Data Management Plan v1

Deliverable D6.2

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CARE project summary

CARE (Circular consumption Activities to tRansform households toward material Efficiency) aims to empower consumer-citizens in European households in the transition to a circular economy (CE). The objective of CARE is to transform a total of 100 households in five European countries (Finland, Norway, Sweden, Germany, and Estonia) to circular model households. To achieve its aim, CARE will further develop, test, and validate two pilots related to two critical material flows: food and clothing. They both have high potential for circularity at the household level.

The CARE pilots will be implemented in five regions – both urban and rural - that are part of the Circular Cities and Regions Initiative (CCRI): Tampere, Asker, Gothenburg, Berlin, and Lääne-Harju. The pilots are based on the practice-theoretical approach, which goes beyond state-of-the-art by focusing on holistic, social, and material aspects of everyday life instead of individualistic and awareness-raising interventions. The pilots will contain both customized, inclusive, and cost-free circular advisory services as well as food and clothing related interventions that focus on making changes in consumption practices. CARE will make a strong contribution towards accelerating fair, inclusive and sustainable consumer-based transition to CE.

Introduction to the deliverable

The purpose of this Data Management Plan (DMP) is to ensure that the data generated or collected during the CARE project is handled in a way that maximizes its value and utility. Other goals of this deliverable include ensuring that research data is managed in a way that supports open science, enhances research quality, data security and complies with legal, ethical, and funder requirements. This DMP introduces the different types of data that are expected to be generated during the project, how the data is handled and other factors that need to be taken into consideration in CARE Data Governance. This deliverable follows the Horizon Europe open science practices[1], and the recommended Horizon Europe Data Management Plan Template has been used as a guideline for this DMP.

This deliverable is part of Task 6.3 Data management and personal data protection. This initial version of the CARE DMP is based on the current understanding at an early phase of the project (M6) and before most of the data collection. This DMP will be updated twice during the project (deliverables D6.3; M36 and D6.4; M48). In addition to the DMP, internal guidelines regarding data collection will be shared with consortium partners during the course of the project. The guidelines for the project's data output (results) will be described in more detail in the following DMP updates (at M36 and M48) and also in the CARE Exploitation Strategy (D5.3 at M6 and its updates at M36 and M48) as the project progresses.

The CARE consortium is aware that in addition to personal data, there are other types of data that can be collected, produced, and used during the project. This includes existing data (such as data derived from readily available sources), data from different activities carried out throughout the project (such as workshop notes, field notes and other workshop/event related data), and other primary data. These

[1] HE Programme Guide: V4.1 – 01.05.2024, Section: Open Science: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

datasets might not include personal data but can be sensitive, and consequently must be handled in compliance with the guidelines on FAIR data management.

This deliverable is structured into four sections:

Section 1 describes the CARE data management strategy: description and organization of data, data collection and generation in each task, and relevant procedures and guidelines.

Section 2 examines the FAIR data management principles in CARE.

Section 3 covers the allocation of resources.

Section 4 discusses data security and ethical aspects of the project.

Glossary of abbreviations

CARE	Circular Consumption Activities to Transform Households Toward Material Efficiency
CC0-license	Creative Commons license, meaning “no rights reserved” on intellectual property. CC0 is a form of copyright that allows creators to waive legal interest in their work and move it into the public domain as far as possible (creativecommons.org/public-domain/cc0/).
CC BY-license	Creative Commons by Attribution license. CC BY allows anyone to copy, distribute, transmit, adapt, and make commercial use of the material when providing appropriate credit, a link to the license, and indicating if any changes were made (creativecommons.org/licenses/by/4.0/).
CCRI	Circular Cities and Regions Initiative
CDE	Communication, Dissemination and Exploitation
CE	Circular Economy
CSO	Civil Society Organization
D	Deliverable output of the CARE project
DMP	Data Management Plan
DOI	Digital Object Identifier
DIY	Do It Yourself
FAIR	Findable, Accessible, Interoperable and Reusable
FW	Food waste
GA	Grant agreement
GDPR	General Data Protection Regulation
HE	Horizon Europe
HH	Household
HTTP	HyperText Transfer Protocol (standard communication protocol for internet browsers)
IPR	Intellectual Property Rights
LCA	Life-Cycle Assessment
M	Month (M1: Jan 2024, 1st month of CARE; M48: Dec 2027, last month of CARE)
NGO	Non-Governmental Organization
URN	Uniform Resource Name (globally unique persistent identifiers)
WP	Work Package

Disclaimer

The CARE project is funded by the European Union under Grant Agreement No. 101135141. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

Table of Contents

List of figures

List of tables

1. Data Description

The majority of the data collected and analysed in CARE is provided by the participating households. The data formats collected during CARE will consist of interview and survey data, written documents, images, and video materials as well as compilations and metadata regarding these materials. The estimated size of the data that will be made publicly available is under 100GB, meaning that the amount is moderate and also likely to be below this estimate. This estimate does not control or limit data collection. Most of the image and video materials are documentation of activities conducted with the participating households, such as workshops or events by the project partners, or observations conducted by researchers, or photos and videos taken by the households themselves. Reuse of existing data beyond a literature review is not required in CARE. Data generation and collection workflows during CARE are illustrated in Figure 1.

As an overview, collected data includes qualitative data like notes, recordings, video and photos from workshops, interviews and observations and quantitative data from surveys and online usage. When possible, data is kept in either anonymized or pseudonymized form.

Data is compiled into commonly used data formats such as *.pdf* and *.doc* for text, *.xls* and *.csv* for table formatted data, *.jpg* and *.png* for images, *.mp3* and *.wav* for audio, and *.mp4* and *.avi* for video recordings.

Non-pseudonymized personal data collected in CARE consists mainly of lists of participants and signed consent forms collected by partners. Signing the consent form is a requirement for participating in CARE research activities for those not involved in CARE consortium. Templates to all necessary forms, including consent forms, will be available in the consortiums shared Teams file and they can be modified by partners to serve each context and activity. The filled forms are stored in PDF format by the collecting partner. Other research data collected from households is pseudonymized by the collecting partner before sharing it to other project partners. Data collection and sharing is elaborated in more detail in chapter 1.2.

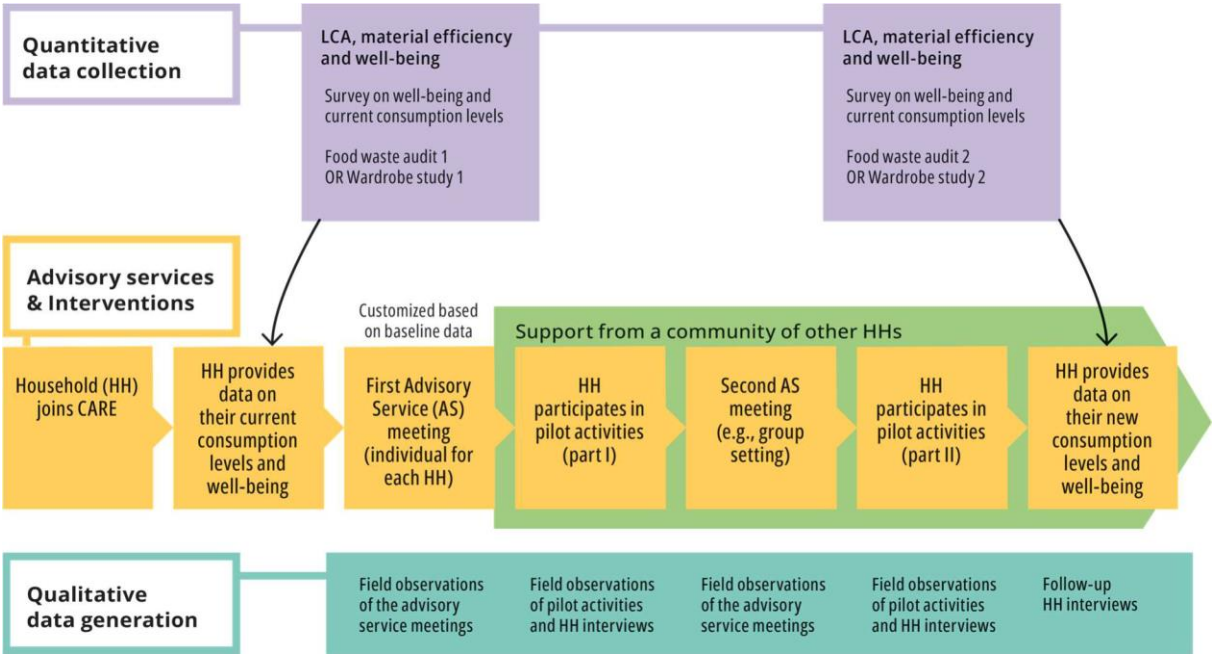

Figure 1. Workflow of data collection and generation in CARE

In addition to European Union and national governmental agencies, interested parties in CARE research and data to be published may include academic researchers, journalists, townships and municipalities or other non-governmental and civil society organizations (NGOs and CSOs) invested in solving environmental issues and in particular, reduction of household waste and achieving carbon neutrality goals. The Results of CARE can even be utilized by environmentally conscious households to find practical solutions to reduce their carbon footprint. The guidelines for the project's results and the open science practices are described in section 2 (FAIR data management) of this DMP.

1.1 CARE Consortium Partner Data

The CARE consortium consists of 11 partners. Each partner is responsible for collecting and storing their data securely, following any country-specific regulations concerning data collection and participant consent. The partners and the data collected by each partner during CARE is described in Table 1. This table will be updated during the project when the plans for data collection become more accurate. Updates will be published in updated versions 2-3 of this deliverable.

Table 1. Regional CARE partners and participation in data collection

Acronym/ Abbreviation	Partner	Country	Data collected by partner
Asker	Asker Kommune	 Norway	WP1: Baseline and post-pilot survey data from participating HHs WP2: Citizen co-design workshop data (participant data, notes, photos, videos) WP3: Circular food pilot data (participant data, community data, food waste audit data, workshop data, advisory service data) WP4: Circular clothing pilot data (participant data, wardrobe study data, community data, workshop data, advisory service data) (Asker has planned to involve a local NGO in giving advisory services. The name of this NGO as well as their role in data management will be specified in the later updates to this document.)
BOKU	Universität für Bodenkultur Wien	 Austria	WP1: Carbon footprint tool development and processing of pseudonymized HH data (collected with food waste audit, wardrobe study and surveys) for the other partners for giving advisory services
CSCP	Collaborating Centre on Sustainable Consumption and Production GGMBH	 Germany	WP2: Citizen co-design workshops (supporting materials, summaries, communication materials), Co-developing advisory services (workshop data) WP5: CARE website, CARE newsletter and CARE social media channels (usage data, subscription data); Data collected for CARE communications (e.g. photos, videos and graphics); Events and meetings data (participant data, access data, event data), Data for CARE vision, identity and communications strategy (e.g. stakeholders, hashtags, media coverage)
EKO	Ekokumppanit Oy	 Finland	WP1: Baseline and post-pilot survey data from participating HHs WP2: Citizen co-design workshop data (participant data, notes, photos, videos)

			WP3: Circular food pilot data (participant data, community data, food waste audit data, workshop data, advisory service data) WP4: Circular clothing pilot data (participant data, wardrobe study data, community data, workshop data, advisory service data)
LDIF	Teeme Ära Sihtasutus	 Estonia	WP1: Baseline and post-pilot survey data from participating HHs WP2: Citizen co-design workshop data (participant data, notes, photos, videos) WP3: Circular food pilot data (participant data, community data, food waste audit data, workshop data, advisory service data) WP4: Circular clothing pilot data (participant data, wardrobe study data, community data, workshop data, advisory service data)
IVL	IVL Svenska Miljöinstitutet	 Sweden	WP1: Baseline and post-pilot survey data from participating HHs WP2: Citizen co-design workshop data (participant data, notes, photos, videos) WP3: Circular food pilot data (participant data, community data, food waste audit data, workshop data, advisory service data) WP4: Circular clothing pilot data (participant data, wardrobe study data, community data, workshop data, advisory service data)
Lääne-Harju	Lääne-Harju Vallavalitsus	 Estonia	WP1: Baseline and post-pilot survey data from participating HHs WP2: Citizen co-design workshop data (participant data, notes, photos, videos) WP3: Circular food pilot data (participant data, community data, food waste audit data, workshop data, advisory service data) WP4: Circular clothing pilot data (participant data, wardrobe study data, community data, workshop data, advisory service data)
ULUND	Lund Universitet	 Sweden	WP2: Citizen co-design workshops (workshop data); Co-designing the interventions for circular food (participant data, workshop data) WP3: Circular food pilot data (community data, qualitative research data) WP4: Circular clothing pilot data (community data, qualitative research data)
OsloMet	Storbyuniversitetet	 Norway	WP2: Citizen co-design workshops (workshop data); Co-designing the interventions for circular clothing (participant data, workshop data) WP3: Circular food pilot data (community data, qualitative research data) WP4: Circular clothing pilot data (community data, qualitative research data)
TAU	Tampereen Korkeakoulusäätiö (Tampere University)	 Finland	WP1: Sustainable well-being workshop data (participant data, workshop data) WP2: Citizen co-design workshops (workshop notes); Co-designing the interventions (workshop data) WP2: Online community platform usage data WP3: Circular food pilot data (community data, qualitative research data) WP4: Circular clothing pilot data (community data, qualitative research data)

			WP6: Internal data
VI	Die Verbraucher Initiative e. V.	Germany	WP1: Baseline and post-pilot survey data from participating HHs (to be decided whether this data is collected by BOKU or by local partners in each country) WP2: Citizen co-design workshop data (participant data, notes, photos, videos) WP3: Circular food pilot data (participant data, community data, food waste audit data, workshop data, advisory service data) WP4: Circular clothing pilot data (participant data, wardrobe study data, community data, workshop data, advisory service data)

1.2 Organization of data collection

CARE activities started in January 2024 for the planned duration of the project of 48 months (M1-M48). CARE data generation and collection activities are organized into work packages 1-6 (WP), as described in the grant agreement (GA). Each work package is further divided into tasks which are defined in detail in the GA. The CARE pilots, that include most data collection activities in the project, will be implemented in five regions - both urban and rural - that are part of the Circular Cities and Regions Initiative (CCRI). Collectively, the participating households will be recruited from Tampere, Asker, Gothenburg, Berlin, and Lääne-Harju city areas. The data collected in each WP are described in Table 2.

The coordinator (TAU), with the help of the designated Data Manager, will instruct the project partners in data collection and management related issues before the CARE pilots start. Throughout the project, partners should contact the coordinator in any data management related questions or concerns.

Special attention is given to the collection of personal data in CARE. The coordinator asks each partner to select an assigned Data Controller who will manage the collected personal data. Data Controllers are responsible for the security of the data against loss, theft, and unauthorised access. The Data Controller commits to restrict as far as possible the number of staff members that have access to original and non-processed personal data, in order to avoid any data breach.

Personal data and participant information may include name of participant, contact information, online identifiers, photographs and videos, socio-demographic information (e.g., age, gender, household composition, income), data on food and clothing consumption, purchases of personal possessions as well as descriptions of personal opinions and experiences.

Table 2. Data collection in Work Packages

Work package	Description	Types of data collected / generated	WP duration (months)
WP1 Lead Beneficiary: BOKU	Evaluation of CARE activities environmental and sustainable well-being impacts	-Primary baseline data from households' food and clothing consumption and sustainable well-being before the pilot actions (survey, food waste audit, wardrobe study)	1-48

		-Data from households' food and clothing consumption and sustainable well-being after the pilot actions (survey, food waste audit, wardrobe study) -Researcher workshop notes and photos -Carbon footprint online tool and data collected by using the tool	
WP2 Lead Beneficiary: TAU	Co-design for advisory services and pilots	-Information on participating citizens (can be different from those who participate in pilots) -Filled participation consent forms -Workshop notes, photos, and videos (from 3 different workshop series – design workshops, co-developing advisory services and co-designing interventions) -Online community platform usage data	1-45
WP3 Lead Beneficiary: ULUND	Circular food pilots	-Information of participating households in circular food pilots -Filled participation consent forms -Workshop/event related data such as presentations, notes, video recordings -Interview recordings and transcripts -Field notes, photos, and videos from observations -Comments, photos, and videos generated by participants in community platform	13-48
WP4 Lead Beneficiary: OsloMet	Circular clothing pilots	-Information of participating households in circular clothing pilots -Filled participation consent forms -Workshop/event related data such as presentations, notes, video recordings -Interview recordings and transcripts -Field notes, photos, and videos from observations -Comments, photos, and videos generated by participants in community platform	13-48
WP5 Lead Beneficiary: CSCP	Communication, dissemination, and exploitation of the CARE results	-Results, such as data tables and infographics generated from the data collected by the consortium partners -Information of newsletter subscribers -Information of workshop/webinar participants -Usage data of CARE website and social media channels - Data on media, events, networks and projects, stakeholders, keywords, hashtags, social media, and newsletters	1-48
WP6 Lead Beneficiary: TAU	Project management and coordination	-Internal data	1-48

The CARE consortium has agreed to use the Microsoft Teams platform for sharing data and documents and for collaborating on tasks with the project coordinator TAU. Teams is a secure file sync, share and content collaboration software that lets project members work on data from anywhere, on any device by downloading a dedicated application on laptops, tablets, and smartphones. Data stored on the Teams platform is guaranteed to physically stay within the EU. Except for image and video materials, data is shared in pseudonymized form with the project coordinator and the CARE consortium to prevent any unnecessary transfer and handling of participants' sensitive information.

1.3 Data collection and generation

1.3.1 WP1 – Evaluation of CARE activities' environmental and sustainable well-being impacts

Lead Beneficiary: BOKU

1.3.1.1 Task 1.1 Screening of existing LCA projects and literature on household level food and clothing consumption [M1-M3]

Task leader: BOKU; Other participants: IVL, TAU, OsloMet

A literature review and a researcher workshop were conducted to map out key issues for the evaluation of the CARE interventions. The researcher workshop was held in Tampere, Finland, at TAU. Primary data collected in the workshop included written notes from conversations and photographs of the results produced by the conversations. This data was collected and is managed by TAU. Personal data collected included basic information about the participants (name, phone number, email address and affiliation). This data is stored locally by TAU with access restricted to TAU's CARE project members.

Further output of this task includes a review report on impact assessment at household level considering food and clothing consumption and on the environmental and sustainable well-being impact of CARE activities (D1.1 Review report on impact assessment), which will be made publicly available.

1.3.1.2 Task 1.2 Development of goal and scope of the assessment and data collection protocol for the pilots [M4-M17]

Task leader: BOKU; Other participants: IVL, TAU, ULUND, OsloMet, EKO, Asker, LDIF, Lääne-Harju, VI

The main outputs of Task 1.2 are a protocol for data collection (for WP3 and WP4, circular food and clothing pilots) and a definition of the goal and scope of the HH carbon footprint assessment. The carbon footprint assessment consists of assessments of the HHs' carbon footprint before and after the planned interventions. The detailed design of the data collection protocol will be carried out by IVL, BOKU, TAU, ULUND, OsloMet (leads to D1.2). The data is collected by project partners and BOKU will analyse the collected data. Data is submitted to BOKU in a non-sensitive format (pseudonymized), as no personal information is required.

The selection process of what steps and question will be included in the protocol and carbon footprint is carried out through a webinar for the partners participating in WP3 and WP4 (IVL, EKO, ASKER, VI, LDIF).

Consent of participation is required from each survey participant. The consent form includes details of what data will be shared with the CARE consortium. Collected participants' personal data will be handled according to national regulations at each partner site. Each partner is responsible for providing the participants a study subject information sheet and a privacy notice in a language the participants are able to understand. Each partner is responsible for keeping participants' personal information secure under restricted access.

Results of task 1.2 will contribute to deliverables D1.2, D3.4, and D4.3., which will be made publicly available.

Baseline and post-pilot survey for households

A survey will be designed in WP1 and implemented and filled out by HHs twice in the project: at baseline (M18) and post-pilot (M37–38). Items in the survey will include indicators related to households' material efficiency, such as current consumption levels in food and clothing. For instance, in the context of food, the indicators may include:

- Frequency and methods of purchasing food
- Amount of food purchased weekly
- Ratios of animal-based products in the households' average consumption
- Food disposal-related questions (e.g., waste sorting and destination)

In the context of clothing, included indicators may include:

- Frequency and methods of purchasing clothes
- Source of clothes purchased
- Ratio of purchasing second-hand garments
- Current skills in caring for clothes
- Clothes disposal methods (e.g., waste destination)

Also, the surveys will include a section developed to measure sustainable well-being.

The conducted survey will complement the DIY food waste audits (in WP3) and DIY wardrobe study data (in WP4) – allowing for an opportunity to ask questions that are not directly covered by the other forms of data collection. Survey responses will be stored by the partners conducting the survey at each partner site. Results of the survey will be shared with the CARE consortium in pseudonymized, non-sensitive format. Collection of the survey is necessary in order to evaluate the impacts of the pilots (in Task 1.3) as well as feed data for the carbon footprint tool.

Carbon footprint tool

A carbon footprint tool will be developed by BOKU and provided to the advisory services/HHs to quantify and illustrate the carbon footprint of the consumption of food and clothing of participating HHs. The carbon footprint tool will focus on food and garment consumption. The tool can be accessed with commonly available web browsers using the http-protocol and it allows participants to assess and estimate the size of the carbon footprint of their households. Those partners in CARE who will give advisory services to the participating households will use the carbon footprint tool in the personal or group settings to illustrate effects of behaviour changes on the carbon footprint of the household.

Results of the Carbon footprint tool are stored in a table format and shared with the consortium in a pseudonymized format.

1.3.1.3 Task 1.3 Assessment of impact of pilots [M18-M48]

Task leader: BOKU; Other participants: IVL, TAU

In Task 1.3, impacts of the interventions and advisory services in WP3 and WP4 are evaluated. The evaluation requires data collected with the survey outlined above (T1.2) and during WP3 and WP4 actions; therefore, this task will run in parallel with WP3 and WP4. The final evaluation will be conducted after WP3 and WP4 are completed (D1.3).

Task 1.3 produces documents and images describing:

- Environmental impact of WP3: Food consumption/waste pilots (led by BOKU)
- Environmental impact of WP4: Clothing Pilots (led by IVL)
- Impacts on HHs' living conditions and sustainable well-being (led by TAU).

The data in this task will be collected during WP3 and WP4. A more detailed specification of the generated data can be found under these work packages.

Results of task 1.3 will contribute to deliverable D1.3 "Evaluation of pilot action impacts" (environmental, living conditions and sustainable well-being), which will be made publicly available.

1.3.2 WP2 – Co-design for advisory services and pilots

Lead Beneficiary: TAU

1.3.2.1 Task 2.1 Reviewing methods for behavioural change for circular practices [M1-M12]

Task leader: TAU; Other participants: ULUND, OsloMet, CSCP

No primary datasets will be collected in the context of this task, the data handled is secondary data like earlier studies and project publications. No personal data will be collected in this task. Written documents and images are produced describing the results of the review.

Results of task 2.1 will contribute to deliverable D2.1 (Infographic of behaviour change toward circularity in food and clothing), which will be made publicly available.

1.3.2.2 Task 2.2 Engaging local citizens to gather insights and co-create [M1-M12]

Task leader: CSCP; Other participants: EKO, Asker, IVL, Lääne-Harju, LDIF, VI, TAU, ULUND, OsloMet

This task engages local citizens with CARE to share their views on co-designing the pilots and the advisory services. Each local partner (EKO, IVL, Asker, Lääne-Harju, LDIF, and VI) organizes live (onsite), human-centred design workshops with citizens of at least 8 separate households. Data from workshops will be collected in the form of written notes, photos, and videos.

Additionally, the workshops will gather input from participants which will form 2 datasets to be utilized in CARE:

1) level of knowledge of circularity, needs, barriers, drivers & goals of households relating to circular behaviours.

2) ideas developed with households on services and products which could support households to become more circular.

Primary data collected in this task will be stored by the local partners responsible for the collection. Relevant data will be shared with the consortium in pseudonymized format whenever sharing of further information of the participants is not required. In image and video materials, where identification of individuals is possible, written participant consent for sharing the material is required before sharing or publishing of the materials.

Personal data of the participants (e.g., name, contact details, demographic details) will be collected during registration and consent forms are required to be filled in by participants. Collected participants' personal data will be handled according to national regulations at each partner site. Each partner is responsible for providing the participants a project information sheet and a privacy notice in a language the participants are able to understand. Each partner is responsible for keeping participants' personal information secure under restricted access.

Results of task 2.2 will contribute to deliverable D5.2 "Explainer videos on circular food and clothing", which will be made publicly available.

1.3.2.3 Task 2.3 Creating a household recruitment strategy [M6-M12]

Task leader: TAU; Other participants: All except BOKU

No primary datasets will be collected, the task utilizes data collected in other tasks. No personal data will be collected in this task. The results of this task include written documents and images, such as infographic for instructing the local partners about agreed upon strategies.

Results of task 2.3 will contribute to produce deliverables D2.2, D3.1, and D4.1, which will be made publicly available.

1.3.2.4 Tasks 2.4 Co-developing the advisory services [M3-M45] and 2.5 and Co-designing the interventions [M3-M41]

Task leader (2.4): CSCP, (2.5): TAU; Other participants (2.4 and 2.5): All except BOKU

These tasks consist of online workshops that aim to co-develop advisory services and interventions for HHs. Workshops are organized by different local partners (CSCP, TAU, EKO, ULUND, OsloMet). Participants of these pilot workshops are mainly members of the CARE consortium, but some citizens may also be engaged in the workshops. Data from these workshops will be collected in the form of written notes and documents, photos, and video materials.

The data collected will be elaborated on together with all participating partners to feed into Task 5.6, to develop a policy brief for the continuation and exploitation of advisory services (D2.3) and to produce a design concept report for the continuation and exploitation of interventions (D2.4).

TAU will select and manage an online community platform service for engaging households that participate in pilots. The platform service will be provided by an external service provider that will be chosen later in this task. Data management is one of the criteria for choosing this service provider. The basic usage data that platform provides (e.g. time used per user, most used features) may be re-stored and handled by TAU.

Personal data of citizen participants (non-CARE consortium members), such as names, contact details, and demographic details will be collected during registration, and consent forms are required to be filled before participation. Each local partner is responsible for providing the participants a project information sheet and a privacy notice in a language the participants are able to understand. Each partner is responsible for keeping participants' personal information secure under restricted access.

Results of Tasks 2.4 and 2.5 will contribute to deliverables D2.3, D2.4, D3.1, and D4.1, which will be made publicly available.

1.3.3 WP3 – Circular food pilots

Lead Beneficiary: ULUND

1.3.3.1 Task 3.1 Recruitment of households and planning of regional pilots [M13-M17]

Task leader: IVL; Other participants: IVL, EKO, Asker, Lääne-Harju, LDIF, VI

In Task 3.1, households for the circular food pilots are recruited according to the household recruitment strategy designed in Task 2.3. Partner IVL will coordinate the work of the task based on output from Tasks 2.4 and 2.5, in collaboration with the regional partners.

Primary data collected includes lists of participating households with contact information and personal data of HH composition. Stored HH personal data may include:

- Participant name
- Contact details
- Demographic details
- Size and type of HH

Each local partner is responsible for providing the participants a project information sheet and a privacy notice in a language the participants are able to understand. Each partner is responsible for keeping participants' personal information secure under restricted access.

This task will contribute to deliverable D3.1 Local guidelines for the circular food pilot, which will be made publicly available.

1.3.3.2 Task 3.2 Implementation of the regional circular food interventions [M18-M36]

Task leader: IVL; Other participants: TAU, EKO, OsloMet, Asker, ULUND, VI, LDIF

The goal of the circular food pilot is to encourage and support the prevention and reduction of food waste (FW) by bringing about change in the practices of food shopping, cooking, and storing. The duration of the interventions is 12 months during M18-36, and it will run in parallel with WP4 (circular clothing pilot).

The interventions included in the pilot are described in detail in section 1.2.1.6 of the GA and further developed under WP2 (T2.4 and T2.5). Partner Asker will use subcontracting of services of local NGOs to aid in the implementation of the interventions. Each regional partner will write a report that will be used for the deliverable on regional implementation (D3.2).

Data collected during the interventions will include images, sound, and video materials. The participants' informed consent is required for the publication of these materials for the purpose of social media visibility and other publicity related purposes. Researchers may also attend the workshops or events related to the interventions by observing the activities and collecting notes, including written materials, images, and video recordings.

Task 3.2 will contribute to deliverables D2.4 and D3.2, which will be made publicly available.

1.3.3.3 Task 3.3 Implementation of the customized advisory services for food [M18-M36]

Task leader: EKO; Other participants: TAU, OsloMet, Asker, ULUND, IVL, Lääne-Harju, LDIF, VI

Local partners EKO, Asker, IVL, Lääne-Harju, LDIF and VI will organize at least two advisory service meetings (around M18-20 and M27–29) as outlined in section 1.2.1.6 of the GA. In addition to the meetings, local partners will give the participating HHs the opportunity for receiving continuous advice through a service hotline (e.g., by email or phone) and an online community platform.

The researchers may also attend and observe the activities in this task and produce field notes in the form of written documents, photos, videos etc.

Data collected in Task 3.3 is used to generate reports and deliverables D3.3 and D2.3, which will be made publicly available.

1.3.3.4 Task 3.4 Assessing current and new consumption levels through food waste audit and survey [M18-M38]

Task leader: ULUND, Other participants: TAU, EKO, OsloMet, Asker, IVL, VI, LDIF

The households will conduct a DIY food waste audit and fill out a survey to provide data for WP1 at the baseline and at the end of the project. This is described in detail in GA section 1.2.1.3, “Impact assessments: Methods for assessing the transformation at the household level”.

In the FW audit, the composition and quantity of food wasted in HHs will be measured. In the DIY Food waste audit, HHs collect and weigh their avoidable FW for a predetermined period (at least for 7 days). They will also record the composition (type) of food wasted as well as report the reasons behind wasting the food (e.g., using an Excel sheet).

The researchers may also attend and observe the activities in this task and produce field notes, in the form of written documents, images and videos.

This task will contribute to deliverables D3.4 and D1.3, which will be made publicly available.

1.3.3.5 Task 3.5 Ethnographic understanding of practice change for food waste [M14-M48]

Task leader: ULUND; Other participants: TAU, OsloMet

Data in this task will be collected through HH visits and ethnographic interviews. Two ethnographic interviews for each HH in Finland by TAU (30 interviews), Norway by OsloMet (30 interviews), and Sweden by ULUND (30 interviews) will be conducted; one introduction interview (M13-18) focuses on tracing the HHs’ initial consumption practices broadly and one exit-interview (M36-38) focuses on tracing how these practices have changed and what challenges have the HHs faced during the pilot. The researchers will also visit, when possible, HHs’ homes to carry out kitchen observations. A final focus group interview with the HHs (M40–42) will collect their experiences and assess changes in food consumption, improve the DIY food waste audit and validate data for Task 1.3. This task will also utilize the data (e.g., photos, videos, text) generated through online community platform from the participating HHs.

Data collected in this task will include:

- Household data related to food waste reduction

- Interviews (audio and transcript)
- Observational notes (photos and videos)

Task 3.5 will contribute to deliverables D2.4 and D3.5, which will be made publicly available.

1.3.4 WP4 – Circular clothing pilots

Lead Beneficiary: OSLOMET

1.3.4.1 Task 4.1 Recruitment of households and planning of regional pilots [M13-M17]

Task leader: Asker; Other participants: EKO, OsloMet, IVL, VI, Lääne-Harju, LDIF

In Task 4.1, households for the circular clothing pilots will be recruited according to the household recruitment strategy designed in Task 2.3. Partners Asker and OsloMet will coordinate the work of the Task 4.1, based on the output from Tasks 2.4 and 2.5 in collaboration with the regional partners.

Primary data collected includes lists of participating households, with contact information and personal data of HH composition. Stored HH personal data may include:

- Participant name
- Contact details
- Demographic details
- Size and type of HH

Each local partner is responsible for providing the participants a project information sheet and a privacy notice in a language the participants are able to understand. Each partner is responsible for keeping participants' personal information secure under restricted access.

This task will contribute to deliverable D4.1 Local guidelines for the circular clothing pilot, which will be made publicly available.

1.3.4.2 Task 4.2 Implementation of the regional circular clothing interventions [M18-M36]

Task leader: Asker; Other participants: TAU, EKO, OsloMet, IVL, VI, LDIF

The aim of the circular clothing pilots is to reduce the environmental impact of HHs' clothing consumption by changing their practices acquiring and caring for clothes. The pilot will last between 12 to 18 months to accommodate seasonal variations in clothing consumption.

The interventions included in the pilot are described in detail in section 1.2.1.6 of the GA and further developed under WP2 (T2.4 and T2.5). Partner Asker will use subcontracting services of local NGOs to aid in the implementation of the interventions. Each regional partner will write a report that will be used for the deliverable on regional implementation (D4.2).

Data collected during the interventions will include images, sound, and video materials. The participants' informed consent is required for the publication of these materials for the purpose of social media visibility and other publicity related purposes. Researchers may also attend the workshops or events related to the interventions by observing the activities and collecting notes, including written materials, images, and video recordings.

Task 4.2 will contribute to deliverables D2.4 and D4.2, which will be made publicly available.

1.3.4.3 Task 4.3 Implementation of the customized advisory services for clothing [M18-M36]

Task leader: EKO; Other participants: TAU, OsloMet, Asker, ULUND, IVL, Lääne-Harju, LDIF, VI

Local partners EKO, Asker, IVL, Lääne-Harju, LDIF and VI will organize at least two advisory service meetings (around M18-20 and M27–29) as outlined in section 1.2.1.6 of the GA. In addition to the meetings, local partners will give the participating HHs the opportunity for receiving continuous advice through a service hotline (e.g., by email or phone) and the online community platform.

The researchers will also attend and observe the activities in this task and produce field notes, photos, videos etc.

Data collected in Task 4.3 is used to generate reports and deliverables D3.3 and D2.3, which will be made publicly available.

1.3.4.4 Task 4.4 Assessing current and new consumption levels through wardrobe study and survey [M18-M38]

Task leader: OsloMet; Other participants: TAU, EKO, Asker, ULUND, IVL, VI, LDIF

Participating households will conduct a DIY wardrobe study and fill out a survey to provide data for WP1 at the baseline and at the end of the project. This is described in detail in GA section 1.2.1.3, “Impact assessments: Methods for assessing the transformation at the household level”.

In the DIY wardrobe study, participating HHs will assess their current wardrobes (e.g., number of garments), laundering habits and practices, the number of repaired garments (if any) in the wardrobes, and garments in need of repair (if any). Each garment in a wardrobe can be an analytical unit, and the history, value, use, shape, and materials are systematically analysed. How people store, use, and maintain their clothing can also be part of these studies. The researchers will also attend and observe the activities in this task and produce field notes, photos etc.

This task will contribute to deliverables D4.3 and D1.3, which will be made publicly available.

1.3.4.5 Task 4.5 Ethnographic understanding of practice change for clothing [M14-M48]

Task leader: OsloMet; Other participants: TAU, ULUND

Data in Task 4.5 will be collected through HH visits and ethnographic interviews. Two ethnographic interviews for each HH in Finland by TAU (30 interviews), Norway by OsloMet (30 interviews), and Sweden by ULUND (30 interviews) will be conducted; one introduction interview (M13–18) focuses on tracing the HH’s initial consumption practices broadly and one exit-interview (M36-38) focuses on tracing how these practices have changed during the pilot, and what challenges the HHs might have faced during the pilot. The researchers will also visit, when possible, HHs’ homes to carry out wardrobe observations. A final focus group interview with the HHs (M40–42) will collect their experiences and assess changes in clothing consumption, improve the DIY wardrobe study and validate data for Task 1.3. This task will also utilize the data (e.g., photos, videos, text) generated through online community platform from the participating HHs.

Data collected in this task will include:

- Household data related to clothing consumption
- Interviews (audio and transcript)
- Observational notes (photos and videos)

Task 4.5 will contribute to deliverables D2.4 and D4.4, which will be made publicly available.

1.3.5 WP5 – Communication, dissemination and exploitation of CARE results

Lead Beneficiary: CSCP

WP5 coordinates CARE communication, dissemination and exploitation activities and aligns the project with the CCRI. In the Tasks 5.1-5.6, different data sets from other WPs are utilized, analysed, and elaborated on, from the communication perspective. The data handling in WP5 is coordinated by CSCP, and it is supported by all CARE partners. For example, research data might be utilized to personalize messages to different target groups and real household stories and photos from participating household might be used in CARE communications (with consent from households).

Personal data of participants that are not members of the CARE consortium (e.g. name, contact details, affiliations) will be collected in registration for workshops and webinars. During the CARE project, various events and meetings will be held to support engagement of relevant stakeholders and exploitation of results. For these, participant and access data may be collected. Some dissemination activities that include active participation and/or recordings and notes will also collect consent forms. An example of this kind of activity is the Circular Academy, which will be an online capacity-building programme for CCRI regions, NGOs and CSOs to take the gained knowledge from CARE forward.

In WP5, usage data of the CARE website and CARE social media channels are collected. The CARE website will not set cookies, analytics will use IP addresses in anonymized form. The central CARE newsletter will gather subscribers through a form on the CARE website. The CARE website features a sign-up form for the CARE central project newsletter. This uses the Mailchimp service, in which sign up data is securely stored and accessed only by CSCP for the purposes of sending out the newsletters. An option to unsubscribe is provided for the subscribers.

WP5 also compiles data of CARE communications in other channels. This includes a table of data on media, events, networks and projects, stakeholders, keywords, hashtags, social media, and newsletters. In a second table (tracker), data is collected on communication, dissemination, and exploitation (CDE) activities by all partners for the purpose of reporting CARE outreach in relation to CARE key performance indicators. Photographs and videos can be taken at various project events, workshops and other various gatherings and used in materials related to the project's research and dissemination activities (such as in communication about the project, social media, reports, or presentations at events). Material used in said activities must always be collected with consent and being photographed or filmed should always be voluntary. Creative elements such as photographs, videos and graphics will be collected, stored, and used by CSCP and utilized by all partners and are available in the CARE Teams file.

1.3.6 WP6 – Project management and coordination

This work package generates only internal data to be used within the project and for the relevant parts, reported to entities specified in the GA. All internal data is handled securely with monitored access that is

only granted only to relevant project personnel and entities. WP6 and a dedicated data manager from TAU supports partners and provides guidance in CARE data management.

2. FAIR data management

Adhering to the FAIR (Findable, Accessible, Interoperable and Re-usable) principles is a key part of managing and maximizing the value and utility of the data generated in CARE. This DMP is reviewed yearly and updated twice (deliverables D6.3; M36 and D6.4; M48) during the course of the project to ensure it aligns with current standards and practices for FAIR data. Open access will be granted for all scientific publications resulting from CARE, including on-line access to scientific information, which is provided, free-of-charge to the end user and, as far as possible, remains re-usable. Open access is granted using a CC-BY license, including the right to read, download, print, copy, distribute, link, crawl, and mine.

2.1 Making data findable, including provisions for metadata

Metadata search keywords are used to make CARE research data easily findable using internationally recognized repositories that provide persistent identifiers (e.g. DOI, URN) and enable data citations. Different types of metadata will be provided for each citable set of data, including project keywords and information on data creators and ownership (persons and institutions), project funding, licensing, access availability and cross references to associated publications and data. All data is deposited using best practices guidelines into a repository that supports page indexing and search engine compatibility such as RD monitor (rdmonitor.com) to ensure maximal discoverability. Partners are instructed by the coordinator and the project data manager about required metadata information for each data set. Missing metadata fields will be filled out and quality controlled before final submission and creation of persistent identifiers in Zenodo. Metadata quality control will be handled by the project data manager to ensure metadata consistency, correctness, and completeness for achieving maximum potential of FAIRness (findable, accessible, interoperable, re-usable).

2.2 Making data accessible

CARE follows Open Research Data policy in Horizon Europe and the FAIR principles. CARE will make data as open as possible and as closed as necessary. Opened data will be made accessible through standard digital communication protocols such as HTTP. CARE generates sensitive data which is regulated by the GDPR and other national regulations. The decisions of opening project data are made by the CARE General Assembly (representing all partners), in accordance with GA requirements and applicable regulations. The details of published data will be updated in later revisions of this DMP. For collected and generated data that does not need to be shared directly with the consortium, owners of the data (defined in the Consortium Agreement) will decide on the openness and usage policies for their data, while complying with GA section “7. Open science: Research data management” requirements. Data will be published with IPR protection clearance.

In general, the data will be made available in the Zenodo (zenodo.org) repository. Zenodo is a trusted data repository supported by CERN guaranteeing open access and data longevity. Zenodo supports using persistent identifiers (e.g. DOI, URN) and is well suited for publication and storage of academic project data. Eligibility to participate in the EU Open Research Repository Pilot (zenodo.org/communities/eu/) will be investigated. There are no restrictions in accessing the data to be published. If restrictions should be

required in the future, Zenodo supports depositing files under closed access with protection against unauthorized access at all levels.

Project data associated with scientific articles will be published with open access in a peer-reviewed scientific publication under CC BY-license, in a journal that is compatible with the Horizon Europe grant agreement specifications. Compatibility of the journal will be verified with JournalChecker (journalcheckertool.org) and TAU's ChronosHub (tampere.chronoshub.io) tools.

Project metadata will be made available openly available and licensed under public domain dedication CC0, as per grant agreement. The metadata will contain information to enable repository users to access the data. No special software is required for reading or accessing the data. CARE data longevity expectations cover and exceed Horizon Europe best practices recommendation of minimum of 5 years in the Zenodo repository. All the data published by CARE will be published in trusted repositories to ensure longevity and contain rich metadata in a machine-readable format.

2.3 Making data interoperable

Deposited data will follow community-endorsed interoperability best practices guidelines. This includes employing widely recognized and accepted data formats (e.g., CSV, JSON, XML), and ensuring data completeness. Data completeness encompasses information on details such as authorship (using Orchid IDs), data creation dates, licensing, and methodological information. Any ontologies or vocabularies generated by the project will be openly published to enhance interoperability. Any possible references to existing data from other projects will be included in the metadata. Assignment of persistent identifiers to all published data will ensure they can be reliably located and referenced over time. Any feedback from the community on accessing and utilizing the data during the course of the project will be taken into consideration.

2.4 Increase data re-use

All data produced in CARE that can be considered reusable in future research or to be valuable to be known publicly, will be deposited to the Zenodo repository, and will be assigned a persistent DOI number. Data quality, compliance with regulations and GA obligations compatibility will be curated before submission by the CARE data manager. Data reusability is considered in all steps of preparing the data for repository deposition. Insights gained through the analysis of the datasets generated and collected in CARE are deposited in written and image formats with the data itself to explain the use of the data in CARE.

2.5 Other research outputs

In addition to generating several publicly available project deliverables (as specified in GA) and scientific publications in an open access format, the carbon footprint tool, described in 2.3.1 "WP1 - Evaluation of CARE activities' environmental and sustainable well-being impacts, ii" is developed and provided to the advisory services/households to quantify the carbon footprint of the consumption of food and clothing of participating HHs. The carbon footprint tool will focus on food and garment consumption. The carbon footprint tool will be made publicly available as an online tool.

3. Allocation of resources

Costs of making peer-reviewed publications open access are part of the budgeted project plan. Zenodo data repository is free of charge for academic project data. Only “Golden” open access publishing costs are covered by the GA.

Data management will be led by the consortium leader TAU and implemented via this data management plan, created at month 6 and updated twice during the project (deliverables D6.3 due in M36 and D6.4 due in M48). A professional information specialist (data manager) at TAU is handling the data management needs for CARE. Each project partner assigns a Data Controller who is responsible for the collected data that does not need to be shared with the project consortium. For example, contact information of participating households is shared only after pseudonymization with the consortium.

Data longevity expectations cover and exceed Horizon Europe best practices recommendation of minimum of 5 years in the Zenodo repository. According to the Zenodo data repository, Zenodo is guaranteed to exist “as long as CERN exists”.

4. Data security and ethical aspects

Each local partner is responsible for the security of the CARE data they are collecting and generating. All sensitive data must be stored under restricted access, available to only authorized users. No data that can be considered sensitive, containing personal information of participants (such as phone numbers, or home addresses) is deposited into a public repository. All user data handling, analysis and storage is done physically within the EU. No private user data are needed by the CARE consortium to have full operability on the CARE datasets.

If partners are unable to use an automatically backed up storage system (provided by an IT-department, for example), they are instructed to ensure a backup exists of their data that is critical for CARE actions. Partners can also send an Openssl encrypted backup of their data to TAU for storage. In this case, the storage of the backup is handled by the CARE data manager. At least two local partner CARE members need to have a decryption key (password) for the data, and the data manager at TAU does not need to have the decryption key for the backup.

For all CARE data collected and generated by the partners and not shared with the consortium, each partner makes the assessment whether their data will need to be stored after the project has ended. Each partner disposes of the data that is deemed unnecessary to retain. Any long-term storage of sensitive information of participating households that may be required after M48 is encrypted using the Openssl algorithm before deposition to a cloud based, backed up, long term storage. Instructions and a protocol for data encryption will be provided by the project data manager (TAU).

All external participants will be given a project information sheet and will be informed about the data that will be collected and the sharing of their data (when applicable). Consent from participants included in the interview, image or video materials is obtained before the hosted events by CARE partners. Partners collecting participants’ personal information are also responsible for providing a privacy notice in a language the participants can understand. Giving consent for the data to be used for research purposes in CARE is a requirement for participation in the workshops and other CARE activities. Participant consent forms also cover all collected survey data and sharing of the data with the CARE consortium.

The server hosting the carbon footprint tool (managed by BOKU) will provide the necessary security standards for all the data processed by the server, including user registration and profile information. Non-encrypted personal data collected by the carbon footprint tool will be stored on local data storage systems under protected, restricted access.

CARE will take necessary steps to guarantee that the website (managed by CSCP) and community platform (managed by TAU) data are treated securely and to ensure privacy. No transfer of personal data will take place to other organisations or countries without participants' informed consent.

The Microsoft Teams platform will provide the necessary security standards for the communications between partners and all non-sensitive data that is shared with, processed, and stored by the CARE consortium while the project is active (M1-M48). All non-published data is kept accessible only to authorized users.

Project partners