FULFILL

Fundamental decarbonisation
through sufficiency by lifestyle changes

Open Research Data Pilot

FULFILL Deliverable D 1.10

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Project Partners

No	Participant name	Short Name	Country code	Partners' logos
1	**Fraunhofer Institute for Systems and Innovation Research ISI**	FH ISI	DE	Fraunhofer
2	**Wuppertal Institut für Klima, Umwelt, Energie GGMBH**	WI	DE	Wuppertal Institut
3	**Accademia Europea di Bolzano**	EURAC	IT	eurac research
4	**Notre Europe - Institut Jacques Delors**	JDI	FR	NOTRE EUROPE Jacques Delors Institute
5	**Association négaWatt**	NW	FR	ASSOCIATION négaWatt
6	**Politecnico di Milano**	POLIMI	IT	POLITECNICO MILANO 1863
7	**International Network for Sustainable Energy-Europe**	INFORSE	DK	INFORSE-EUROPE International Network for Sustainable Energy
8	**Zala Briviba Biedriba SA**	ZB	LV	Zaļā brīvība

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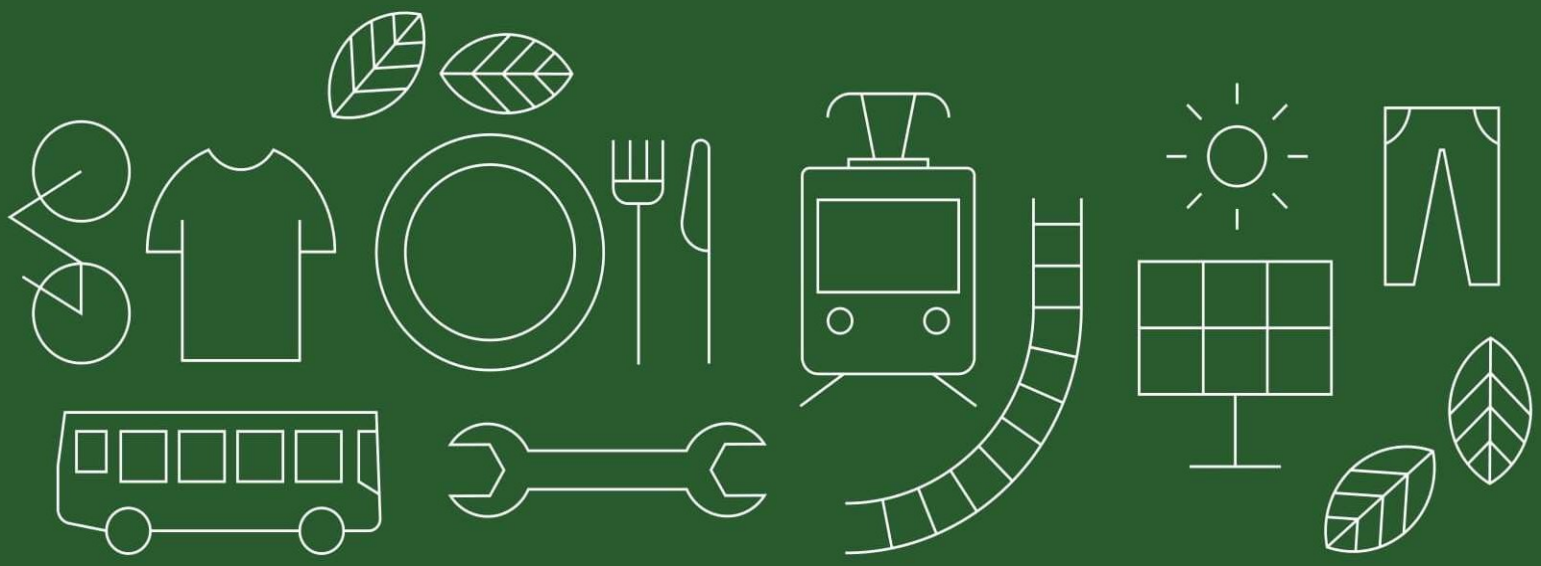

Content

List of Abbreviations 6

List of Figures 6

1 Summary of the project and introduction 7

2 Primary Data from FULFILL 8

FULFILL dataset round 1 Denmark 9

FULFILL dataset round 1 France 9

FULFILL dataset round 1 Germany 9

FULFILL dataset round 1 Italy 9

FULFILL dataset round 1 Latvia 9

FULFILL dataset round 1 Delhi and Mumbai (India) 10

FULFILL dataset round 2 Denmark 10

FULFILL dataset round 2 Germany 10

FULFILL dataset round 2 France 10

FULFILL dataset round 2 Italy 10

FULFILL dataset round 2 Latvia 10

FULFILL dataset round 2 Delhi and Mumbai (India) 10

FULFILL dataset - housing policy acceptability - framing experiment Denmark 10

FULFILL dataset - housing policy acceptability - framing experiment Germany 11

FULFILL dataset - housing policy acceptability - framing experiment France 11

FULFILL dataset - housing policy acceptability - framing experiment Latvia 11

FULFILL dataset - housing policy acceptability - framing experiment Italy 11

FULFILL dataset - diet policy acceptability - efficacy and acceptability framing Germany 11

FULFILL dataset - diet policy acceptability - efficacy and acceptability framing Denmark 11

FULFILL dataset - diet policy acceptability - health information provision France 12

FULFILL dataset - diet policy acceptability - health information provision Italy 12

FULFILL dataset - diet policy acceptability - health information provision Latvia 12

3 Research Outputs from FULFILL 13

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List of Abbreviations

DOI	Digital Object Identifier
FAIR	Findable, Accessible, Interoperable, Reuseable
ORD	Open Research Data
SSH	Social Sciences and Humanities
WP	Work Package
CORDIS	EC Community Research and Development Information Service (CORDIS)

List of Figures

Figure 1 Conceptual and methodological approach of the FULFILL project 7
Figure 2 Overview on the micro-level data collection conducted in FULFILL which combined surveys and interview studies in six countries. 8
Figure 3 Screenshot from the FULFILL webpage where the deliverables and further research outputs are published https://fulfill-sufficiency.eu/our-research/ 13

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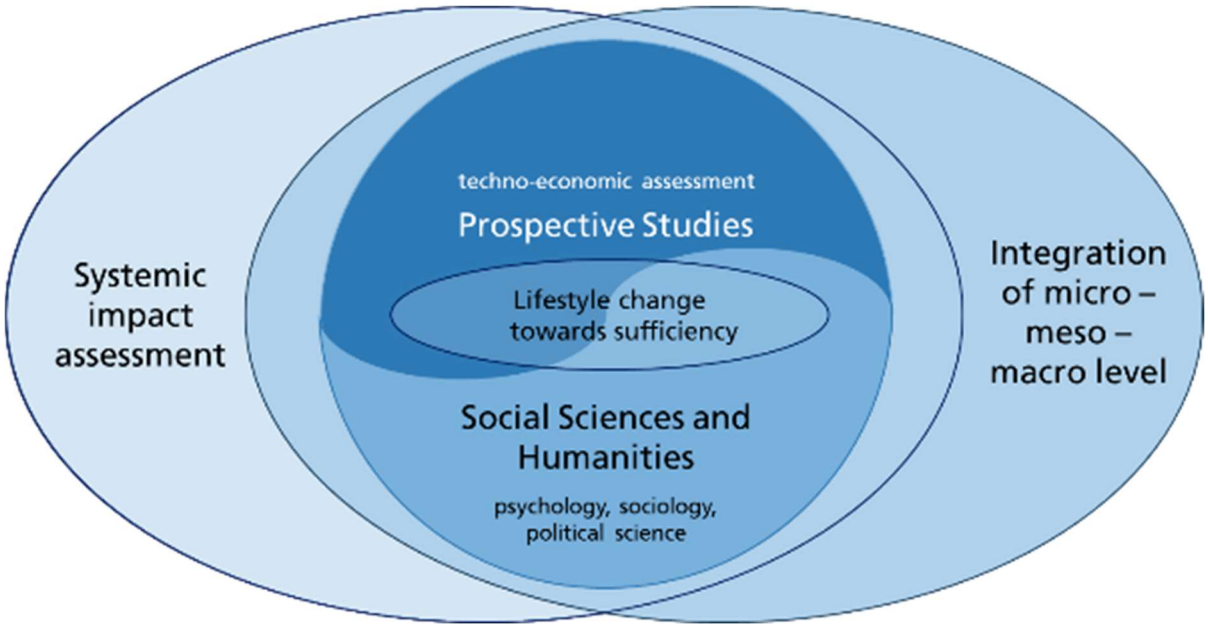
1 Summary of the project and introduction

The project FULFILL focuses on the concept of sufficiency to study the contribution of lifestyle changes and citizen engagement in decarbonising Europe and fulfilling the goals of the Paris Agreement. FULFILL understands the sufficiency principle as creating the social, infrastructural, and regulatory conditions for changing individual and collective lifestyles in a way that reduces energy demand and greenhouse gas emissions to an extent that they are within planetary boundaries, and simultaneously contributes to societal well-being.

The methodological approach of FULFILL is to engage in an interdisciplinary dialogue between, on the one hand, Social Sciences and Humanities (SSH) and, on the other hand, Prospective Studies, techno-economic energy and climate research, regarding the role and implementation of lifestyle changes towards sufficiency in decarbonisation strategies (Figure 1). Consequently, it connects recent knowledge to study lifestyles changes (from SSH) with the identification of the most promising lifestyle changes that significantly contribute to decarbonisation (from Prospective Studies) and links also back to Prospective Studies by including a macro level assessment of the impacts of sufficiency lifestyles. The rationale of taking such an interdisciplinary approach is that SSH and Prospective Studies can inform one another to generate new insights and support the design of effective policies and actions towards sustainable lifestyle changes. This can be understood as a polycentric multi-level approach that also allows integrating the micro-meso-macro levels in its investigation into lifestyles and to combine it with a systemic assessment regarding impacts e.g., with aspects of well-being and life-satisfaction, including health-related and justice- or power-related concerns (e.g., gender equality). This finally leads to soundly based and potentially highly effective recommendations for governance approaches for pathways towards sufficiency lifestyles and for a better integration of sufficiency approaches in decarbonisation strategies.

Figure 1 Conceptual and methodological approach of the FULFILL project



This deliverable now provides an overview on the research outcomes and the data that FULFILL generated and how to access them. Since FULFILL participates in the **Open Research Data (ORD) Pilot**, not only scientific publications but also research data as outcomes of FULFILL will be made findable, accessible, interoperable and reusable, following the European Commission's **FAIR** (Findability, Accessibility, Interoperability, and Reusability of data) principle.

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2 Primary Data from FULFILL

Primary data that is shared with the public in FULFILL emerged from work package (WP) 3 in FULFILL. Other WPs engaged in the analysis of secondary data (e.g. WP5 and 6) or undertook analyses based on interviews (e.g. WP4 and 5); however, this data is either already published elsewhere or not suitable for sharing due to the need to ensure confidentiality and privacy.

As an overarching objective, WP3 in FULFILL had the aim to investigate the mechanisms of lifestyle change and sufficiency-oriented lifestyles using social science and humanities (SSH) research methods at the micro level (individual, household). It thus contributes to developing a better understanding of the potential scope and diffusion of sufficiency-oriented lifestyles. It involved the collection of a comprehensive set of survey and interview data collected at three points in time and in six countries, five from the European Union (EU) (DK, FR, DE, IT, LV) and in India.

Figure 2 Overview on the micro-level data collection conducted in FULFILL which combined surveys and interview studies in six countries.

The aims of the different studies conducted included the following:

- The first round of surveys in the six countries aimed to identify the existing variety of lifestyles that are present in today's households with a focus on their level of sufficiency. It relied on large sample demographically representative household online surveys in five EU countries (Denmark, France, Germany, Italy, and Latvia) and computer-assisted personal interviews in two major cities in India (Mumbai and Delhi). This involved translating the concept of sufficiency-oriented lifestyles to the micro level for empirical research. In FULFILL, sufficiency is defined as a lifestyle that is low in CO_{2eq}-emissions and at the same time relatively high in individual well-being. Therefore, a comprehensive carbon footprint calculator was developed to measure individual emissions from the following key activities: housing (heating and hot water use), electricity, transport and diet. This was combined with a measure of individual well-being. The European data was collected in summer 2022 referring to year 2021 and in India in summer 2023 referring to 2022.
- Based on the outcomes of the survey, as well as the conceptual work conducted in FULFILL, socio-anthropological fieldwork mainly based on interviews was conducted in all six countries. The main objective of this step was to explore the diversity of social practices and of socio-demographic profiles associated with sufficiency to understand the motivations behind their adoption and the needs they fulfil, and to address the varieties of sufficient lifestyles and the importance of social contexts. All data was collected between summer 2022 and winter 2022/23.
- The second round of surveys aimed at a better understanding of the persistence of sufficiency-oriented lifestyles, exploring the acceptability of policy measures supporting sufficiency and investigating potential diffusion pathways for sufficiency-oriented lifestyles. The samples therefore included partially going back to participants in the first round of surveys

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and partially included new respondents. The geographical scope was identical to that of the first round of surveys. The European data was collected in spring and summer 2023 referring to year 2022 and in India in spring 2024 referring to 2023.

The three tasks resulted in three reports with 488 pages overall (D3.1, D3.2, D3.3, available online https://fulfill-sufficiency.eu/our-research/). Synthesizing and summarising deliverables from this WP are also available (D3.4, D3.5, available online https://fulfill-sufficiency.eu/our-research/).

The primary data collected by this WP was published as far as possible while considering the protection of personal data. This implies that potentially sensitive information such as respondents' postcode was removed. Therefore, the datasets from the questionnaire studies from Task 1 and Task 3 are made available through Zenodo (https://zenodo.org/communities/fulfill-sufficiency). Zenodo is commonly used for multi-disciplinary research (https://zenodo.org) and has the advantage that both research data and related publications can be made available in one repository. To improve accessibility and overview of the project's activities, a 'community' on FULFILL was set-up on Zenodo.

In the following, the list of uploaded data-sets is presented including the summary of each of them as it appears on the overview page in Zenodo:

FULFILL dataset round 1 Denmark

This dataset and codebook correspond to the initial round of survey data gathered in Denmark in 2022, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvia,...

FULFILL dataset round 1 France

This dataset and codebook correspond to the initial round of survey data gathered in France in 2022, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvia,...

FULFILL dataset round 1 Germany

This dataset and codebook correspond to the initial round of survey data gathered in Germany in 2022, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latv...

FULFILL dataset round 1 Italy

This dataset and codebook correspond to the initial round of survey data gathered in Italy in 2022, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvia, ...

FULFILL dataset round 1 Latvia

This dataset and codebook correspond to the initial round of survey data gathered in Latvia in 2022, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvia,...

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FULFILL dataset round 1 Delhi and Mumbai (India)

This dataset and codebook correspond to the initial round of survey data gathered in Delhi and Mumbai (India) in 2023, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Ger...

FULFILL dataset round 2 Denmark

This dataset and codebook correspond to the second round of survey data gathered in Denmark in 2023, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvi...

FULFILL dataset round 2 Germany

This dataset and codebook correspond to the second round of survey data gathered in Germany in 2023, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvi...

FULFILL dataset round 2 France

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FULFILL dataset round 2 Italy

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FULFILL dataset round 2 Latvia

This dataset and codebook correspond to the second round of survey data gathered in Latvia in 2023, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germany, Italy, Latvia...

FULFILL dataset round 2 Delhi and Mumbai (India)

This dataset and codebook correspond to the second round of survey data gathered in Delhi and Mumbai (India) in 2024, within the project FULFILL - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collected quantitative data from six countries: Denmark, France, Germ...

FULFILL dataset - housing policy acceptability - framing experiment Denmark

This dataset represents survey data on sufficiency-oriented housing gathered in the second round of surveys in Denmark in 2023 within the FULFILL project - Fundamental Decarbonisation Through

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FULFILL dataset - diet policy acceptability - efficacy and acceptability framing Germany

This dataset represents survey data on sufficiency-oriented policy acceptability in regard to dietary consumption. The study was part of the second round surveys in Germany in 2023 within the FULFILL project - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collect...

FULFILL dataset - diet policy acceptability - efficacy and acceptability framing Denmark

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FULFILL dataset - diet policy acceptability - health information provision France

This dataset represents survey data on sufficiency-oriented policy acceptability in regard to dietary consumption. The study was part of the second round surveys in France in 2023 within the FULFILL project - Fundamental Decarbonisation Through Sufficiency By Lifestyle Changes. As part of Work Package 3 (WP3) in the FULFILL project, we collecte...

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When uploading FULFILL's research data on Zenodo, rich metadata (e.g. Digital Object Identifier [DOI]) was used to describe each set of research data.

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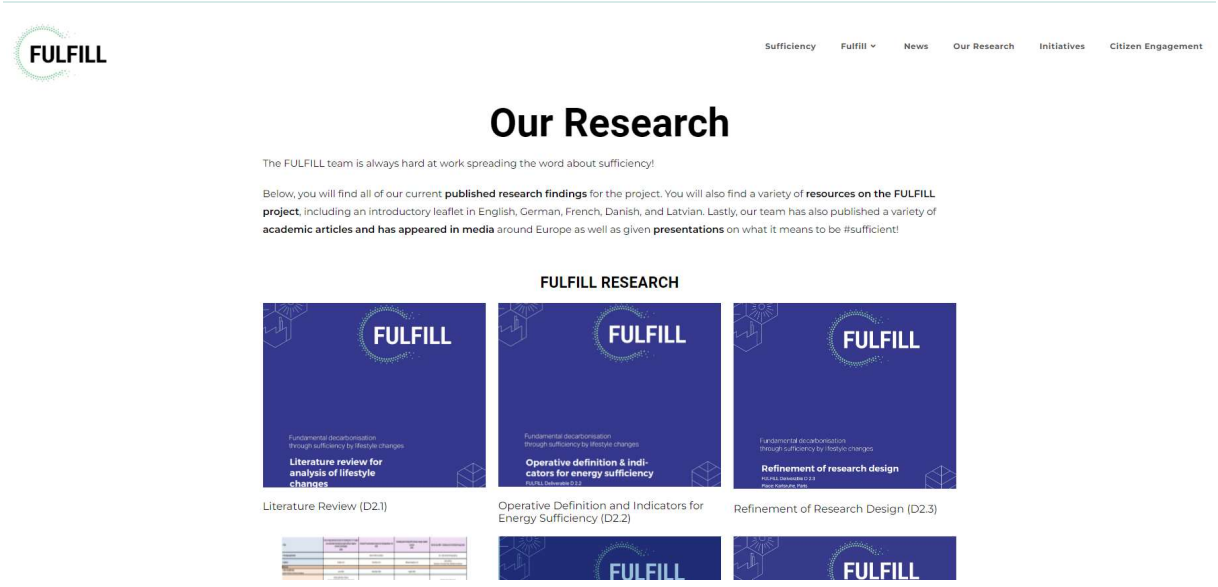
3 Research Outputs from FULFILL

In addition to the data shared on Zenodo, the project's website (http://fulfill-sufficiency.eu/) provides access to all deliverables from FULFILL's that are not confidential as well as scientific publications from the project's lifetime. Once approved the deliverables will also appear through the EC Community Research and Development Information Service (CORDIS) (https://cordis.europa.eu/project/id/101003656).

Figure 3 Screenshot from the FULFILL webpage where the deliverables and further research outputs are published https://fulfill-sufficiency.eu/our-research/



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