – version

e.g GREENMEUP – Task 1.1 – Survey for societal acceptance – 01.01.2022 – v1

Public deliverables and other files, once validated, will be uploaded on the project website to be findable by the wider audience.

In addition to the GreenMeUp website, an internal dropbox is developed by ETA for consortium partners to upload and share internal documents, draft deliverables and reports, presentations, surveys, photos and meeting recordings, as well as any other project material useful to partners so that they are findable and easlily accessible by all. The list of partners will be frequently updated in order to ensure that all partners have access to the dropbox.

The dropbox is organised in folders for: Logos, visual identity, WPs, Project meetings, Deliverables, Project Reports to enhance the findability of the uploaded and shared draft documents. In each WP folder all related documents are stored in their draft, intermediate and final versions. The final versions of project reports and deliverables once validated are moved to the relevant folders.

2.2 Accessible

Open research data developed by GreenMeUp will be indexed in searchable resources and recognised data repositories such is ZENODO and OpenAIRE with globally unique persistent identifiers (such as DOI and ISBN).

In addition to that, research articles, reports and publications marked as public will be uploaded on GreenMEUp's website to facilitate their wide accessibility by the targeted audience, such as market actors, policy actors and regulatory authorities, general public, research and academia.

2.3 Interoperable

All data and associated metadata will be interoperable so that they will be reused by the targeted stakeholder groups and other entities. Open source formats such as .rtf, .txt, .jpg will be implemented to make data interoperable.

2.4 Re-usable

Public reports and deliverables will be uploaded on the GreenMeUp website so that they will be available for direct reuse without restrictions.

Consortium partners will seek for scientific publications and articles to be open accessed without embargo periods. All submitted data and metadata will traceable in ZENODO, OpenAIRE and other repositories.

2.5 Data security

Each partner of the consortium will be responsible for the data they collect, store and produce. This data will be stored in a cloud-based shared folder in Dropbox platform to facilitate their management and among the participants with GreenMeUp project.

Public data and metadata will be stored in Open Access Databases, like the Zenodo.