CHORIZO FLW DATAHUB & "INSIGHTER"

Status Report v1.0

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Full title project	Changing practices and Habits through Open, Responsible, and social Innovation towards ZerO food waste
Call	HORIZON-CL6-2021-FARM2FORK-01
Topic	HORIZON-CL6-2021-FARM2FORK-01-13
Type of action	HORIZON-RIA
Project coordinator	EV ILVO
Project URL	chorizoproject.eu

Dissemination level	Public	**Document type**	Report
Work package	2		
Author(s)	Capwell Forbang Echo		
Document version	1.0		

Grant agreement	101060014	**Duration**	36 months
Start Date	1st October 2022	**End date**	30th September 2025

Contributors

Name	Organisation
Samuel Bosch	EV - ILVO
Andang Kloran Awah	EV - ILVO

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1 INTRODUCTION

1.1 The CHORIZO project

Chorizo stands for "Changing practices and Habits through Open, Responsible, and social Innovation towards ZerO food waste". It is a Horizon Europe (HE), European Union (EU) Research and Innovation Action (RIA) type of project which principally aims to improve the understanding of how social norms and behaviors influence food loss and waste (FLW) generation across various areas of consumption. The knowledge generated in the project will be used to improve the effectiveness of decision-making and engagement of food chain actors towards zero food waste.

1.2 The CHORIZO datahub and FLW "Insighter"

The CHORIZO datahub and FLW "Insighter" is broadly a 2-in-1 infrastructure. As a datahub, it efficiently catalogues and indexes large amounts of data, providing robust metadata management and comprehensive description of datasets. Datasets will come from within the project (case studies and desktop research on previous and existing FLW actions) as well as outside the project from interested stakeholders tackling FLW. The stored datasets can be versioned, which is crucial for tracking changes and revisions to datasets. As a FLW "Insighter", the infrastructure will provide new insights- generated from data and FLW analytics on the levers to change social norms.

1.3 Infrastructural and functional layers

The CHORIZO datahub and FLW "Insighter" has three functional layers:

- Data layer 1: Multi-source evidence collection, analysis and interpretation
- Data layer2: New evidence generated from the project case studies on the interaction of social norms and FLW behavior and
- Data layer 3: The insights

The CHORIZO FLW Datahub and "Insighter" Status Report hence seeks to support the FAIR principles of data sharing. An API documentation *(see appendix I)* has been developed to this effect to enable external stakeholders understand and programmatic details on how to access the wealth of datasets on social norms and their impact on food waste generation hosted on our CKAN instance (CHORIZO FLW datahub and "Insighter"), facilitating easy integration with applications, research, or data analysis tools. The API is designed to enable users to search for datasets, retrieve metadata, and download datasets directly through a series of RESTful endpoints. The API documentation also contains instructions on how access to private datasets (data layer 2 & 3) can be requested. This is possible through a request form or by scanning the QR code below.

2   CHORIZO DATA LAYER 1: MULTI-SOURCE EVIDENCE COLLECTION, ANALYSIS AND INTERPRETATION

This is a master list of previous and on-going actions to prevent/reduce FLW collected and assessed in terms of relevance. These actions tackle food loss and waste (FLW) in different countries of the European Union and the United Kingdom. Various stages of the food chain are tackled including:

- Primary production: the production, rearing or growing of primary products, including harvesting;
- Processing and manufacturing including valorization: The first processing and manufacturing of food after the primary production and before the retail and other distribution stage of the food supply chain;
- Transportation: the transportation of food at any stage in the supply chain;
- Retail: the handling of food and its storage at the point of sale or delivery to the final consumer - includes distribution terminals, shops, supermarkets distribution centers, wholesale outlets;
- Redistribution: To redistribute surplus food fit for human consumption;
- Food services: includes catering operations, factory and school canteens, institutional catering, restaurants, hotels, hospitals, cafes, and other similar food service operations;
- Households: consumption of food in the household or small residential facilities;
- General awareness-raising: focus on increasing overall, broad, general awareness about food loss and food waste - in the form of campaigns, forums, platforms, exchange of information/ideas; and
- The whole supply chain: addresses food loss and food waste along all stages of the supply chain

This data layer currently has 10 datasets.

2.1   DATASET 1: Chorizo master list of actions tackling food loss and waste covering the entire food production chain

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section in includes resources or data of actions on whole supply chain (20): addresses food loss and food waste along all stages of the supply chain.

This dataset currently has 19 Resources.

- **Resource 1: Circular Cities Practitioners Handbook**

Engaged with large scale retailers to analyze their supply chain to reduce surpluses and minimize waste production. The city convened a network of exchange between large-scale retailers, non-profits and public authorities to enhance the recovery and the donation of food surpluses.

- **Resource 2: Project: Hrana ni odpadek**

Analysis of the situation and causes of food waste in Slovenia. Preventing food surpluses through redistribution, valorization, education, awareness raising, digital tools, prizes, and competitions, technological innovations for food and non-food uses, training, sales innovations, improved public procurement, certification, legislation, grants, and incentives.

- **Resource 3: FUSILLI / Food 2030**

This is the Danish part of the EU project that aims to transform the food system to be more sustainable by focusing on all stages of the chain: production and processing, consumer, distribution, and governance. Food

waste actions are focused on: efficient ways to avoid food waste, promote recycling and transform into bio-based products, improving logistics.

- **Resource 4: Partnerships on food waste**

National partnership for food waste to increase the cooperation across the food value chain and between the private sector, authorities, and civil society.

- **Resource 5: Madspildspuljen (The food waste pool)**

A number of partnership and funding projects to reduce food waste with various measures: involvement of the entire value chain (e.g. from farm to fork), knowledge about behavior (e.g. food waste in single households), technological innovation (e.g. product sponsorship in retail), campaigns (e.g. dissemination of food waste-reducing measures in commercial kitchens), joint-thinking of actors (e.g. spread of food waste-reducing measures in commercial kitchens), events and citizen involvement (e.g. Youth against food waste), and donation - e.g. surplus food for schools.

- **Resource 6: Glanbia**

Pure Food and Pure Planet Strategy includes targeting zero waste to landfill at all operational sites by 2025 and 50 percent reduction in all food waste by 2030.

- **Resource 7: Socio-economic context of food waste generation in Latvia (2022-2023)**

A project to investigate the socio-economic context of food waste generation in Latvian society and food production and distribution enterprises, as well as to assess the potential role of food waste prevention or valorization in the Latvian economy.

- **Resource 8: Unilever**

Future Food initiative to halve food waste in Unilever's direct operations from factory to shelf by 2025.

- **Resource 9: Sainsbury's**

As part of the commitment to reduce food waste by 50% by 2030, working to reduce, or put as much of food waste as possible to good use. Includes working with farmers to reduce food waste in the supply chain, sending surplus food waste from stores to charity food donation partners and recovering energy from waste.

- **Resource 10: Estratégia Nacional de Combate ao Desperdício Alimentar (ENCDA) - Comissão Nacional de Combate ao Desperdício Alimentar (CNCDA)**

Combating food waste, a shared responsibility of the producer to the consumer.

- **Resource 11: ZERO DESPERDICIO. Nada se perde. Tudo se transforma. ZERO DESPERDÍCIO WEBAPP**

The first digital platform entirely dedicated to the management and implementation of production and distribution models, according to the Circular Economy concept. The Zero Waste Model aims to recover network surpluses. A model of people for people and for the environment, which benefits from the support of a technological platform - ZERO DESPERÍCIO 360 WEB APP - equipped with Business Intelligence tools , which allows connecting entities on a national scale, collecting data on donations made; measuring social, economic and environmental impacts; scalable to other territories at national and international level. ZERO DESPERDICIO sends all donations to people in need, in a Zero Waste Movement composed of retailers,

restaurants and the like, public entities, social organizations and local solidarity, all together in favor of society and the environment.

- **Resource 12: Alentejo KmO Initiative**

Km0 Initiative - Alentejo: Enhance the consumption, production and processing of locally sourced agri-food products.The mission of Alentejo's Km0 Inititative is to boost the consumption, production and transformation of locally sourced food products in order to contribute to the diversity and resilience of food systems and to enhance the value of local products. The concept also aims to raise awareness of the carbon and ecological footprint resulting from high energy spent on intensive production processes, packaging, transport and storage of foodstuffs that are produced at a far distance from where they are consumed.

- **Resource 13: Le pacte national de lutte contre le gaspillage alimentaire**

The national pact to fight against food waste. In particular, it sets the national goal of reducing food waste by 50 percent by 2025, i.e. an average annual reduction of 5 percent between 2013 and 2025.

- **Resource 14: Plan Alimentation Durable 2015-2020, 2022-2027, Plan Strategique Parisien de lutte contre le gaspillage alimentaire**

Reducing food waste through public procurement of sustainable food and shorter supply chains. The plan goes beyond food waste, it is an integral food policy plan. However, Challenge 4 of the plan specifically focuses on food loss and food waste.

- **Resource 15: Le Project Alimentaire de L'Eurometropole de Strasbourg: Strategie & Plan D'Action 2022 / Proximity Composting**

Aim is to ensure that proximity composting is part of the bigger approach to food policy.

- **Resource 16: La alimentación no tiene desperdicio. Aprovéchala – AEOCC**

The initiative has the support of more than 100 companies, the Ministry of Agriculture, Food and the Environment, the Ministry of Health and Social Services and the Spanish Federation of Food Banks. The initiative brings together more than 600 companies and distributors. Establish prevention and efficiency practices along the entire food chain; maximize the use of the surplus produced throughout the different stages of the value chain (redistribution, reuse and recycling); raise awareness and sensitize society to this problem and the need to reduce food waste.

- **Resource 17: The Norwegian Model**

The Norwegian Government and the food industry entered into a historic negotiated agreement in June 2017. The goal of the agreement is to reduce food waste in Norway by 50 percent by 2030. The agreement was signed by five ministries and twelve industry organizations. The parties agreed on joint efforts towards reduction targets for food waste throughout the supply chain, including facilitating and helping consumers throw away less food. The participating businesses joined the agreement via a declaration of affiliation, and contribute to achieving the goal through measures in their own business and in collaboration with others. The Ministry of Climate and the Environment has the responsibility for coordinating the work, and will ensure joint reporting of achieved results in 2020, 2025 and 2030.

- **Resource 18: Antigaspi Solidaritéitspakt**

A total of 92 out of the 102 municipalities of Luxembourg are part of a pact against food waste, the solidarity pact. The goal is to act as multipliers towards more sustainable consumption and production against food loss and food waste.

- **Resource 19: Action plan food loss and biomass waste circular action plan 2021-2025: Food loss and food waste from producer to consumer (OVAM)**

Initiatives across the entire food supply chain. Contribute to reducing food waste by 30 percent. Stimulate cooperation within product chains. Establish sector-specific programs encouraging companies to reduce food waste on a broad scale. Reducing the generation of food loss in the consumption phase. Scaling up social circular entrepreneurship. Support food loss start-ups. Support local authorities in their local coordinating role in preventing food loss. Stimulate home recycling. Improve selective sorting and collection of kitchen and food waste at companies. Increase the circularity and sustainability (valorization) of the recycling market, gaining market trust for recyclates and assuring the sales.

2.2 DATASET 2: chorizo master list of actions tackling food loss and waste through general awareness raising

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section includes resources or data sets on general awareness-raising (79) on FLW: the main focus on increasing overall, broad, general awareness about food loss and food waste - in the form of campaigns, forums, platforms, exchange of information/idea

This dataset currently has 80 Resources.

- **Resource 1: Feeding the 5000 / Feedback**

Serves up a delicious communal feast for 5000 people made entirely out of food that would otherwise have been wasted. The public gets to see the scale of food waste first hand and learn that the solutions are delicious. The event brings together a coalition of organisations and engage politicians at the local and national level. Feeding the 5000 creates and acts as a catalyst for change.

- **Resource 2: Adopt the Ugly Foodling**

The main objective of the Ugly Foodling is to create awareness among young consumers about the reasons and challenges of food waste and bring them together with more experienced consumers (elderly) who spend their youth in different conditions (non-abundance of food, participation in producing food producing, etc.). The urban young consumers will come into contact with the various food chain stakeholders, they will get to know how the food is produced and learn to respect it, learn about the bond between the food and cultural identity.

- **Resource 3: No Leftovers Malta**

A platform / forum to foster awareness and educate the general public about sustainable and responsible consumption and production; foster and create an open dialogue where members of societies are given the opportunity to engage and participate in the eradication of food waste.

- **Resource 4: I Am Ready / Zachra? jídlo**

A campaign called "I Am Ready" to raise awareness about aesthetic standards on fruits and vegetables. The petition was signed by more than 10,000 people. After that, two shops – Penny Market and an online supermarket Rohlik.cz – started to sell wonky fruits and vegetables. Later, TESCO joined, and it is now selling wonky vegetables, too.

- **Resource 5: Antigaspi Exhibition**

Awareness raising for the general public, and especially strudents from 3rd and 4th grades, with a moving exhibition.

- **Resource 6: Golden rules Campaign**

Awareness raising and teaching best practices about food waste to the general public.

- **Resource 7: 118 Reasons to Change Something Campaign**

Motivate people to start changing their own behaviour; awareness raising and teaching best practices to the general public.

- **Resource 8: "Jugendtreff Käl-Téiteng"**

Informing youth about food waste and recipes which might help to reduce it.

- **Resource 9: Food Policy Council**

Developing strategies to reduce food waste in Luxembourg.

- **Resource 10: Aquí no se tira nada" (Ministry of Agriculture, Fisheries and Food)**

The objective of this campaign is to contribute to the awareness of all sectors of society, recovering the value of the food that makes up the national, cultural gastronomic heritage of Spain to curb food waste and its impact.

- **Resource 11: Comida Basura**

Awareness-raising initiatives about food waste.

- **Resource 12: Red sin Desperdicio**

Red sin Desperdicio is a network for the knowledge and prevention of food losses and waste that has been operating informally for some time and is now promoting different activities and providing solutions to reduce food waste.

- **Resource 13: Yonodesperdicio**

General awareness campaigns, recipes to address food waste, for all actors along the supply chain.

- **Resource 14: ReAprovecha Cantabria**

ReAprovecha Cantabria is an awareness campaign against waste framed in the Cantabrian Strategy against Food Waste launched by the Government of Cantabria.

- **Resource 15: Sindrome de Abundancia**

The objective is to create awareness campaigns about the need to avoid food waste.

- **Resource 16: Remenja'mmm**

Remenja'mmm ("Buy me, too good to throw it away") is a campaign that aims to raise awareness, for both consumers and the restaurant / hospitality industry, in the prevention of food waste by offering proposals and resources.

- **Resource 17: La manduca no caduca**

The manduca no caduca is an initiative of the Association of Naturalists of Girona (ANG) that since its inception in 2013 seeks to raise awareness among citizens about food waste and its environmental and social consequences. To do this, it invites people to create ways to take advantage of food throughout the food chain and to reflect on the current consumption model.

- **Resource 18: Feeding Zaragoza**

The main objective is to denounce food waste and generate a critical movement in society regarding our attitude towards food (the way it is produced, distributed and consumed), taking into account the fact that there are people who are hungry in our cities and in the world.

- **Resource 19: Sin desperdicios: aprovecha la comida – HISPACOOP**

A campaign of HISPACOOP (Spanish Confederation of Cooperatives of Consumers and Users) which aims to raise awareness among the general public about the importance of reducing food waste and promoting responsible consumption. To this end, HISPACOOP organizes informative, training talks with special attention to the most vulnerable groups. It also disseminates materials, advice and responsible habits in the management and use of food.

- **Resource 20: SEMANA DE LA REDUCCIÓN DEL DESPERDICIO 2018**

The Ministry (Agriculture, Food and Environment) develops the dissemination and awareness campaign to raise awareness among the Spanish population (adults, young people and children), as well as the food sector, educational centers, gastronomy professionals, journalists and bloggers, about the importance of the use of food and food waste. The campaign has been done regularly on a yearly basis.

- **Resource 21: "La Comida No Se Tira"**

The awareness campaign against food waste aimed at Basque society with the slogan "Food is not thrown away".

- **Resource 22: "Más alimento, menos desperdicio"**

Ministry of Agriculture, Food and Environment aims to limit food losses and waste and encourages all sectors of society to collaborate by contributing their opinions, ideas, knowledge and experiences to contribute all together to the reduction of food waste, and addresses potential of valorization.

- **Resource 23: Semana contra el despilfarro de alimentos en Euskadi / No al Despilfarro Alimentario en Euskadi**

Basque platform / forum for exchanging ideas, discussions, campaigns and generally raising awareness about food waste.

- **Resource 24: ResursRestaurangen**

Works across the entire supply chain to decrease food waste and raise awareness about how the present system of food production influences the ecosystem, and aims to foster knowledge about sustainable food production and food consumption.

- **Resource 25: Too Good to be Wasted / Terra Mileniul III**

An educational project on food waste for students.

- **Resource 26: Company Packages / Zachra? jídlo**

Training, tools, and activities that companies can participate in to help their employees gain a better understanding and awareness about and help reduce food waste in the office and at home.

- **Resource 27: Kokoza**

Kokoza's social enterprise brings composting and communities together by building awareness and educating society, businesses, and public administration on how to process organic material and how to build and maintain community gardens.

- **Resource 28: Circular Food Center**

Think-tank / knowledge center covering entire food supply chain, providing education, research, and raising awareness about food waste.

- **Resource 29: Eqosphere**

Research and awareness-raising about food waste and valorization possibilities. A pioneer in the design of CSR/RSO programs applied to the prevention of waste.

- **Resource 30: Aux gouts du jour**

An independent training, support and awareness-raising organization on the various themes related to food: taste education, fight against food waste, food balance, food and climate change, heritage gastronomy of our regions, attractiveness of jobs in the food sector.

- **Resource 31: Solidari Food**

SolidariFood is an initiative that aims to tackle food waste in Angers, Pays de la Loire - a major agricultural area in France. The initiative's primary role is to raise awareness among consumers through information days and 'collaborative cooking' opportunities.

- **Resource 32: Jardins Collectifs**

The city Dunkerque manages 6 shared gardens, which are maintained and used by the general public and Community Centers. There are also family gardens, these gardens are intended to serve the nourishing needs of families, to eat healthily, and to develop social relations with other gardeners - a total of 732 plots. Families can request their plot. The Parc Coquelle education garden trains the general public and raises awareness. There is also collective composting in various parks of the city, with awareness-raising sessions.

- **Resource 33: Open Calls for Innovative Projects direct at the Food Sector**

Strasbourg sets up open calls for innovative projects directed at the food sector and also food loss and food waste. Winners have their projects financed. It is part of an integral food policy.

- **Resource 34: ZeroW (ZeroFLW Business Ecosystem)**

Forum / platform for stakeholders interested in the market sustainability of food waste prevention actions, and the opportunity to network and exchange information about the needs and solutions for food loss and waste (FLW) in the market.

- **Resource 35: Élelmiszer Érték Fórum (Food Value Forum)**

Stakeholder forum on food waste established by the Ministry of Agriculture and the Food Bank Association.

- **Resource 36: "Unidos contra o desperdício"**

A movement that gives stage to all who actively fight against food waste and wants to make usual the use of surpluses, warn of losses and waste, encourage and facilitate the donation of leftovers and promote responsible consumption.

- **Resource 37: Hortas Pedagógicas**

Educational action directed towards children. The municipality promotes participation in various activities and workshops. Children learn to grow vegetables and identify seasonal produce and feed poultry, inter alia. They are also trained in food preservation and healthy cooking.

- **Resource 38: Vegetable gardens and grow beds**

In total 13 vegetable gardens with a total of 537 users. Provide grow bed/garden toolkit to create gardens for self-consumption of food.

- **Resource 39: Practical Guide on Food Cycle**

Published three guides on: 1) Sustainable urban agriculture, 2) Food without wasting, 3) Home (vermi)composting. Published in 2020. Part of the LIPOR Bio-waste strategy.

- **Resource 40: Urban Kitchen Gardens Project**

Reduce waste production by offering free plots in urban gardens, in order to produce locally-grown vegetables.

- **Resource 41: Terra a Terra**

Composting bins are distributed to households and communities to produce compost out of bio-waset. Support is provided for producing compost. Target: Implementation 17 000 compost bins since 2008, each year 1000 new composting bins.

- **Resource 42: Horta a Porta**

Organic gardening, alotments are allocated to residents for growing organic vegetables. Compost is produced locally with gardeners valorising their own bio-waste.

- **Resource 43: Stop Spild af Mad (Stop-waste-food)**

A volunteer-driven non-profit with various activities, projects and collaboration. It is Denmark's largest movement against food waste.

- **Resource 44: Videncenter om Madspild (Knowledge center on food waste)**

It is the Nordic's first virtual knowledge centre to inform about the extent of food waste, as well as provide information about measures, analyses, reports, organizations and other actors in Denmark and abroad who actively work with both prevention and reduction of food waste.

- **Resource 45: Save & Help campaign (Spar & Hjælp kampagne)**

The nationwide campaign, which aims both to reduce food waste and at the same time help poor Danes. Every time buying a product with the Spar & Hjælp label, DKK 1 goes to social organization Danish Folkehjælp.

- **Resource 46: Stop Madspild (Stop Food-Waste Teaching Campaign)**

A free educational campaign and teaching materials for the oldest classes of the primary school, to work journalistically and project-oriented on the issue of food waste.

- **Resource 47: Charity dinner**

A yearly charity dinner (supported by the Danish Crown prince and Crown Princess) with a focus on food waste to support the nationwide charitable project Christmas Surplus (Juleoverskud).

- **Resource 48: Nationale madspildsdag (National Food Waste Day)**

A yearly event on the 29th September with physical activities including a virtual live event for all the country's elementary schools. Under the name "Schools Save the Food", Denmark's largest virtual food waste event where the food minister promotes school kids to reduce food waste via a cooking demonstration.

- **Resource 49: Madværkstedet Madspild (Food Waste Workshop)**

A cooking-related teaching course to provide insight into the understanding of and experience with how food waste can be reduced through teaching courses to school pupils.

- **Resource 50: Madspilskolen (Food-waste school)**

A camp-type of food activity based class, during the school holiday (winter - week-7), summer (July), National-Food-waste-day (week 36), and Autumn (week-42 - holiday). It is mostly outreach-based education. Students spend time to learn about food, food-waste, and its impact.

- **Resource 51: Unge stopper madspild (Youth stop food-waste)**

A problem-based learning activity to develop solutions in the local community. Especially work together with the concept of UN sustainable goal no. 12. The classes are taught about where, how, and why food waste occurs and investigated in their local community and local environment. The students must then develop their own proposals for how food waste can be reduced, working together with a teacher, local politicians, and experts.

- **Resource 52: Overskudsmad til skoler (Learning about retail surplus food for schoools)**

A pilot project with the aim of finding a sustainable model for collaboration between schools and supermarkets that can be scaled up nationally and reduce food waste. The pilot project includes the development of teaching material on food waste for food science teachers and courses for the canteen staff at the two schools. The concept is: Students go to the local supermarket to see and hear about the surplus foods that goes into the bin in the back of the warehouse. The students are given vegetables and bread, which can no longer be sold because of the best-before label, but which can still be eaten. They go back to the school with some of the surplus food in their back-pack, and cook delicious food from these surplus ingredients and taste them together with the rest of the class.

- **Resource 53: Mind the Trash (Digital teaching course for middle school)**

New teaching material to teach students in grades 4-6 on resources and waste. Digital teaching materials for educational course on waste which deals with the entire resource cycle within the topics of waste, resources, physical-activity, and entrepreneurship.

- **Resource 54: Madskoler (Food Schools)**

Cooking classes for kids, especially during school holiday such as: Winter, Summer, or Autumn holidays. The focus is given to having a fun learning experience with food for children. The focus of the food schools is cooking, including; physical activity, health, nutrition and food-waste are also central themes.

- **Resource 55: Uddannelsesportal (Educational portal)**

The portal aims to make students and teachers in primary school, secondary education and higher education, more aware of the consequences of food waste and what the individual can do to reduce it.

- **Resource 56: Madkundskab og Verdensmål (Food-economics and UN sustainable Goals)**

To learn about food, nutrition, food-waste and sustainability through education at a camp-type environment and later developed teaching material.

- **Resource 57: Less food waste - More ecology and climate-friendly food**

Short, entertaining presentation that prepares students for a sustainable future in the kitchen with focuses on: What role does food waste play globally and for ourselves; What ecology is; How you choose climate-friendly food and how it all connects to less food waste and the UN's 17 global goals for sustainability; What is the most sustainable balance for our food; and How you save on water and electricity when you cook.

- **Resource 58: Denmark mod Madspild (Denmark against Food Waste)**

A voluntary agreement for companies and organizations that aim to halve food waste by 2030 and reduce food loss in the Danish food industry. The main purpose is to develop and implement nationwide programs, research, and initiatives carried out within all layers of the food value chain. The initiative is based on the UN's Global Goal 12.3 for sustainable development, where global food waste, incl. food waste per population, must be halved by 2030 and food loss reduced.

- **Resource 59: YouFoo (Young Food Waste Fighters Club)**

The YouFoo Club program was used for the study and included 4 schools. It ran for 8 weeks and concluded on International Food Waste Day. A sample of schools was recruited, the process was structured as a case competition, and the end goal was to present the solutions at the final event. It built on Project Based Learning, the Knowledge Triangle, and the concepts of 21st century skills. The research shows that it is possible to bring youth into solution-making, that the process contributed to learning, and that it fitted well with principles of Education for Sustainable Development.

- **Resource 60: SESAM – Sense Science & the Magic of Food**

SESAM is a science & food literacy training program for pupils at school that is based on Project Based Learning and Mentoring. It involves STEM based development of learning stations focusing on different aspects of food systems transformation, including food waste mitigation. Students work on a particular food topic and do a relevance challenge together with the school teacher.

- **Resource 61: United Against Food Waste**

A yearly global event against food waste feeding free food to the public at the city center to raise awareness about food waste. The event also provides an opportunity for the food industry to show to the public their involvement in addressing food waste.

- **Resource 62: Project: Hrana nije otpad / A children's picture book entitled: "Kako su Dora i Mario spasili hranu"**

The children's picture book explains in a fun and educational manner what food waste is and how to manage it and reduce it.

- **Resource 63: Campagna SprecoZero**

Spreco Zero is Italy's only permanent food waste awareness campaign.

- **Resource 64: Campaign "Non ti scarto"**

Project promoted by Slow Food in which food products that are no longer "sale-able" but still perfectly edible are collected, convivial moments of cooking and music (Disco Soup) are organized, along with recovery recipe contests among elementary school children.

- **Resource 65: ICareFood**

An association that studies solutions to combat food waste, combating local poverty and supporting the economy of the Territory, the environment and the well-being of people.

- **Resource 66: Noi, il cibo, il nostro pianeta**

An educational program designed by Fondazione Barilla that encourages innovative teaching by offering teachers on-line training about food and food sustainability issues, as well as digital teaching tools for classroom lessons.

- **Resource 67: NoiConMente**

The regional project encourages active citizenship behaviors and the spread of the ethical value of food, solidarity, and cooperation to encourage a culture of conscious consumption and limit waste. It involves at least 1000 high schools students.

- **Resource 68: Campaign Tarbi Toitu Targalt**

A national campaign that informs the general public about food waste and food waste reduction strategies.

- **Resource 69: "Consume food wisely!" campaign**

The goal is to reduce food waste while also spreading awareness about the issue.

- **Resource 70: The Sustainable Development Forum 2016**

The forum explored / discussed the potential for reducing per capita food waste in Estonia by 2030.

- **Resource 71: Food Waste Charter Ireland**

A public commitment by companies and organisations to change how they think and respond to food waste. Pledge to take positive actions through measuring, reducing, and reporting their food waste.

- **Resource 72: Vegetable gardens (Vegetable gardens - part of Ghent en Garde Strategy)**

Municipally-owned vegetable garden, to be used by the general public. The produce grown is meant to be sold to the urban population. Knowledge support is provided for community gardens.

- **Resource 73: Restevenn**

A campaign run by Stavanger City and other municipalities in the region (IVAR: inter-municipal company with responsibility for water, sewage and waste disposal; owned by municipalities) to inform the general public about foodstuff: tips for purchase, use of leftovers etc. Mostly a webpage, but some events do take place.

- **Resource 74: Landelijke Gilden (Samen beleef je meer) / Rural Guilds**

Startup to reduce food loss. Develop, test and implement ideas and solutions. Objective was to come up with ideas which were pitched to a grand jury, that would be later adopted to reduce food loss.

- **Resource 75: Mechelen: Disco Soup**

A disco soup is a concept that is simple and extremely fun and effective: cooking together with food leftovers, eating and dancing. Not only do you bring your neighborhood closer together, but you also create awareness about food waste.

- **Resource 76: Feed The '2000' in Antwerp**

A sensitizing on-line quiz on Food Waste and 2000 meals from Antwerp surpluses for the people who took the quiz, from one of five catering establishments.

- **Resource 77: Lidl Einderjaarsacties**

Food retailer Lidl is extremely active in an event called "De Warmste Week" (previously called "Music For Life") which takes place each year about a week before Christmas. The event involves various participating organizations (such as the Belgian Red Cross - Flanders, VRT Radio), as well as the general public with the aim of participating in order to contribute to a charitable cause. Lidl is an active participant in this event every year, providing donations to food banks, and spear-heading activities to raise awareness about sustainability, food waste, health, and wellbeing. For example, in 2015 Lidl set up a major campaign via "Music for Life" with the name 'today's soup with yesterday's vegetables'. The soup, which was sold at various Christmas markets, was made with vegetables that could no longer be sold in the stores but were still perfectly edible.

- **Resource 78: WAW BRANDS (Waste Warrior Brand)**

Started between Too Good To Go and Compass Group Belgium. Belgian coalition of brands working together in the fight against food waste. By signing the declaration "For a planet without food waste" along with fifteen other brands, Compass Group Belgium commits to making a difference together with Too Good To Go around three pillars: internal commitment, external communication and taking action.

- **Resource 79: Knowledge Hub**

On-line database of recipes and articles related to food waste. Raising awareness and sharing knowledge.

- **Resource 80: Sincerely Food / Lithuanian Consumer Institute**

A national project on sustainable food consumption, also covering environmental impacts through all life cycle stages of the products, i.e., also food waste. The project included a variety of activities starting from a drawing competition for school children and exhibitions, to discussions, articles in the mass media, radio broadcasts, and an interactive map of eco-farms.

2.3 DATASET 3: Chorizo master list of actions tackling food loss and waste in the household sector

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section includes resources or datasets on households (40) specifically consumption of food in the household or small residential facilities

This dataset currently has 40 Resources.

- **Resource 1: Stop Food Waste Ireland**

To provide consumers / households with information and tips on how to make the most of their food and avoid food waste.

- **Resource 2: Report on the Food Waste Recycling Pilot Project**

Standardizing household awareness and education for the food waste recycling bin by increasing uptake and encouraging participation, reducing cross contamination.

- **Resource 3: Food Waste Fighters**

Food Waste Fighters is a food waste project that aims to help consumers and householders reduce their food waste by 50 percent by 2030.

- **Resource 4: No Time to Waste**

Pilot program to help households make simple and accessible changes in regards to how they manage their food at home, and to test whether that had an impact on food wasted, money spent on food and their overall behaviors around food as a household.

- **Resource 5: Kitche**

An app that allows users to scan their supermarket receipts to keep track of exactly what they have bought. The app will then help plan meals and suggest recipes based on what is in the cupboards. It can also send reminders when certain foods are nearing their use-by dates.

- **Resource 6: Kromkommer**

Awareness-raising, education for consumers / households about the use of fresh fruits and vegetables, even though not aesthetically pleasing to see.

- **Resource 7: Instock**

The startup has published and sells on-line two cookbooks that will help consumers to waste less and make more sustainable choices in their kitchens at home. In Instock Cooking you will read and learn everything about eight preservation techniques and with "Circular Chefs" you will get to know the five principals of circular cooking.

- **Resource 8: Less Food Waste**

Calculator that Finnish households can use to understand the amount of food waste but also its emission impact and monetary value.

- **Resource 9: STOP Waste - 2P2S Rule**

Awareness raising, education campaign for customers on how to plan, process, share and sort food at home.

- **Resource 10: Home composting**

The Municipality of Wroclaw provides free composters for a period of 3 years to residents that have home gardens or to educational units. The requirement to opt for this benefit is to send annual reports on the amount of waste treated during the 3 years.

- **Resource 11: Zá?í proti plýtvání (September Against Waste) / Zachra? jídlo**

Trying to increase public awareness and sharing tips on how to preserve and rescue food at home and in the office. The campaign aims to make navigating through the host of information available on their website simpler and easier. Send out newsletters every week in September to a distribution list (can sign up on-line) with basic tips on how to buy, preserve and cook food so that nothing is left over.

- **Resource 12: WWF "Tag der Lebensmittelrettung"**

Raising awareness about the issue of food waste, addressing households, politics and businesses, providing advice on actions and policies.

- **Resource 13: Goodness Groceries!**

Goal is to find out more about the grocery shopping through tracking in the app and developing a public app.

- **Resource 14: ALDI NORD/SÜD Communication campaign**

Engage consumers into buying food with optical imperfections and educating consumers about the best-before date, so households are less likely to dispose of food early.

- **Resource 15: FoodbanGo**

Household food waste awareness raising game for 4-8 person groups, organised by the Hungarian Foodbank.

- **Resource 16: Nosalty "What's in your fridge?"**

Nosalty is a major recipe website in Hungary. "What's in your fridge?" is a sub-site where people can search for recipes based on what they already have at home.

- **Resource 17: Community composting**

Community composting in Budapest.

- **Resource 18: Zero-Gachis**

Create a community of responsible consumers/households and help them in their daily purchases through an app.

- **Resource 19: No al cubo – Campaña de CECU**

No al cubo is a campaign of CECU - Confederation of Consumers and Users. The objective of the campaign is to contribute to the information and training of households to avoid food waste through activities.

- **Resource 20: No lo tires – Campaña de FACUA**

The "Don't Throw It Away" campaign asks consumers to demand that supermarkets and hypermarkets donate safe food they can no longer sell.

- **Resource 21: SISTERS Project: How "best-before" and "use-by dates" affect food waste**

Correct labelling equals a consumer who is well informed about dates, as well as a distribution chain that controls and plans stocks, product dates, and is mindful of food waste.

- **Resource 22: For Resten**

Thinking behind the app is "empty the fridge". The app offers good ideas and inspiration for how to make the best possible use of the surplus food that you already have in the fridge and freezer.

- **Resource 23: Restekogebog (Leftover cookbook)**

A cooking book with recipes and guidance to use leftover meals to promote the reuse of leftover food, especially in households.

- **Resource 24: MadPlanen (Meal-planing)**

Webpage where provide inspiration and suggestions for a weekly meal plan.

- **Resource 25: LIFE IP CARE4CLIMATE**

The study aimed to obtain data on the generation and management of food waste in households and to test the feasibility of the chosen method of keeping a kitchen diary. For this purpose, a web-based application was set up through which households reported data on the amount of food waste they measured (weighed). On Facebook they created a Foodsharing group, where users on social networks offer food that they have not used.

- **Resource 26: Project: "Volk sit koza cela"**

Ten tools have been developed to help households keep a food waste diary and an online survey examined habits and behavioral patterns in food waste management.

- **Resource 27: Recipe booklet for preparing meals from food waste, "Hrana nije otpad" (2022)**

The recipe booklet brings together the most creative recipes from the students of the cookery education program for making food from surplus food.

- **Resource 28: Waste Watcher International Observatory**

The Observatory aims to provide the community with tools for understanding the social, behavioral and lifestyle dynamics that generate and determine household waste. An Observatory capable of generating common and shared knowledge to guide policies and actions to prevent food waste by public and private actors. Waste Watcher is research carried out with a scientific method, based on opinions and self-perceptions.

- **Resource 29: App Sprecometro Wastemeter**

An app that aims to generate awareness and knowledge useful for directing individual and collective choices toward reducing food waste, adopting healthy diets, and sustainable use of natural resources: soil, water, energy.

- **Resource 30: Portami a casa con te**

Project in which pupils are provided with an anti-waste, thermal, washable and reusable bag for taking home meal not consumed in the canteen (bread, fruit, baked goods). The purpose of the initiative is to make people understand how a simple gesture, that of recovery, represents a useful moment to communicate the value of food and reflect on the dynamics related to the production and availability of food and its economic, social and cultural meanings.

- **Resource 31: Buono oggi e anche domani**

The project delivers the anti-waste kit consisting of a 100 percent biodegradable plastic re-sealable container and a paper shopper (bag) to collect and take home leftover food during Venetian village festivals.

- **Resource 32: Separate Collection of Household Organics**

Separate collection of organic municipal waste. A new system for the selective collection of organic waste destined for composting and use in agriculture, set up by the Hygiene and Public Cleaning Unit of Évora City Council.

- **Resource 33: Home composting / community composting**

Lipor is promting home / community composting. They provide some indicators on composting adoption.

- **Resource 34: Home & Neighbourhood Composting**

Household and neighbourhood composting initiative.

- **Resource 35: Plan-eet App**

An app geared towards becoming better cognizant of how much food is wasted in Flemish households (measuring FW), and to provide tips and tricks to help deal with food as consciously as possible. Techniques to store food optimally, nice recipes to process leftovers and even tips to buy only what you need in the store.

- **Resource 36: "Lekker van bij ons" Cooking with leftovers**

Recipes and tips to never throw away food again, supported by VLAM: Flemish Centre for Agro and Fisheries Marketing.

- **Resource 37: Food Winners Brugge (part of the Bruggesmaakt framework)**

Participating households (5,000) to weigh their food waste for seven days in a row for both solid waste and liquid waste (soup, water, coffee, etc.) and to obtain a 30 percent reduction in food waste.

- **Resource 38: Biojäätmete kohtkompostimine**

Pilot project carried out by the municipality (Circular Economy department). Several on-site composting systems have been tested for a year, targeting various end-users (detached house, residential house with up to 4 and up to 9 apartments, kindergarten). A report on their results has been completed. From 2023 onwards, the municipality is promoting home composting as part of the plan to introduce a mandatory separate bio-waste collection from 1 April, 2023.

- **Resource 39: Circular Cities Declaration / Composting**

Household composting and CIRC4FooD project: combination of composting and rainwater harvesting.

- **Resource 40: Mat & Klimat (climate and food book)**

The municipality, along with collaborating restaurants, has created a book on "strategies, tips and recipes for more sustainable food" that explicitly tackles the issue of food waste (available in English).

2.4 DATASET 4: chorizo master list of actions tackling food loss and waste in the food service sector

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section includes resources or data sets on food Services (66): Includes catering operations, factory and school canteens, institutional catering, restaurants, hotels, hospitals, cafes, and other similar food service operations.

This dataset currently has 66 Resources.

- **Resource 1: We eat responsibly**

To motivate children to reduce their food waste, the students were involved in all parts of the process – monitoring the food waste, evaluating the menu, creating the action plan, and in celebrating after food waste was reduced.

- **Resource 2: SPILL**

Restaurant which buys surplus food directly from suppliers to turn into delicious meals, thereby highlighting the volume of waste to its customers.

- **Resource 3: Municipal Food Services Intervention**

The intervention targets 5 nursing homes and 14 kindergartens in the municipality. The intervention consists of an awareness raising component that includes educational material and training of food service staff. In addition, the data collection part – the measurement component - is seen as part of the intervention. The assumption is that the agenda setting and data collection itself will provide to some extent an effect based on the so-called Hawthorne phenomena. The intervention has been organised around a partnership based on the principles of the knowledge Triangle - a type of partnership where the public engage with market actors and academia, in this case with local university and a technology provider (FoodOp).

- **Resource 4: SmartMat Hbg**

Local initiative which aimed to halve food waste and increase the proportion of climate-smart food in 40 municipal schools. Various methods and mechanisms have been used, involving different stakeholders in schools.

- **Resource 5: AI for minskat matsvinn**

Development and testing of an algorithm that processes food consumption data to predict and prevent food waste before it occurs.

- **Resource 6: Svinnovatoren ska minska matsvinnet**

The waste innovator's task is to be innovative in the area of food waste. The waste innovator must investigate what is required to bring about a lasting change in how the administration handles its food waste. Directed at public kitchens.

- **Resource 7: Sustainable Acquisition of Foodstuff**

Green public procurement criteria for acquisition of foodstuff, including menu planning.

- **Resource 8: Love Food, Hate Waste / The Really Healthy School Program**

The aim of the campaign is to reduce food waste in school canteens. Any school can be part of the solution which consists of implementing four steps to reduce the amount of food thrown away.

- **Resource 9: Nesnezeno**

The essence of the project consists in restaurants, bistros, bakeries, confectioners or cafés left with unsold food, or which have surplus food nearing its expiration date, offering this food to anybody who is interested at a discount of at least 30 percent, but usually 50 percent.

- **Resource 10: Instock**

Restaurant where the chef creates recipes based on surplus food. The surplus food comes directly from the Albert Heijn grocery stores. Instock consists of three restaurants (Amsterdam, The Hague and Utrecht), a food truck, and a catering service.

- **Resource 11: CutFoodWaste2020**

The hospitality industry's historic collaborative project, created an important foundation for the work in this sector, with clear definitions, indicators, systems for measurement and reporting, training and communication tools, and sharing of best practices in the industry. Key actors, including group purchasing organizations, have joined forces with Matvett to continue the work of cutting food waste in the hospitality industry.

- **Resource 12: JótéKonyha**

Jótékonyha is a social enterprise of the Hungarian Foodbank, offering food waste-free catering services. Surplus (if any) and food from charity cooking events gets (re)distributed to charities.

- **Resource 13: School Food 4 Change (SF4C)**

To achieve the ambitious goal of enabling community-wide food system change, the 43 partners involved in SF4C – spearheaded by ICLEI Europe – follow a holistic multi-level approach: this entails the development of innovative and sustainable food procurement criteria and methods, the promotion of planetary health diets and cooking, and the introduction of a Whole School Food Approach. This is a defined framework for municipalities and schools that are aiming to create a holistic food culture and bring food to the heart of the school mission.

- **Resource 14: WASTED / Grow It Yourself**

WASTED is a national, peer-to-peer education program for chefs and food service teams that focuses on reducing food waste in the hospitality industry.

- **Resource 15: Meal Canteen**

An app for the catering industry in order to reduce food waste. It allows the customer to reserve the meal the day before. This allows catering staff at restaurants and schools to plan the amount of food they need in advance, ensuring a reduction in their food waste.

- **Resource 16: Komefy**

An app to avoid waste in the food services sectors. Consumers can locate food services such as grocery stores, restaurants, that are offering reduced priced food due to surplus, close to expiry date, or appearance.

- **Resource 17: NiLasMigas**

A mobile application that offers an alternative to reduce food waste and is in operation in Madrid. NiLasMigas puts in contact establishments in the food sector (greengrocers, bakeries, restaurants, etc.) willing to lower the price of products that they have not managed to sell with potential end customers near the establishment (by working with the geolocation of the devices).

- **Resource 18: Desperdicio cero en la alimentacion: Guia para restaurantes**

Elaborating a zero waste guide for local restaurants. Evaluating the response of restaurants to said guide, and assessing the implementation of recommendations.

- **Resource 19: ResQ Club**

An App that lets people buy restaurants' surplus meals for a discounted price - typcially 40-60 percent. Enables restaurants and hotels to advertise their leftover food portions that are still in great condition, but which need to be consumed that day. The food can be listed as "to be rescued" on the mobile app. Users can then use the app to check what meals are avaialable on the day, make an order, pay and pick up the food. They can also receive offer notifications from their favourite restaurants or for certain types of food, such as vegetarian meals.

- **Resource 20: From Waste to Taste / Ravintola Loop**

From Waste to Taste's trucks picks up surplus food from supermarkets in the mornings and Loop's team of chefs plan the day's menu based on the available ingredients.

- **Resource 21: Sustainable Consumption, Measure package 5.4 of Carbon Neutral Tampere 2030**

Municipality-owned Pirkanmaan Voimia Oy catering firm and the municipality have included some criteria for sustainable nutrition. Measures inter-alia: reduction of food waste in meals and exploration of opportunities for revalorization of food waste (2020-21), re-tendering of municipality-owned café and restaurant services including environmental criteria (2020-25), selling of surplus food from upper secondary schools (2020-29).

- **Resource 22: Supporting Circular Food Systems through public procurement**

Public procurement mechanisms to reduce GHG emissions through circular food systems.

- **Resource 23: Zu gut für die Tonne! - Dialog zur Vermeidung von Lebensmittelabfällen in der Außer-Haus-Verpflegung**

Too good for the bin! - Dialogue on reducing food waste in the service sector. A series of 12 case studies in different kinds of gastronomy (care sector, hotels, and corporate catering). Identifying effective ways of reducing food waste in different sectors of the gastronomy sector to aid the reduction of food waste by half by 2030.

- **Resource 24: IKEA Germany / United Against Food Waste**

Reducing food waste in its food stores together with United Against Food Waste through a strategic selection of measures after installing a food waste management system.

- **Resource 25: Youth Hostel Cologne-Riehl**

A youth hostel, taking part in the "MehrWertKonsum" (Added Value Consumption) project from 2018-2021 implemented measures to reduce food waste, with the support of the Consumer Advice Centre NRW.

- **Resource 26: Charging for leftovers in buffet restaurants**

A social norm of charging for leftovers emerging in many buffet restaurants in Germany, such as Yuoki in Stuttgart and Okinii in Dusseldorf.

- **Resource 27: LWL Clinics in Münster and Lengerich**

Undertaking multiple measures in the hospital kitchen service, e.g. installing a feedback system, reducing portion size etc. to reduce food waste.

- **Resource 28: Future Kitchen Essen**

An initiative was set up by the municipality and the nutrition council (Ernaehrungsrat). The goal of "Zukunftskuche" Essen is to promote climate-friendly communal catering in the city through a pilot project involving various canteens. There was also a plan to operate it as an education and training center for canteens and caterers on sustainable and local food. Also involved agricultural producers in order to promote regional products.

- **Resource 29: YourLocal**

YourLocal is a mobile app that connects neighbourhood stores and mainly small food services - such as restaurants, cafes - with local consumers. On the app shops can make offers (up to 70 percent) on food to be sold "here and now" and notify nearby users who want to make a delicious deal just before closing time.

- **Resource 30: ReFood**

A national certification for the food services sector (such as canteens and restaurants) to highlight their work towards less food waste. Partners could use the ReFood label to show their commitment to reducing food waste - civil society driven.

- **Resource 31: Doggybags (Goodie-bag)**

A takeaway bag to motivate food service guests to take their leftovers home. The goal is to make it normal to take leftover food from food service (such as a restaurant) back home.

- **Resource 32: Minimizing food waste in the elderly-care center**

To bring forth minimal food waste by working together with UN´s sustainable goal (no 12: Responsible consumption, production and reduction of food waste). Different topics are covered: What is food waste and why do we work with it, how can leftovers be used, food waste data, interdisciplinary collaboration, date marking, and food legislation.

- **Resource 33: Reduction of food waste/Menus**

Public-private collaboration that looks at data to learn from patterns and create adjusted menus.

- **Resource 34: Madspildsjægerne (The food waste hunters)**

Offer to professional commercial kitchens to get assistance from a consultant to reduce food waste.

- **Resource 35: Hospital food-waste**

Scrapped the fixed mealtimes that have traditionally been used in the hospital system for many years and introduced flexible eating time as per the patient needs.

- **Resource 36: Rub & Stub restaurant**

A restaurant run by volunteers and serves meals prepared with surplus ingredients which otherwise would be thrown away. It receives surplus food from a food bank or supermarket, and cooks the food in a restaurant setting and serves it to guests.

- **Resource 37: FoodOp Digital platform**

A digital platform that helps professional kitchens automatically measure food waste and guest choices, and use these insights to make better food for the environment and for guests. The platform consists of a menu planning system that is synchronized with data from scales that are placed under all serving plates and garbage bins. The scales automatically collect data on how much is taken and wasted for each dish, which is used to optimize future menus based on e.g. composition, quantities and canteen guests' choices.

- **Resource 38: Stop Food Waste Day (SFWD) / Compass Group Foodservice**

Strive to minimize food waste every day. Not only in the kitchens, but also by informing and positively influencing the many guests that are served daily. - 2019: Monitoring guests' plate waste - 2018: First Stop Food Waste Day in Denmark - 2016: Campaign-use everything! - 2015: Menu planning tool and "Empty the Buffet"/ "Leftover Lovers" introduced in the restaurants - 2014: Preparing food as needed and serving individual portions, incl. front cooking, is introduced in the restaurants - 2011:Monitoring kitchen waste.

- **Resource 39: Food Waste Mitigation Strategy**

This food waste mitigation intervention runs in the City of Copenhagen and started in 2021. It is part of the municipality's ambition to cut food waste on the public plate and is part of the city's urban food strategy. It is targeted the municipal food service and is an active intervention where the intervention components are food waste mitigation counseling, awareness raising and training for kitchen staff. It is targeted at all institutional food service units in the city.

- **Resource 40: Strategy for Green Transition**

One of the first municipalities in the country, Gladsaxe has mapped food waste in the entire municipality to be used as a baseline for the goal of reducing food waste by 50 percent by 2030. The action is based on the FoodOp measurement technology. The baseline shows that, only approximately 2 percent of food waste occurs in municipal kitchens such as children's homes and care centres, while the retail trade and households account for 62 percent and 26 percent of the total food waste, respectively. Company canteens account for 7 percent and restaurants and cafes account for 2 percent.

- **Resource 41: Program EKOŠOLA - We eat responsibly!**

Examples of good practices during the school year 2016. Measuring food waste from the trays in the school childrens' dormitory and recording the amount of food waste in a logbook. They also organized "Zelemenjava" (Crops2swap) event, where visitors are invited to bring produce from their gardens that they cannot use.

- **Resource 42: Program Ekošola: Project: "Hrana ni za tjavendan"**

By recording food leftovers in a diary, wanted to find out which food is most often wasted, how much is left, where it goes, and why children wasted it.

- **Resource 43: Ecologists Without Borders, Project "Ne me?mo hrane vstran"**

Publication with an analysis of the situation and steps to prevent waste in public establishments. The project developed tools for monitoring and assessing food waste. Intergenerational workshops for young and old were also held.

- **Resource 44: Ministry of Agriculture; Project: Hrana nije otpad; Guide to reducing food waste in food services**

Measures to prevent surplus food in food services with procurement planning, short supply chains, food storage and food donation. The aim is to bring changes in food services regarding food handling habits and behaviors and to promote food waste reduction.

- **Resource 45: LaRiSo**

A living-lab, a participatory working table with the goal of improving integrated sustainability in food service and school food service in particular.

- **Resource 46: Food for Good**

The association puts the managers of the catering companies in touch with the non-profit organization in the area where the event is held so that it can recover the excess food at the end of the lunch or dinner. The recovered food is then delivered to charitable organizations (family homes, soup kitchens and refugee centers.

- **Resource 47: Ciapa e port a ca**

With this initiative, the Piedmont Region intends to involve consumers and restaurateurs in order to start a path of awareness toward conscious consumption aimed at reducing food waste.

- **Resource 48: La mia scatola del gusto**

The project supports restaurants / food service in offerering and promoting the option of safely and hygienically taking home any leftover food during a meal, thanks to a biodegradable and compostable box.

- **Resource 49: Mangio senza avanzo**

The project aims to promote healthy eating habits and support social solidarity projects with an anti-waste perspective. By counting the amount of uneaten food and analyzing the correlation between the caloric intake of the mid-morning snack and the food leftover, a new method of administering food has been created: new school menus are now being proposed, as well as the distribution of fruit for the mid-morning snack.

- **Resource 50: Squiseat App**

An app through which bars, restaurants, supermarkets sell the day's surplus at a discounted price.

- **Resource 51: Food Lab**

In 2015 was launched the Food Lab, a platform for local stakeholders to create food guidelines for the city. These include targets on reducing food waste from public organizations, which prompted four healthcare institutions to start pilots to decrease food waste. Learnings were compiled in methodologies for replication at other healthcare institutions.

- **Resource 52: Good Food: Rest-o-pack**

Amongst the different levers, there is the Rest-o-pack: food container to take leftovers home from restaurants.

- **Resource 53: Restorestje**

Free and compostable food containers for leftovers.

- **Resource 54: Sustainable School Meals**

More organic ingredients, less meat and more seasonal products. Criteria such as food waste and human and animal welfare are taken into account. Part of the Ghent en Garde Strategy.

- **Resource 55: Portfolio chain roadmap food loss examples of 2017 / Measures in the company restaurants of the Flemish government**

The Facilities department of the Flemish government has achieved at least 15 percent reduction in food loss through various measures in its restaurants and kitchens. In terms of quantity, the 15 percent reduction is an equivalent of approximately 2,758 kg of solid food and 2,058 liters of soup on an annual basis.

- **Resource 56: Waste Watch / Sodexo**

An innovative digital solution by Sodexo. Decreased food waste by 50 percent in its restaurants by 2022. The program covered 180 industrial kitchens from different sectors; from a hospital, school, residential care center, army base and various companies to its own headquarters in Ixelles.

- **Resource 57: "Soepcafes"**

The principle is one evening a week, volunteers make soup from products that would otherwise be wasted, and anyone can join to help cooking or to consume. People are encouraged to give a free gift, however, people who have trouble to make ends meet are also offered a free meal.

- **Resource 58: Rekub**

Entrepreneur that makes chocolates, cakes, and pies from fruits and vegetables that would normally be wasted. Launched various pop-up restaurants where chefs prepared a 3-course menu with ingredients that would normally be wasted: crooked fruit and vegetables, fish from by-catch or unloved parts of the pig.

- **Resource 59: À Table**

A 100 percent organic, local, and homemade food procurement in schools.

- **Resource 60: Mediterranean Season School Meals**

This project involves adapting school menus and creating a vegetarian school menu, encouraging local production of agricultural and fruit products, training actions for non-teaching staff working in the canteens, carrying out awareness-raising actions in the community and evaluation and monitoring of school community satisfaction.

- **Resource 61: Dose Certa**

Dose Certa is a program aimed at restaurants and canteens. Businesses that adhere to this initiative commit to implement active measures to tackle FLW.

- **Resource 62: Programa de Sustentabilidade na Alimentacao Escolar - Axes 2 & 3**

A multivectorial programme that addresses multiple challenges related to sustainable meals at schools, operating since 2014. Operates on various axes (2 and 3 are related): Axis 2 - acquisition of food products: Regional and organic procurement of foodstuff. Axis 3 - cooking: The menus are prepared by each institution,

respecting the nutritional balance, taking into account anthropometric values ??and favoring local seasonal foods, traditional dishes or those most appreciated in each location.

- **Resource 63: BioCanteens**

BioCanteens Transfer Network is about ensuring the distribution of sustainable school meals in participating cities as a key lever towards the development of an integrated local agri-food approach, protecting both citizens' health and the environment. The project aims to transfer Mouans-Sartoux's Good Practice in the field of collective school catering, to other highly committed cities across Europe. Mouans-Sartoux's Good Practice is based on the daily distribution of meals that are 100 percent organic and mostly composed of local products. The drastic reduction of food waste thereby fully compensating the higher cost of switching to organic products, and the organization of dedicated educational activities to raise children's awareness about sustainable food.

- **Resource 64: ÖkoKauf Wien**

Sustainable criteria for public procurement, also on the topic of food. It addresses FLW issues explicitly.

[i]**Resource 65: Jemy, nie marnujemy: School doesn't waste food**

In a series of five workshops, young people from grades 6-8, with the support of a nutrition education coach and a teacher, develop ways to reduce food waste at school. The project will be summarised in a report, which will include good practices shared by all schools. Started in September 2022.

- **Resource 66: BioCanteens 2**

A project that promotes healthy and organic food, as well as short supply chains of products to school canteens. It explicity promotes a zero waste idea, also as part of the bigger campaign "Wroclaw nie marnuje". It is running between June 2021 and the end of 2023. For now, workshops are carried out with school children.

2.5 DATASET 5: chorizo master list of actions tackling food loss and waste in the redistribution sector

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section includes resources or data sets on redistribution (84): aimed to redistribute surplus food fit for human consumption.

This dataset currently has 84 Resources.

- **Resource 1: The Felix Project**

Redistribution of surplus food to people in need via charities and primary schools.

- **Resource 2: FareShare**

Redistribute surplus food to people in need via charities.

- **Resource 3: Wonky Veg Box**

Redistribute surplus fresh produce (fruits, vegetables) to the average consumer via on-line purchase, and to people in need via charities. Ten percent of food is allocated for charities. Prioritises food that is at high risk of going to waste due to aesthetic requirements of supermarkets.

- **Resource 4: Community Food Connection Scheme**

Program which links local charities to Tesco stores.

- **Resource 5: Planzheroes**

Food donation platform to donate and/or access surplus food.

- **Resource 6: Sodexo Stop Hunger Foundation**

Works to redistribute food to thousands of community groups around the country.

- **Resource 7: Wasteful to Tasteful**

Rescue and distribute "wonky" fruit and vegetables to Sodexo sites, where their chefs use the ingredients to create dishes.

- **Resource 8: Company Shop Group / Community Shop**

Surplus food from well-known brands at low prices.

- **Resource 9: Community Fridges / Hubbub**

A Community Fridge is a space that brings people together to eat, connect, learn new skills and reduce food waste. It is a site where local people can share food, this includes surplus from supermarkets, local food businesses, producers, households and gardens. Fridges are run by community groups in shared spaces such as schools, community centers and shops, with their main purpose being to save fresh food from going to waste.

- **Resource 10: Prikka Kiertoon**

Reducing food waste & supporting job creation. Food is given to those in need.

- **Resource 11: Yhteinen Pöytä - Shared Table**

Sets up a surplus food terminal, "Shared Table", connecting food factories, wholesalers, and retailers to a large network of food aid distributors.

- **Resource 12: Food Waste Combat**

Excess food is collected from supermarkets and restaurants in a specialised van for food transport, which is then stored in a logistics centre, distributed to local social charities, or processed for daily meals in homeless shelters.

- **Resource 13: No Waste/Society for Responsible Consumption**

Reduce food waste in the agri-food market in the city of Aiud. In the agri-food market in Aiud, Society for Responsible Consumption volunteers collect unsold vegetables and fruits (for unsightly or fresh reasons) from producers every Thursday. In the evening the food is delivered to beneficiary families identified during the respective week.

• **Resource 14: Meal of Joy/Vasiliada Association**

Foods are distributed in perfect condition for consumption, but which for various reasons can no longer be used in the economic process (goods with improper packaging, overproduction, short shelf-life). In Dolj and Gorj counties, the Vasiliada Association distributes the food collected from the two commercial partners to the people in need, beneficiaries of its social projects.

- **Resource 15: Donation of Food Saves the Climate / Zachra? jídlo**

Donation of surplus food from canteens and fast foods.

- **Resource 16: SIRPLUS business model**

Selling food from overproduction, with minor imperfections, and other sources, which would otherwise have been exposed.

- **Resource 17: Foodsharing Luxembourg**

Goal is to reduce FLW through redistribution, engagement, political education, and awareness raising.

- **Resource 18: Distribution Days, Foodsharing Luxembourg**

Goal is to reduce FLW through redistribution, engagement and awareness raising, as well as political education.

- **Resource 19: "Stemm vun der Strooss" Restaurants**

Provide food to people in need at a very low price.

- **Resource 20: Budapest Bike Maffia**

Ad hoc food rescue (min. 50 portions) with volunteers delivering the food to charities.

- **Resource 21: Food Not Bombs Budapest**

Food Not Bombs is an informal organization whose volunteers once a week rescue vegetables and fruits from a market in Budapest and cook a vegan meal for people in need. They distribute the food in public places.

- **Resource 22: Direct food surplus redistribution**

Direct food redistribution is a facilitated food donation process, managed by the Hungarian Food Bank Association, in cooperation with 6 retail chains and about 400 charities in the country.

- **Resource 23: REFOOD**

A 100 percent volunteer movement that transforms not only waste into nutrition, but also the lives of everyone involved in Refood's goodwill driven, circular and solidary economy. Largely collection and redistribution of food to those in need, but also gives left-over food to composting, making energy and feed.

- **Resource 24: Electronic platform for the management of the donation of food surpluses**

Implementing an already-developed electronic platform for food surplus' donations' management.

- **Resource 25: Gratix**

Gratix is a circular and sustainable app to share for free, in which you can share with the community food rescued from shops and restaurants or that you will not be able to take advantage of at home, and make yourself a "food saver" against food waste.

- **Resource 26: TALKUAL**

TALKUAL is a Catalan company whose mission is to reduce waste. Fresh produce that can not be accepted at supermarkets due to appearance, are sold directly from farms to consumers (brought to home) at a lower price.

- **Resource 27: Red de Recuperación de Alimentos de Rivas**

The Rivas Food Recovery Network is a group of more than 200 volunteers, members of the Intertiempo Rivas association, which fights against food waste in the municipality. The objective of this Network is to alleviate the effects of disadvantaged families in the municipality, obtain food from individuals and entities for delivery to beneficiaries. This network works in teams of people who are distributed in six areas of Rivas and who collect food at eleven separate points.

- **Resource 28: Red Alimenta**

Red Alimenta is a local association that, through a network formed by volunteers, aims to reduce food waste in the city of Toledo and promote sustainable consumption. The collection of surplus food from different catering establishments (school canteens, restaurants, hospitals, etc.) and deliver it through a network of volunteers to people who are in a vulnerable situation.

- **Resource 29: Nevera Solidaria**

Solidarity Fridge allows people to leave and pick up food freely in a solidarity fridge installed in the street.

- **Resource 30: Aprofita València**

One of the initiatives set up by the Food Council of the Municipality of Valencia is Aprofita València. Voluntary citizens gather to collect surplus food and deliver it to those in need.

- **Resource 31: HopHop Food**

HopHopFood aims to develop food solidarity areas, while reducing food waste of individuals and households, via a free digital platform. HopHopFood is a platform which geolocates and connects people who have, at any given moment, not enough good food and those who occasionally or generally have too much food or want to donate it.

- **Resource 32: Linkee**

Redistribute surplus food from food services sector to those in need via food banks.

- **Resource 33: Excellents Excedents**

Works on the transport component of picking up surplus food from food services sector and delivering it to entities that sell at reduced price or charities / food banks.

- **Resource 34: Le Chainon Manquant**

Redistribute surplus food from food services sector to those in need via food banks.

- **Resource 35: Biocycle**

Redistribute surplus food from food services sector to those in need via food banks, raise awareness for the general public, and help companies put in place anti-food waste measures.

- **Resource 36: Comerso**

The company offers a solution which takes responsibility for administrative, fiscal, organizational and logistical aspects related to the donation of perishable goods to organizations. This is the first logistic and digital operator of unsold goods optimization for companies and free for food aid organizations. The company uses all the new technologies to rationalize each step of the collection and guarantee the best conditions of delivery in the quickest way.

- **Resource 37: Le Halte du Coeur**

Collecting foodstuffs from food manufacturers and redistributing food parcels to those in need is the core business.

- **Resource 38: Moissons Solidaires**

Collect and re-distribute excess food from outdoor food markets to those in need.

- **Resource 39: La Tablée des Chefs**

This organization recovers the food that would be thrown out from hotels, restaurants, banquets - food services industry. La Tablée des Chefs prepares dishes with these leftovers, and delivers them to social institutions that work with people who have limited resources.

- **Resource 40: Les Restos du Coeur**

A French charity, with the main activity of which is to distribute food packages and hot meals to those in need. The association targets homeless and those with a low or a very low income. Collections are organized daily by volunteers throughout France in order to collect from supermarkets, for example, products often destined for destruction due to the proximity of the expiry dates.

- **Resource 41: Chrismas Surplus (Juleoverskud)**

The nationwide annual charitable project, where volunteers collect tons of good surplus Christmas food from partner (REMA 1000) and distributes it free of charge to poor families in Denmark.

- **Resource 42: Food-Surplus (Madoverskud)**

Digital platform that makes it easy to donate or receive surplus food.

- **Resource 43: FødevareBanken (Food Bank)**

The Food Bank is the largest organization in Denmark that works in a structured and food-safe manner to distribute surplus food to the vulnerable. It collects surplus food from industry (all stages of supply chain) and distribute to social organizations free of charge.

- **Resource 44: Too Good To Go**

App B2C marketplace (online platform) for selling and buying surplus food at a discounted price. The app lets you buy and collect 'Magic Bags' of this food - at a great price - so it gets eaten instead of wasted.

- **Resource 45: Federation of Lions Clubs, District 129 Slovenia: Project: Donirana hrana**

Food distribution from different stores to the people in need in Slovenia. In 2019, project "Donirana hrana" expanded to more than 100 stores across Slovenia. More than 860 tonnes of donated food were distributed.

- **Resource 46: BringTheFood**

Bringthefood is the web application for companies and non-profits that simplifies the donation and recovery of surpluses.

- **Resource 47: CiBus**

Association that collects the food that every day, if not consumed, should be thrown away and redistribute it fairly to charitable kitchens in Matera.

- **Resource 48: Non si butta via niente**

Project that nurtures a dense network of recovery, waste prevention and solidarity to needy families in the area, combining it with attention to sustainability and the weakest segments of the population.

- **Resource 49: CiboAmico (Gruppo Hera)**

Corporate project that helps to recover meals prepared and not consumed within its corporate canteens. These meals are then collected and donated to 5 non-profits that provide hospitality and assist fragile and troubled people on a daily basis.

- **Resource 50: Babaco Market**

Web platform that sells fruits and vegetables with shape and size defects that are not accepted by traditional channels - such as supermarkets - and therefore are often destined for waste.

- **Resource 51: RECUP**

RECUP is a project that aims to combat food waste and promote active citizenship. At markets they recover unsold food, sort it, and share it with all the people who participate in the activity.

- **Resource 52: Carovana Salvacibo and RePoPP**

The association recovers fruit and vegetable products in places where they are at risk of being turned into waste (wholesale markets, fruit and vegetable markets, fields) and distributes it to beneficiaries.

- **Resource 53: Food for Soul**

NGOs in which professional chefs prepare meals for people in need using surplus delivered by various suppliers. Refectory spaces (13 around the world) are also used for cultural activities and workshops involving the community to promote social inclusion.

- **Resource 54: Viva la bontà…abbasso lo spreco!**

Project in which food that is not consumed in school canteens is recovered and redistributed for social purposes.

- **Resource 55: Rete solida**

School project in which leftover food in five school canteens is recovered and donated to two charities.

- **Resource 56: Ricibo**

Project involving the city of Genoa in networking local associations that are involved in recovering surplus food and distributing it to people in need.

- **Resource 57: Foodbusters**

The Foodbusters are a group of people who founded the first food recovery association in the Marche region.

- **Resource 58: 6 Salvacibo**

Initiative aimed at recovering surplus food at neighborhood markets and stores, and subsequent distribution to the beneficiaries of the associations involved in the recovery, as well as to fragile families in Municipio 6.

- **Resource 59: Associazione Alveare**

Association that collects unsold products at outdoor markets and supermarkets. The pickup is taken care of by the young people followed by the association for vocational rehabilitation. The goods are used to support the families of a parish center (200 families).

- **Resource 60: Associazione La Forza del Pane**

Daily collection of surplus food from five bakeries in Gorgonzola and distribution to people in need through Caritas Gorgonzola. In addition, the Association engages in activities to raise awareness about food waste and reuse of surplus food.

- **Resource 61: E il resto non si butta**

Pickup of fruits and vegetables by volunteers at school canteens twice a week with delivery to a charity, which distributes the next day.

- **Resource 62: Pane e Rose**

Initiative that collects surplus from supermarkets and bakeries and redistributes it to people in need.

- **Resource 63: Prima il pane**

Recovers and distributes food items no longer useful for sale but good for charitable purposes.

- **Resource 64: La mensa che non spreca**

The goal of the project is to activate a solidarity circuit that, in addition to helping people in need, will help eliminate food waste by recovering undiscarded food from school canteens.

- **Resource 65: Cacciatori di briciole**

Volunteers that recover food that remains unsold at the end of the night at cafes, bakeries, fruit and vegetable shops, and supermarkets, and redistribute it to people in need.

- **Resource 66: Ri-generi alimentari (Association that distributes for free unsold fruits and vegetables in downtown Livorno markets.)**

Association that distributes for free unsold fruits and vegetables in downtown Livorno markets.

- **Resource 67: ReFoodGees Roma Salvacibo**

Association that recovers and redistributes for free surplus food within Roman neighborhood markets.

- **Resource 68: Bari Social Food**

The Bari Social Food project aims to offer opportunities for combating food waste via the collection and redistribution of surpluses to people and households in socioeconomic distress. Also by promoting in the

medium to long term a change in the approach and a greater sensitivity and awareness with respect to the issues of waste and the environmental, social, and economic impact that the failure to use surplus resources entails.

- **Resource 69: SprecoZero Taranto**

The project aims to identify and implement sustainability models and shared tools that allow the achievement of recovery rates far higher than those achieved by the individual work of Local Voluntary Associations. The project thus aims to synergize and maximize the impact of the actions already implemented for years in Taranto by promoting associations on the issue of food waste. The Zero Spreco Taranto project has as its main objective the recovery of medicines, foodstuffs and cooked food for redistribution to people in difficulty and who are less well-off.

- **Resource 70: Cibiltà**

The project aims to implement concrete measures and actions to limit waste, promoting initiatives to recover surplus food to be allocated to families in need in the municipal area.

- **Resource 71: Hub di Quartiere contro lo Spreco Alimentare (Local Food Hubs)**

Since 2015, Milan has created Local Food Waste Hubs to recover food surpluses from local supermarkets and canteens and redistribute it to people in need through local neighbourhood networks. The Municipality allocated city-owned buildings for stocking and redistribution of recovered food and implemented a tax reduction measure that rewards businesses that donate food with a 20 percent reduction on the waste tax.

- **Resource 72: Foodsharing Tartu**

Foodsharing Tartu is a movement that saves and distributes leftover food in Tartu, cooperating with individuals, retailers, companies and food producers.

- **Resource 73: Foodsavers Antwerp**

Foodsavers is an initiative of the city of Antwerp that collects food surpluses free of charge and redistributes them to aid organizations that are committed to food distribution.

- **Resource 74: FoodSavers Ghent**

Redistribution of excedent food from supermarkets to social organisations and those in need. Foodsavers Ghent employs citizens that have long been unemployed.

- **Resource 75: wegEETbox Sint-Maartensdal**

Fridges where local residents and other people from Leuven can put in or take out food surpluses. Both private and professional food surpluses are welcome in the wegEETbox. People who are in need can in turn take something out of it. Managed by the municipality, volunteers participate.

- **Resource 76: Invendus pas Perdus**

Since December 2017, a municipal employee has collected unsold products from several partner supermarkets. He then brings them to associations such as the Red Cross, the Episol social grocery store. Schaerbeek is the first municipality to have set up a large-scale circuit and recently it has just passed the milestone of 100 tonnes of redistributed unsold food.

- **Resource 77: The Schenkinsbeurs Donation Grant**

The Donation Grant offers a solution by connecting food companies that have unsold goods (donors) with food aid and social organizations that are looking for donations (recipients).

- **Resource 78: FLAVOUR**

Flavour is a European partnership with 10 partners from Belgium that explores new ways to combat food waste, create jobs for people with a large distance to the labour market and support people in poverty. FLAVOUR encourages producing, buying and consuming food in a "different way" in order to prevent waste as much as possible. With the surpluses, distribute food through distribution platforms to food aid and social organizations, and transform/process/valorise food into new longer-lasting products.

- **Resource 79: FOOD HUB-Mechelen**

The Food Hub Together with Ecoso created the first food hub in Mechelen. Through FoodSavers, collects food surpluses from supermarkets, and safe, local traders. They then distribute this food to poverty organizations and schools in Mechelen.

- **Resource 80: Let's Save Food!**

Let's Save Food vending machines sell products that otherwise woud be wasted. Non-profit organization volunteers refill the vending machine several times a day with bread, biscuits, freeze-dried fruit or other tasty things. In this way, everything in the machine is saved from going to waste. Preventing food loss in a consistently sustainable way, by collecting and distributing local food surpluses. In addition, Let's Save Food is out to fight against climate change and enhance more social connections.

- **Resource 81: European Food Banks Association (FEBA)**

The European Food Banks Federation is a network of over 341 Food Banks in 30 European countries, preventing food waste and reducing food insecurity.

- **Resource 82: Jemy, nie marnujemy: Foodsharing points**

Creation of foodsharing points scattered across Warsaw. Users manage it by themselves: both those who leave food, and those who take it. The list of foodsharing spots is available on two municipal websites: Warszawa 19115 and Warsaw geoportal.

- **Resource 83: Jemy, nie marnujemy: Collections at marketplaces**

Collection of unsold food in markets by volunteers.

- **Resource 84: Maisto Bankas**

Lithuanian Food Bank, in cooperation with the Schweizer Tafel, implemented projects to reduce food waste, such as "Stop Food Waste in Lithuania!", and continues this work mainly with the retail sector.

2.6 DATASET 6: chorizo master list of actions tackling food loss and waste in the retail sector

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section includes resources or data sets on retail (45): These include the handling of food and its storage at the point of sale or delivery to the final consumer - includes distribution terminals, shops, supermarkets distribution centers, wholesale outlets.

This dataset currently has 45 Resources.

- **Resource 1: Perfectly Imperfect and TESCO**

Package and sell fruits and vegetables that are at risk of going to waste due to aesthetics.

- **Resource 2: SPAR and Gander**

The Gander platform will enable retailers to automatically display to shoppers, in real-time, all reduced-to-clear food on the shelves within their local SPAR store.

- **Resource 3: Coop and WhyWaste**

Whywaste's solution Semafor Deli helps the personnel work more efficiently and keep track of all areas of the deli counter, while also ensuring that all food safety requirements are met. The system alerts personnel if there any products on the counter that are at risk of becoming waste so that the personnel can take proactive, preventative, measures.

- **Resource 4: Matsmart**

Sells on-line surplus food that would be otherwise thrown away due to packaging or short expiry dates.

- **Resource 5: Karma**

App connecting surplus food from retailers to consumers for a lower price.

- **Resource 6: Carrefour Poland**

Price reductions up to 90% for food with a short shelf-life / soon to expire.

- **Resource 7: Foodsi**

App allows customers to buy surplus food from food retailers and thereby save it from going to waste.

- **Resource 8: AH Overblijvers/Albert Heijn**

Products that are left over at the end of the day and have an approaching expiration date, or are going out of stock. These are then offered to customers at reduced prices.

- **Resource 9: Best For**

Grocery store that sells at reduced price food products whose season has passed, are near expiry, or which have been overproduced.

- **Resource 10: Foodlist**

App that connects grocery stores with surplus food to consumers who wish to buy it at a reduced rate or charities that will take the donation.

- **Resource 11: REIF: resource efficient, economic and intelligent foodchain**

Using artificial intelligence to save food. Also covers production and processing. Develop and test an AI tool, which will help to reduce food waste along the entire food-chain up to the retail sector.

- **Resource 12: Alnatura's goal of 100% redistribution**

Better collaboration with redistribution sector, target: 100 percent of stores.

- **Resource 13: BIO COMPANY**

Reduces leftover baking goods by introducing new controlling software FoodTracks. Goal of reducing food waste in bakeries, by optimizing the purchasing and editing the product range. Regular review in sustainability report.

- **Resource 14: Metro "Frische Gastro Deals"**

Reducing food waste by selling products with different kind of disadvantages at a reduced price.

- **Resource 15: #Goodbuy Transgourmet**

Reduced price on and selling products close to "best-before" date.

- **Resource 16: VollCorner "Marketing von Suboptimal Food im Öko-Handel"**

Scientific test on optically imperfect carotts; selling carrots with optical imperfections, measuring how unusual the carrots can look until they are not purchased anymore. Also, testing the effect of different communication strategies and price reduction.

- **Resource 17: CHEFS CULINAR**

Weight measurements for redistribution. Measuring the exact amount of food in kilograms which is given to the redistribution sector, by weighing every donation and substracting the weight of the packaging.

- **Resource 18: Lehmann natur employment benefits**

Giving boxes of fruits and vegetables to employees at the end of each week and providing meals, both based on fruits and vegetables that could not be sold.

- **Resource 19: REWE**

Weighing food waste to create more precise measurements. Developing a better indicator for the amount of food waste generated, based on the depreciation data.

- **Resource 20: "Die etwas Anderen" Kaufland**

Selling fruits and vegetables with optical imperfections. Reducing food waste by allowing primary production to market products which are below typical optical norms.

- **Resource 21: "Rettertüte"(saviour bag/rescue bag) initiative by LIDL**

Reducing food waste by selling products, which are usually not sold anymore in small paper bags.

- **Resource 22: PENNY Retterregal**

Introducing and showcasing innovative products which reduce food waste by being produced by otherwise thrown-away products.

- **Resource 23: TESCO Perfectly Imperfect**

Tesco sells misshapen vegetables that would otherwise become waste.

- **Resource 24: STREFOWA/SPAR**

Awareness-raising action in supermarkets on best before dates and what consumers can do to reduce food waste in the shop.

- **Resource 25: Austria Voluntary Agreement "Vereinbarung 2017-2030 Zur Vermeidung von Lebensmittelabfällen bei Lebensmittelunternehmen"**

Voluntary agreement with the goal of halfing the food waste for all signatories - multiple private companies from the retail and distribution sector. Signatories are asked to implement measures and start a detailed reporting of the generated food waste by mass.

- **Resource 26: "Motatos"**

A business selling food products which would otherwise have been wasted due to imperfections / over-production, which recently expanded to Austria.

- **Resource 27: We-Food**

Store (food retail) that sells food products with damaged packaging, incorrect labelling, expired shelf life and seasonal products that cannot be sold in regular supermarkets at a discounted price. Profit from the store goes to social work. Have already 6 shops in two cities of Denmark (Copenhagen and Jutland) that collects and sells almost 700.000 tons / year.

- **Resource 28: Changing consumers' mindset / Arla**

Arla uses several tools to minimize food waste. One of them is to change the 'best before label' to 'also good after'. Another initiative is to design packaging, which is easy to fold and fully empty.

- **Resource 29: "Look, Smell, Taste"**

Influencing message on food label: "Look, Smell, Taste" to promote consumers to act before throwing out the food.

- **Resource 30: "Often Good After"**

Add label information of "Often good after" just after the "best before date" on the food product to cut down on food-waste. The additional information "Often good after" is to guide or motivate consumers to still use the product close to or just after passing the date, as it is often still safe to consume.

- **Resource 31: Scan2Save**

A QR barcode based system that allows food packers to add a batch number to identify the sell by date.

- **Resource 32: Ministry of agriculture; Project: Hrana nije otpad; Guide to reducing food waste in retail**

It provides tips on how to measure and evaluate food waste in the supermarket, the causes of food waste, and tips for consumers on handling food to reduce food waste.

- **Resource 33: Last Minute Market**

Last Minute Market was established to support large-scale retail companies in the recovery of food surpluses. Today its' areas of action have expanded to other types of non-food goods (e.g., medicines), and thanks to its increasingly innovative package of services (e.g., education, training, communication), it deals with loss and waste prevention across the board.

- **Resource 34: Coop Buon Fine**

Within the coop supermarkets there are "Buon fine" products with slight defects or near expiration, discounted by 30 to 50 percent.

- **Resource 35: MyFoody**

Platform that allows one to find deals from the nearest supermarkets, saving up to 50 percent on groceries and helping to reduce food waste.

- **Resource 36: Qualivery**

The initiative aims to help reduce the food waste that many stores in Belluno incur on a daily basis. The Green Bag contains fresh, non-preservable products that the stores cannot sell the next day and groceries that risk going unsold because they are close to their expiration date or because they have minor cosmetic defects.

- **Resource 37: FOODELLO**

Save products that do not end up in the supermarket because the best-before date is approaching, a product has disappeared from the range, or because there is a printing error on the packaging, etc. and offer them to the consumer at a discount.

- **Resource 38: Good Taste, Zero Waste / Lidl**

Offering a bottom price for the products that remain on the store shelves and are difficult to be sold due to being close to the expiration date or damaged packaging.

- **Resource 39: Foodie Save**

App connecting surplus food from retailers to consumers for a lower price.

- **Resource 40: Fiksuruoka**

Fiksuruoka buys surplus food from manufacturers and sells it online to consumers at affordable prices.

- **Resource 41: Froodly**

Froodly's mobile app rewards consumers for reporting still-fresh discounted products in their local stores. They share a picture of the discounted product, price and store details in the app and gain credits towards rewards such as free coffee. Others can use this information to find great products with a low price all while helping to reduce food waste.

- **Resource 42: Aswell**

App connecting surplus food from retailers to consumers for a lower price.

- **Resource 43: FoodObox**

Via the app, allows businesses to sell surplus food and to avoid throwing it out.

- **Resource 44: Globble**

App allows customers to buy surplus food from food retailers and thereby save it from going to waste.

- **Resource 45: Nous, Anti-Gaspi**

Sells online surplus food or food that is hard to sell - i.e. due to expiry dates, appearance.

2.7 DATASET 7: chorizo master list of actions tackling food loss and waste in the transportation sector

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section includes resources or data sets on transportion actions reducing food loss and waste at any stage in the supply chain.

This dataset currently has 2 Resources.

- **Resource 1: FoodSense: Connecting Sensors and Cloud to Track Food Waste**

In the last few years, significant efforts have been made to introduce new solutions in the field of temperature monitoring for transport logistics. Monitoring temperature is a key aspect of food safety that can be used to prevent food waste and guarantee consumer satisfaction. The technology is currently growing fast and there are many new solutions on offer—but they are not yet widely used.

- **Resource 2: Internet of Things helping reduce food loss and waste**

The ImaR (Intelligent Mechatronic and RFID) Research Centre in the Munster Technological University (Ireland) is using their expertise in the SISTERS project to monitor the environmental conditions that pervade in the Logistics Phase of the food supply chain. The monitoring of environmental conditions during transport is an indicator of the freshness of food produce and provides valuable information that is used to design solutions that may be able to minimize the volume of food loss and waste during the transport phase.

2.8 DATASET 8: chorizo master list of actions tackling food loss and waste in the processing and manufacturing including valorization sector

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. This section include resources or datasets on processing, manufacturing and valorization (45); the first processing and manufacturing of food after the primary production and before the retail and other distribution stage of the food supply chain.

This dataset currently has 45 Resources.

- **Resource 1: Apeel technology applied in Netto**

German food retail discounter - extending the shelf-life of vegetables and fruits through coating, thereby reducing the likelihood of food waste.

- **Resource 2: Chr-Hansen´s CSR strategy**

This is a general and overall Corporate Social Responsibility (CSR) strategy to contribute to actions against food waste. It is divided in three pillars: Using nature's own resources; delay spoilage with food cultures; committed to reducing yogurt waste by 2 million tons by 2025.

- **Resource 3: Ministry of agriculture: Project: Hrana nije otpad; Guide to reducing food waste in food production and processing**

Keeping records makes it possible to identify the amount of food waste. Collected data is processed, and the results indicate the amount of food waste, which can help select target actions to reduce food waste.

- **Resource 4: Biova Project**

Innovative start-up that focuses on reducing food waste through the creation of products that follow the principles of circular economy and upcycling.

- **Resource 5: City Compost for Sustainable Agriculture**

The project aims to create the optimal compost possible that can be produced from urban food and green waste. This bio-waste will be shipped to a testing site owned by the University of Forestry located on the outskirts of the city. There, different compositions and ratios of bio-waste will be tested. The compost created by the project will later be used by small and medium-sized agricultural producers to boost the production of food, as well as supporting a more circular approach to both agriculture and urban waste.

- **Resource 6: Processing Residual Flows of Onions / Fresh Onions**

Founded by Fresh Onions; process residual flow (onions that are too small and onion peels) into a product and sell it to existing B2B customers.

- **Resource 7: Cookie of own…trot / SOWEPO**

SOWEPO saw the opportunity to process the remaining trot from the nearby Sint Bernardus brewery, and came up with the idea of producing a cookie. The trot is combined with apple pulp as a natural sweetener.

- **Resource 8: Responsible entrepreneurship with Poperinge's 'white gold'**

The landscape of Poperinge in West Flanders has traditionally been strongly dominated by hop cultivation. Hops are especially popular as the most important raw material for beer. That the young offshoots of hop plants are very popular with top chefs and gourmets is less known. The Popering hop shoots are even called the 'white gold'. The tailor-made company SOWEPO produces products based on hop shoots. Under the name 'Houblonesse' produce regional products from hop shoots. When processing hops in a finished product, the stems of the hop plant, the hop shoots, are discarded. From these stems can extract ingredients that enhance the natural taste. As a result, they really add value to products such as caramel waffles, gin and, for example, cheese.

- **Resource 9: Lantmannen**

Ensure a coordinated and efficient use of resources throughout the production of food, feed and energy. The raw materials that do not reach food quality are used for production of feed or ethanol. Lantmännen also works to use waste from its' processes, and also other producers' waste. The reuse of grain based waste and residues are an additional material in Lantmännen's bio refinery. Make use of carbohydrate rich food waste such as pasta, bread and soda, to produce ethanol from it and thereby create a circular business.

- **Resource 10: Valorization of food waste: biogas production and home composting**

Since 2014, waste directed to biogas production for transport sector, and for producing biofertiliser as a by-product. For those who prefer, the municipality also gives an option for home composting.

- **Resource 11: Valorization of food waste from households, restaurants and commercial kitchens: biogas production for local buses and private passenger cards in the vicinity**

The Municipality of Vaxjo and the regional waste management company (SSAM) transform foodwaste into biogas for city buses and passenger cars. There is a local gas station that lets people fill their cars with locally generated biogas. The remaining sludge is then diverted to arable lands to be used as fertilizer.

- **Resource 12: Wholy Greens**

Using left-over vegetables from the primary sector to make pasta and sell it on-line.

- **Resource 13: Instock**

The startup has developed food waste products and sells them on-line - namely: two beers brewed with surplus bread, potatoes or raspberries, and a granola made out of the malt residue from beer production.

- **Resource 14: Upcyclen van reststromen**

Looking at how to make residual flows of our food valuable.

- **Resource 15: Collection of Left-over Bread**

It is prohibited to feed leftover bread to animals in Rotterdam. As an alternative, the municipality has installed 130 bread bins to collect bread all throughout the city. This bread is then fermented and green energy is produced with it.

- **Resource 16: Helsieni**

Using used coffee grounds to grow mushrooms/selling starter kits.

- **Resource 17: City Loops**

The aim is to improve the recovery of nutrients from bio-waste streams into recycled products and to collaborate with citizens in implementing new collection and sorting processes to upgrade the quality of the collected waste.

- **Resource 18: Riga: From Food Waste to Healthy Off-Season Food**

Turning the Getlini landfill into an environmentally friendly, innovative and ecological waste management site.

- **Resource 19: Esimperfect**

Transform recovered produce into preserves and sell them on-line while providing job opportunities to people at risk of social exclusion.

- **Resource 20: Panduru**

Circular Confectionery Panduru Economía Circular SLL is a company led by two Asturian entrepreneurs that transforms surplus bakery bread into delicious pastries, thus contributing to reducing food waste.

- **Resource 21: VALUEWASTE**

Turning bio-waste into bioproducts (fertilizers, foodstuff / feed ingredients, biogas for plant functioning). Already initiated in La Flota neighborhood and some markets, targeting households and businesses.

- **Resource 22: Cerveza Sr. Mendrugo**

Making beer with surplus bread.

- **Resource 23: Liebe^2 (love squared)**

The goal is to reduce food waste, by processing fruits and vegetables, which were neither sold nor given away to civil society redistributors, to gelee and chutney. Aiming to expand the machanism to more food products.

- **Resource 24: VIRESOL**

Viresol Ltd is a wheat starch factory. Utilise their by-products (waste starch) by producing animal feed, alcohol and biogas thereby utilising 99% of raw materials.

- **Resource 25: Ételment?**

Ételment? utlises a beer by-product, beer marc to produce granolas. Create food products that are made exclusively from raw materials that are either considered "waste" for aesthetic reasons, or because the raw material is only partially necessary for the product made by the given food industry company.

- **Resource 26: Sewage sludge and food waste as feedstocks for electricity generation**

Budapest uses sewage sludge and food waste as feedstocks for electricity generation.

- **Resource 27: Déifferdenger Pléckerten**

In this village, young and old collaborate, to pick fruit, process it and prevent it from rotting.

- **Resource 28: La Panetière des Hameaux**

The Panetière des Hameaux is a tambourine in France that makes cookies made with stale bread. In this way it reduces the waste of food.

- **Resource 29: Bio-waste collecting**

Bio-waste valorisation for energy production. The City of Paris has been addressing the collection of food waste since 2017, as part of the law on energy transition which requires that all French cities offer a system for collecting food waste at source by 2024.

- **Resource 30: AVARE**

The objective of AVARE (Adding Value in Resource Effective Food Systems) is to minimize food waste. The project conducts research aiming at generating bio-based products with food waste. The European project combines research institutes from Finland, Norway, Sweden and Germany.

- **Resource 31: Food Surplus Management**

Food Surplus Management Limited (FSM) is an Irish owned company who specialise in recovery and recycling of short-dated and out of date food products, and packaging for the manufacturing, wholesale and retail food and drinks industry. Servicing over 150 hotels and restaurants nationwide. FSM operates two licensed facilities in Co. Meath, where de-pack and recover all the food waste for anaerobic digestion (energy).

- **Resource 32: Krut**

A company processing over-produced or imperfect vegetables into Kimchi and Kombucha.

- **Resource 33: Žganjekuha Krži?: Brodka spirit drink (brandy)**

Use of old bread and scraps for processing into brandy.

- **Resource 34: Atlantic Droga Kolinska d.o.o.: chicken pate Argeta**

Argeta collects food waste suitable for further processing or recycling and food waste destined for conversion into animal food (pet food).

- **Resource 35: Pulp and Paper Institute: CIP brand Circular Innovative Papers**

Tomato stalk waste is used to make paper as well as biodegradable packaging safe for food contact.

- **Resource 36: Urban Soil 4 Food**

Biowaste to compost. The main goal of the project is to use the city's waste to produce and valorise new products and food using an innovative process to produce urban soil, with the aim to increase local food self-sufficiency and minimize the environmental footprint of the city of Maribor.

- **Resource 37: ERA Chair for Food (By-) Products Valorization Technologies of the Estonian University of Life Sciences?**

Bring structural changes to universities and research institutions in the "widening" EU countries like Estonia. Establish a new internationally recognized research team, and recruit a top-level researcher/research manager (ERA Chair holder) to lead this interdisciplinary, inter-unit entity, formed based on a joint effort by the Institute of Agricultural and Environmental Sciences and the Institute of Veterinary Medicine and Animal Sciences of EMU.

- **Resource 38: Romerike biogas plant**

Turning biowaste into energy & biofertilizers: Romerike plant. The plant treats waste from households combined with industrial biowaste. The waste is converted to biogas and biofertiliser. The biogas is further refined into methane and liquified for use in transport.

- **Resource 39: Centralized treatment of bio-waste / Nutrimais**

Collection of bio-waste that comes from different sources (households, restaurants-caterers-businesses, events) to produce high-quality organic compost: Nutrimais. Anaerobic digestion units are being developed.

- **Resource 40: Valorisation of by-products from carrot production / Verduyn**

An approach to deal with by-products for Verduyn. Founded in collaboration with the Food Heroes project. The pieces of carrot that used to fall off the belt are now collected and used to make something new and tasty.

- **Resource 41: Valorisation of the cauliflower waste streams into cauliflower rice / Greenyard**

Transforming the 'waste' that was left behind on the land when cauliflower was harvested.

- **Resource 42: Valorisation of chicory**

Chicory by-products from chicory cultivation into a chicory croquette.

- **Resource 43: Best of Waste**

Process residual fruit into a healthy and long-lasting product in collaboration with the partners of Food From Food. One initiative done by the project is 'Boost your life with BES't!'. Five to ten tons of soft fruit from the Wilderhof company does not find its destination in the regular retail circuit because it is not of desired size, is damaged or deformed. Wilderhof has now found a destination for part of this 'non-premium fruit'. It is used to produce fresh juice.

- **Resource 44: Rabot on your plate**

Make artisanal products, such as pesto, from harvest surplusses.

- **Resource 45: Collection and valorisation of orange peels**

Collection and valorisation of orange peels.

2.9 DATASET 9: chorizo master list of actions tackling food loss and waste in primary production

This is a master list of previous and on-going actions to tackle food loss and waste (FLW) studied in the framework of the CHORIZO project. There are a total of 395 actions from different countries tackling different stages of the food chain. These sections include resouces or datasets on primary production (14), that is the production, rearing or growing of primary products, including harvesting.

This dataset currently has 14 Resources.

- **Resource 1: Leaf No Waste**

Address food waste by combining plant fortification with sustainable compostable packaging, in order to have the commodity stay naturally fresh for as long as possible (compared to existing system).

- **Resource 2: Gleaning Network / Feedback**

Since 2012, Feedback's Gleaning Network has worked with 60 farmers, 3,000 volunteers and numerous charities to rescue over 500 tonnes of fruits and vegetables that would otherwise be wasted. In 2019, expanded this network further, by training and supporting community groups across the country to run gleaning activities in their region. The Gleaning Network website contains a map to help farmers and volunteers find their nearest gleaning group, and a toolkit for use by existing and new gleaning groups.

- **Resource 3: Espigoladors**

Harvest fruits and vegetables that are not suitable for the market through gleanings with the help of volunteers. Most of the fruits and vegetables that are collected are distributed to social entities in order to reach people who do not have access to them. The other recovered produce are transformed into preserves and sold on-line while providing job opportunities to people at risk of social exclusion.

- **Resource 4: BARUXKA**

Buruxka is an initiative that emerged in Navarra (Spain) that aims to recover the practice of gleaning or "respigamiento", that is, recovering products that remain unharvested in the fields, and then working with charities / food banks to ensure the food goes to those in need.

- **Resource 5: SISTERS Project - Annual webinar: Combating food losses and waste at the primary production level**

October 20, 2022, SISTER partner SAFE held a webinar to foster deeper inter-European cooperation. This was the first of four annual webinars focused on best practices and strategies to combat food waste and losses at the primary production level.

- **Resource 6: SISTERS Project - IT can help reducing food waste in Europe: here's why!**

The consortium works closely with primary producers and food actors to develop a Short Chain Platform and test it with different producers in different countries. With the ambition to help contribute to the reduction of food waste at the farmer level while increasing farmers' revenue.

- **Resource 7: FOLOU**

The project will develop new methodologies and tools to reduce food losses and food waste in the primary sector.

- **Resource 8: Grinsect**

In the vertical insect protein manufacturing facility, the black soldier fly larvae are fed with food and feed industry biowaste. These larvae are one of the most promising candidates to transform low-value streams (grain, vegetables, fruits, and a wide range of stem residues) into high-quality protein and fat during a so-called bioconversion process. Feeding the larvae and utilizing their power in such a way is an environmentally conscious choice. Objective is to produce a premium animal protein with a low ecological footprint from biowaste and substrates otherwise untreated or useless to the production and processing sector.

- **Resource 9: Eat Grim (Eat Ugly)**

Development of a digital platform where can sell discarded ugly vegetables to restaurants and commercial kitchens. The goal is to reduce food waste in primary production. The start-up is selling discarded fruits and vegetables with box scheme through their on-line platform.

- **Resource 10: Ministry of agriculture; Project: Hrana nije otpad; Guide to reducing food waste in primary production**

Methods and tips for identifying losses and reducing food waste through direct measurement and physical separation of food waste.

- **Resource 11: Bella Dentro**

This small company buys aesthetically imperfect products from producers all over Italy and re-sells them to consumers. A laboratory for processing imperfect fruits and vegetables has been in operation since 2021.

- **Resource 12: Alimentando**

Alimentando as an ODV and ONLUS wants to facilitate a reduction in individual and collective food waste, always safeguarding product quality. This is done through the collection of food raw materials that would otherwise be discarded by the distribution system, thus demonstrating that many products are unnecessarily discarded and can safely be consumed, while still respecting hygienic and sanitary regulations.

- **Resource 13: LAB3S**

Urban topsoil restoration, conducting research and work to reconstitute functional urban topsoils.

- **Resource 14: Rescued Box**

Receive directly from the farm every week a recyclable box full of fresh fruits and vegetables, avoiding food waste derived from produce surplus, the use of plastic and contributing to the decrease of carbon footprint since the delivery routes are optimized. In addition, Rescued Box donates every week 10% of the proceeds to charity organizations to fight hunger in Cyprus.

2.10 DATASET 10: Actions and links to datasets

This file contains some actions tackling FLW with links to existing datasets for the actions

This dataset currently has 1 Resources.

- **Resource 1: CHORIZO_D1.2_List of Datasets_FINAL.csv**

3 CHORIZO DATA LAYER 2: CASE STUDIES' DATA SETS

This layer contains new evidence generated from CHORIZO project case studies on the interaction of social norms and food loss and waste behavior. The case studies centered around:

- ➢ Case Study 1: Household food waste in and off crisis periods
- ➢ Case Study 2: Hospitality food waste
- ➢ Case Study 3: Food services food waste
- ➢ Case Study 4: School food waste and relation with obesity and malnutrition
- ➢ Case Study 5: Food waste in a food banks' mediated supply chain
- ➢ Case Study 6: Food waste in relation to date marking and sustainable and smart food packaging

This data layer currently has 23 datasets.

3.1 DATASET 1: In-Depth Interviews.CS5-HU_HORECA

IDIs interviews with HORECA actors on perspectives on food surplus and its implications, as well as priorities concerning donations and food quality

This dataset currently has 5 Resources.

- **Resource 1: IDI.CS5-HU_H1.docx**

- **Resource 2: IDI.CS5-HU_H2.docx**

- **Resource 3: IDI.CS5-HU_H3.docx**

- **Resource 4: IDI.CS5-HU_H4.docx**

- **Resource 5: IDI.CS5-HU_H5.docx**

3.2 DATASET 2: In-Depth Interviews.CS5-HU_NGOs

IDIs interviews with NGOs actors on perspectives on food surplus and its implications, as well as priorities concerning donations and food quality

This dataset currently has 10 Resources.

- **Resource 1: IDI.CS5-HU_N1.docx**

- **Resource 2: IDI.CS5-HU_N2.docx**

- **Resource 3: IDI.CS5-HU_N3.docx**

- **Resource 4: IDI.CS5-HU_N4.docx**

- **Resource 5: IDI.CS5-HU_N5.docx**

- **Resource 6: IDI.CS5-HU_N6.docx**

- **Resource 7: IDI.CS5-HU_N7.docx**

- **Resource 8: IDI.CS5-HU_N8.docx**

- **Resource 9: IDI.CS5-HU_N9.docx**

- **Resource 10: IDI.CS5-HU_N10.docx**

3.3   DATASET 3: In-Depth Interviews.CS5-HU_Retail

IDIs interviews with Retails actors on perspectives on food surplus and its implications, as well as priorities concerning donations and food quality

This dataset currently has 5 Resources.

- **Resource 1: IDI.CS5-HU_R1.docx**

- **Resource 2: IDI.CS5-HU_R2.docx**

- **Resource 3: IDI.CS5-HU_R3.docx**

- **Resource 4: IDI.CS5-HU_R4.docx**

- **Resource 5: IDI.CS5-HU_R5.docx**

3.4   DATASET 4: In-Depth Interviews.CS5-HU_Processing

IDIs interviews with Processing Firms' actors on perspectives on food surplus and its implications, as well as priorities concerning donations and food quality

This dataset currently has 10 Resources.

- **Resource 1: IDI.CS5-HU_P1.docx**

- **Resource 2: IDI.CS5-HU_P2.docx**

- **Resource 3: IDI.CS5-HU_P3.docx**

- **Resource 4: IDI.CS5-HU_P4.docx**

- **Resource 5: IDI.CS5-HU_P5.docx**

- **Resource 6: IDI.CS5-HU_P6.docx**

- **Resource 7: IDI.CS5-HU_P7.docx**

- **Resource 8: IDI.CS5-HU_P8.docx**

- **Resource 9: IDI.CS5-HU_P9.docx**

- **Resource 10: IDI.CS5-HU_P10.docx**

3.5   DATASET 5: Experiment02.CS2-NO.lunch

Weighting food waste depending on serving type

This dataset currently has 2 Resources.

- **Resource 1: Experiment02.CS2-NO.lunch .csv**

- **Resource 2: Experiment02.CS2-NO.lunch.xlsx**

3.6 DATASET 6: In-depth Interviews, CS2-NO

In-depth interview with Strawberry restaurant chefs in Norway.

This dataset currently has 10 Resources.

- **Resource 1: IDI.CS2-NO Metadata.xlsx**

- **Resource 2: IDI01.CS2-NO.docx**

- **Resource 3: IDI02.CS2-NO.docx**

- **Resource 4: IDI03.CS2-NO.docx**

- **Resource 5: IDI04.CS2-NO.docx**

- **Resource 6: IDI05.CS2-NO.docx**

- **Resource 7: IDI06.CS2-NO.docx**

- **Resource 8: IDI07.CS2-NO.docx**

- **Resource 9: IDI08.CS2-NO.docx**

- **Resource 10: IDI09.CS2-NO.docx**

3.7 DATASET 7: Survey.CS2-NO

Staff survey on breakfast guest behavior.

This dataset currently has 1 Resources.

- **Resource 1: Survey.CS2-NO.xlsx**

3.8 DATASET 8: Experiment01.CS2-NO.Breakfast

Weighting food waste depending on communication strategy.

This dataset currently has 2 Resources.

- **Resource 1: Experiment01.CS2-NO.breakfast.csv**

- **Resource 2: Experiment01.CS2-NO.breakfast.xlsx**

3.9 DATASET 9: In-Depth Interviews.CS6-ES.Food Industry

FOOD INDUSTRY In-depth Interviews (25 docs) are collected here. CS6 Food waste in relation to date marking and sustainable and smart food packaging.

This dataset currently has 25 Resources.

- **Resource 1: CS6_INDUSTRY_IDI #1_FRUIT AND VEGETABLES**

- **Resource 2: CS6_INDUSTRY_IDI #2_VERMUT AND ALCOHOLIC DRINKS**

- **Resource 3: CS6_INDUSTRY_IDI #3_INGREDIENTS**

- **Resource 4: CS6_INDUSTRY_IDI #4_FRUITS AND VEGETABLES.docx**

- **Resource 5: CS6_INDUSTRY_IDI #5_COLD PRESS TECHNOLOGY.docx**

- **Resource 6: CS6_INDUSTRY_IDI #6_UPCYCLE OF BYPRODUCTS COMPANY.docx**

- **Resource 7: CS6_INDUSTRY_IDI #7_DAIRY PRODUCTS.docx**

- **Resource 8: CS6_INDUSTRY_IDI #8_CANNED PRODUCTS.docx**

- **Resource 9: CS6_INDUSTRY_IDI #9_BYPRODUCTS MANAGEMENT COMPANY.docx**

- **Resource 10: CS6_INDUSTRY_IDI #10_ADDITIVES AND FLAVOURS.docx**

- **Resource 11: CS6_INDUSTRY_IDI #11_MEAT INDUSTRY.docx**

- **Resource 12: CS6_INDUSTRY_IDI #12_DAIRY INDUSTRY.docx**

- **Resource 13: CS6_INDUSTRY_IDI #13_BREWERY.docx**

- **Resource 14: CS6_INDUSTRY_IDI #14_BUBBLE TE.docx**

- **Resource 15: CS6_INDUSTRY_IDI #15_FRUIT AND VEGETABLES.docx**

- **Resource 16: CS6_INDUSTRY_IDI #16_CANNED PRODUCTS.docx**

- **Resource 17: CS6_INDUSTRY_IDI #17_BAKERY.docx**

- **Resource 18: CS6_INDUSTRY_IDI #18_MEAT INDUSTRY.docx**

- **Resource 19: CS6_INDUSTRY_IDI #19_VEGETABLES AND FRESH SALADS.docx**

- **Resource 20: CS6_INDUSTRY_IDI #20_BAKERY.docx**

- **Resource 21: CS6_INDUSTRY_IDI #21_BREWERY.docx**

- **Resource 22: CS6_INDUSTRY_IDI #22_OLIVES AND OLIVE OIL.docx**

- **Resource 23: CS6_INDUSTRY_IDI #23_FROZEN PRODUCTS.docx**

- **Resource 24: CS6_INDUSTRY_IDI #24_EGGS.docx**

- **Resource 25: CS6_INDUSTRY_IDI #25_COFFEE.docx**

3.10 DATASET 10: Food waste in relation to date marking and sustainable and smart food packaging_IDI

Results obtained in the IDI carried out to the Spanish population (data sets with "_PI" in the file name stand for vulnerable group participants) on the habits and knowledge about food waste in households, to evaluate food waste in relation to date marking and sustainable and smart food packaging

This dataset currently has 15 Resources.

- **Resource 1: IDI.CS6-ES. Consumers_Interview 1.docx**

- **Resource 2: IDI.CS6-ES. Consumers_Interview 2.docx**

- **Resource 3: IDI.CS6-ES. Consumers_Interview 3.docx**

- **Resource 4: IDI.CS6-ES. Consumers_Interview 4.docx**

- **Resource 5: IDI.CS6-ES. Consumers_PI_Interview 1.docx**

- **Resource 6: IDI.CS6-ES. Consumers_Interview 5.docx**

- **Resource 7: IDI.CS6-ES. Consumers_PI_Interview 2.docx**

- **Resource 8: IDI.CS6-ES. Consumers_Interview 6.docx**

- **Resource 9: IDI.CS6-ES. Consumers_PI_Interview 3.docx**

- **Resource 10: IDI.CS6-ES. Consumers_Interview 7.docx**

- **Resource 11: IDI.CS6-ES. Consumers_Interview 8.docx**

- **Resource 12: IDI.CS6-ES. Consumers_Interview 9.docx**

- **Resource 13: IDI.CS6-ES. Consumers_PI_Interview 4.docx**

- **Resource 14: IDI.CS6-ES. Consumers_PI_Interview 5.docx**

- **Resource 15: IDI.CS6-ES. Consumers_Interview 10.docx**

3.11 DATASET 11: Food waste by Young people (School Food Waste) data from IDI with School-Teachers

Results were obtained with the In-depth Interview (IDI) with School teachers from Danish schools to explore the behavior change strategies, status of Food waste and the motivation for wasting food from various eating situations by young people for instance; school-Lunch-pack, School-canteen, Family-dinner, and out-of-school**.**

This dataset currently has 3 Resources.

- **Resource 1: IDI01-TEACHER1.CS4-DK.docx**

- **Resource 2: IDI02-TEACHER2.CS4-DK.docx**

- **Resource 3: IDI03-TEACHER3.CS4-DK.docx**

3.12 DATASET 12: Food waste by Young people (School Food Waste) data from Workshop with pupils

Results were obtained from the student workshop focused on the "Future of School Food" during the Danish people meeting.

This dataset currently has 2 Resources.

- **Resource 1: Wkshop01-PUPILS-WORKSHOP.CS4-DK.pdf**

- **Resource 2: Wkshop02-PUPILS-NEWS.CS4-DK.docx**

3.13 DATASET 13: Food waste by Young people (School Food Waste) data from IDI with School-Head Masters

Results were obtained with the In-Depth Interview (IDI) with school principals/Leaders from Danish schools to explore the possible strategies and local policies to implement behavior change strategies throughout the school**.**

This dataset currently has 2 Resources.

- **Resource 1: IDI01-HEADMASTER1.CS4-DK.docx**

- **Resource 2: IDI02-HEADMASTER2.CS4-DK.docx**

3.14 DATASET 14: Food waste by Young people (School Food Waste) data from IDI with Parents

Results were obtained with the In-Depth Interview (IDI) with parents from Danish schools to explore the status of Food waste and the motivation for wasting food from various eating situations by young people for instance; school-Lunch-pack, School-canteen, Family-dinner, and out-of-school.

This dataset currently has 4 Resources.

- **Resource 1: IDI01-PARENT1.CS4-DK.docx**

- **Resource 2: IDI02-PARENT2.CS4-DK.docx**

- **Resource 3: IDI03-PARENT3.CS4-DK.docx**

- **Resource 4: IDI04-PARENT4.CS4-DK.docx**

3.15 DATASET 15: Food waste by Young people (School Food Waste) data from FGI with Pupils

Results were obtained with the Focus Group Interview (FGI) with pupils from Danish schools in order to explore the status of Food waste and the motivation for wasting food from various eating situations for instance; Lunch-pack, School-canteen, family dinner, and out-of-school.

This dataset currently has 5 Resources.

- **Resource 1: FGI01-PUPILS.CS4-DK.docx**

- **Resource 2: FGI02-PUPILS.CS4-DK.docx**

- **Resource 3: FGI03-PUPILS.CS4-DK.docx**

- **Resource 4: FGI04-PUPILS.CS4-DK.docx**

- **Resource 5: FGI05-PUPILS.CS4-DK.docx**

3.16 DATASET 16: Food waste in relation to date marking and sustainable and smart food packaging_Pilot homes

Results obtained in the survey interviews carried out in Spain with Pilot Homes (PH), on the habits and knowledge about food waste in households, to evaluate food waste in relation to date marking and sustainable and smart food packaging.

This dataset currently has 14 Resources.

- **Resource 1: Survey.CS6-ES-PH_1.csv**

- **Resource 2: Survey.CS6-ES-PH_2.csv**

- **Resource 3: Survey.CS6-ES-PH_3.csv**

- **Resource 4: Survey.CS6-ES-PH_4.csv**

- **Resource 5: Survey.CS6-ES-PH_5.csv**

- **Resource 6: Survey.CS6-ES-PH_1.xlsx**

- **Resource 7: Survey.CS6-ES-PH_2.xlsx**

- **Resource 8: Survey.CS6-ES-PH_3.xlsx**

- **Resource 9: Survey.CS6-ES-PH_4.xlsx**

- **Resource 10: Survey.CS6-ES-PH_5.xlsx**

- **Resource 11: Variable code book for pilot homes.docx**

- **Resource 12: Survey.CS6-ES-PH.xlsx**

- **Resource 13: Variable-code-book-for-pilot-homes_V2.docx**

- **Resource 14: Survey.CS6-ES-PH.csv**

3.17 DATASET 17: Household food waste in and off crisis periods_Spanish Survey

Results obtained in the survey interview carried out to the Spanish population on the habits and knowledge about food waste in households, to evaluate the situation in and off crisis periods.

This dataset currently has 3 Resources.

- **Resource 1: Survey.CS1-ES.csv**

- **Resource 2: Survey.CS1-ES.xlsx**

- **Resource 3: Survey.CS1-BE&ES_Code_book.xlsx**

3.18 DATASET 18: Household food waste in and off crisis periods_Spain IDI

Results obtained in the IDIs carried out to the Spanish population on the habits and knowledge about food waste in households, to evaluate the situation in and off crisis periods.

This dataset currently has 15 Resources.

- **Resource 1: IDI.CS1-ES_Interview 1**

- **Resource 2: IDI.CS1-ES_Interview 2**

- **Resource 3: IDI.CS1-ES_Interview 3**

- **Resource 4: IDI.CS1-ES_Interview 4**

- **Resource 5: IDI.CS1-ES_PI_Interview 1**

- **Resource 6: IDI.CS1-ES_Interview 5**

- **Resource 7: IDI.CS1-ES_Interview 6**

- **Resource 8: IDI.CS1-ES_PI_Interview 2**

- **Resource 9: IDI.CS1-ES_Interview 7**

- **Resource 10: IDI.CS1-ES_Interview 8**

- **Resource 11: IDI.CS1-ES_PI_Interview 3**

- **Resource 12: IDI.CS1-ES_Interview 9**

- **Resource 13: IDI.CS1-ES_Interview 10**

- **Resource 14: IDI.CS1-ES_PI_Interview 4**

- **Resource 15: IDI.CS1-ES_PI_Interview 5**

3.19 DATASET 19: Food Services Food Waste Consumer Survey

Results obtained in the survey interviews carried out in Slovenia on the dining habits of consumers at restaurants, food waste patterns, and the underlying reasons for food waste**.**

This dataset currently has 2 Resources.

- **Resource 1: Survey.CS3-SI.csv**

- **Resource 2: Survey.CS3-SI.Code book.xlsx**

3.20 DATASET 20: household food waste in and off crisis periods_Belgian_Flemish_Survey

Results obtained in the survey interview carried out in the Flemish population of Belgium on the habits and knowledge about food waste in households. The impact of the current economic crisis and food prices on food waste behaviors in households was also evaluated.

This dataset currently has 3 Resources.

- **Resource 1: Survey.CS1-BE.csv**

- **Resource 2: Survey.CS1-BE.xlsx**

- **Resource 3: Survey.CS1-BE&ES_Code_book.xlsx**

3.21 DATASET 21: Food waste in relation to date marking and sustainable and smart food packaging_EU surveys

Results obtained in the survey interviews carried out in Spain, Greece, Netherlands, Hungary and Estonia, on the habits and knowledge about food waste in households, to evaluate food waste in relation to date marking and sustainable and smart food packaging.

This dataset currently has 11 Resources.

- **Resource 1: Survey.CS6-HU**

- **Resource 2: Survey.CS6-NL**

- **Resource 3: Survey.CS6-EE**

- **Resource 4: Survey.CS6-GR**

- **Resource 5: Survey.CS6-ES**

- **Resource 6: Survey.CS6-EE**

- **Resource 7: Survey.CS6-GR**

- **Resource 8: Survey.CS6-HU**

- **Resource 9: Survey.CS6-NL**

- **Resource 10: Survey.CS6-ES**

- **Resource 11: Variable-code-book-for-EU-Countries.docx**

3.22 DATASET 22: Food Services Food Waste IDI with Restaurants Suppliers

Results obtained in the IDIs carried out in Slovenia with Restaurant Suppliers

This dataset currently has 5 Resources.

- **Resource 1: IDI.CS3-SI_S1.docx**

- **Resource 2: IDI.CS3-SI_S2.docx**

- **Resource 3: IDI.CS3-SI_S3.docx**

- **Resource 4: IDI.CS3-SI_S4.docx**

- **Resource 5: IDI.CS3-SI_S5.docx**

3.23 DATASET 23: Food Services Food Waste IDI with Restaurants Managers

Results obtained in the IDIs carried out in Slovenia with Restaurant Managers

This dataset currently has 14 Resources.

- **Resource 1: IDI.CS3-SI_R1.docx**

- **Resource 2: IDI.CS3-SI_R2.docx**

- **Resource 3: IDI.CS3-SI_R3.docx**

- **Resource 4: IDI.CS3-SI_R4.docx**

- **Resource 5: IDI.CS3-SI_R5.docx**

- **Resource 6: IDI.CS3-SI_R6.docx**

- **Resource 7: IDI.CS3-SI_R7.docx**

- **Resource 8: IDI.CS3-SI_R8.docx**

- **Resource 9: IDI.CS3-SI_R9.docx**

- **Resource 10: IDI.CS3-SI_R10.docx**

- **Resource 11: IDI.CS3-SI_R11.docx**

- **Resource 12: IDI.CS3-SI_R12.docx**

- **Resource 13: IDI.CS3-SI_R13.docx**

- **Resource 14: IDI.CS3-SI_R14.docx**

4 CHORIZO DATA LAYER 3: FOOD LOSS AND WASTE INSIGHTER

New insights generated from data and food loss and waste (FLW) analytics, on the levers to change social norms. This is a service provision layer to the relevant corporate actors pursuing FLW prevention activities.

This data layer currently has 2 datasets.

4.1 DATASET 1: CHORIZO NEWSLETTERS

This is a collection of all newsletters produced and publish by the CHORIZO consortium partners to inform the general public of the progress made in the project.

This dataset currently has 5 Resources.

- **Resource 1: newsletter1.pdf**

CHORIZO project has started !

- **Resource 2: Newsletter2.pdf**

Food waste and social norms: Interrelation explored in six different case studies

- **Resource 3: Newsletter3.pdf**

CHORIZO'S INNOVATIVE MODELLING APPROACH: THE COMPLEXITY OF BEHAVIOURS TO UNDERSTAND THE ROLE OF MOTIVATION, ABILITY, AND OPPORTUNITY IN FOOD WASTE RELATED BEHAVIOURS

- **Resource 4: Newsletter4.pdf**

Social norms influencing food waste related behaviours

- **Resource 5: Newsletter5.pdf**

This newsletter aims to assist stakeholders involved in implementing and researching food waste prevention and reduction interventions by providing guidance on selecting effective actions to achieve their food loss and waste (FLW) goals.

4.2 DATASET 2: Project Public Deliverables or reports

This data folder contains public deliverables or reports generated in the CHORIZO project from various work packages. They touch on various aspects related to the impact of social norms on food waste generation.

This dataset currently has 12 Resources.

- **Resource 1: CHORIZO_D1.2_Evidence-based-Analysis-of-FLW-Prevention-Actions_v1.4_FINAL.pdf**

This report provides a comprehensive overview of past and current FLW prevention actions identified across EU member states within task 1.2 of the CHORIZO project. The analysis explores various facets of the actions, including food waste prevention levels, implementation challenges, the broader social, economic, and environmental impacts, gender considerations, and to what extent the interventions illuminate social norms at play that affect behaviour towards food waste.

- **Resource 2: D1.3-FLW-prevention-reduction-index.pdf**

In an effort to provide comparative insight into the applicability of particular actions in specific cases of food waste (FW) generation, this deliverable (D1.3) has introduced two composite indices to be utilized as a metric to help stakeholders rank the different actions identified in D1.2. The two indices allowed for adherence to the requirements of the Chorizo Grant Agreement, but also provided an opportunity to build upon the work of the European Commission (food waste hierarchy pyramid), and highlight actions which demonstrated drivers of behaviour towards food waste.

- **Resource 3: CHORIZO-D1.4-Sector-Specific-Guidance.pdf**

This report builds on actions (interventions) identified and analysed to develop sector-specific guidance on actions that address food loss and food waste (FLW). The focus is on key success factors, impacts of the actions, challenges and implementation barriers, and ultimately identifying what is needed to facilitate interventions with a high-potential to address food waste.

- **Resource 4: D2.1_Case-Studies-Strategic-Plan.pdf**

This report outlines the formal strategic plan for each case study in the CHORIZO project. The strategic plan was aimed at refining each case studies' objectives, give a detail description of scheduled actions and data collection techniques, possible risks in the implementation of these actions, mitigation measures as well as periodic assessment procedures to determine the extent to which each case study advanced toward its objectives.

- **Resource 5: D2.2-FLW-insighter-data-hub.pdf**

This report elaborates on the CHORIZO FLW Data hub and "Insighter" development approach undertaken by project partners to arrive at the final design. It highlights the functional data layers making up the datahub and "Insighter", with directives on how to navigate the site to perform basic operations.

- **Resource 6: CHORIZO_D2.3_Empirical-evidence-sensemaking_final_v1.0_compressed-1.pdf**

The report presents an elaborate analysis of data collected from all case studies. It explores correlations, compares findings with previous analysis, highlights and identifies influences of Gender and intersectional differences of social norms on food waste generation and provides Insights for communication and education. : This serves as a crucial step in synthesizing case study findings and extracting actionable insights.

- **Resource 7: CHORIZO_D3.1_Conceptual-framework-for-behavioural-change-understanding.pdf**

This report outlines the conceptual framework for behavioural change understanding in the CHORIZO project. This work aims at setting out the theoretical framework which represents the starting point for the modelling activities, which will focus on the effects of interactions among food supply chain actors and the influence of social norms towards zero food losses and wastes (FLW). The theoretical framework will be here presented by first outlining the complexity underpinning social systems – and food systems more specifically – and the methods available to investigate them Then, the MOA and HUMAT behavioural frameworks will be presented: the former considers food waste as an unintended consequence of iterative decisions, adaptation and behaviours driven both by internal and external factors, the latter explores agents' behavioural decision mechanisms. The following section will provide an operational definition of social norms. Finally, the last section will supply a set of challenges and attention points to be considered when incorporating MOA and HUMAT into agent-based models and pave the way forward for the understanding of how social norms influence the generation or reduction of food waste.

- **Resource 8: CHORIZO-D3.2-0FLW-Interventions_final_v2.3.pdf**

This work emphasizes the importance of targeted and customised interventions that include considerations on specific context-related social norms. A pivotal aspect in behavioural change interventions involves recognizing diverse social roles and settings. Here, we define the concept of social roles as expected behavioural patterns in specific contexts, exploring potential conflicts within or between these roles. In the context of the six Case Studies of the CHORIZO project, this work explores the relevant social norms within and beyond each setting, their targets groups and networks of

influence. Furthermore, this report introduces potential 'what-if' scenarios emerging in the Case Studies, highlighting possible awareness-raising interventions, economic incentives and 'nudging' strategies related to social norms for 0FLW interventions. The importance of the co-design process is highlighted for the definition of possible settings (e.g., in-home settings, out-of-home settings and alternative settings) for the modelling of interventions, basing this segmentation on the similarities with the case studies in which to model interventions.

- **Resource 9: CHORIZO-D3.3-Case-independent-changing-social-norms-predictive-model_final_v1.0.pdf**

Deliverable 3.3 'Case-independent changing social norms predictive model' comprises of two social norms models that operate in two different contexts. The establishment diner model is an agent-based simulation examining food consumption in a social context. This model is pertinent to both descriptive and injunctive social norms, and social roles such as client, guest, in-group members (e.g., businessperson). Additionally, it also considers gender roles. The model combines insights from Case Studies 2: Hospitality food waste, 3: Food services food waste, and 4: School food waste and relation with obesity and malnutrition. The second model, the home cook, is a microsimulation that explores food consumption at home. As the behaviour is private, this model is particularly relevant in the context of injunctive social norms, gender roles and social roles of a parent, housewife/househusband and host. The model integrates insights from Case Studies 1: Household food waste in and off crisis periods and 6: Food waste in relation to date marking and sustainable and smart food packaging. This document accompanies the developed software, providing a technical description of the models to allow for a comprehensive understanding of the assumptions they are based on and how they work, especially among non-expert programmers.

- **Resource 10: CHORIZO-D6.5-Practice-Abstracts-batch-1_final_v1.0.pdf**

This first batch of "practice abstract" is a short summary which describes a main information/recommendation/practice that can be used by the end-users in their daily practice.

- **Resource 11: CHORIZO-D7.2-Data-Management-Plan_final_v1.0.pdf**

Data Management Plan 1 of the CHORIZO Project

- **Resource 12: CHORIZO-D7.3-Data-Management-Plan-update1_final_v1.0.pdf**

Data Management Plan 2

5   APPENDIX

5.1   Appendix I: CHORIZO CKAN Data API DOCUMENTATION

Chorizo CKAN Data API documentation

📄 Overview

Welcome to the Chorizo Project Data Application Programming Interface (API) documentation. This documentation provides programmatic details on how to access the wealth of datasets on social norms and their impact on food waste generation hosted on our CKAN instance, facilitating easy integration with your applications, research, or data analysis tools. The API is designed to enable users to search for datasets, retrieve metadata, and download datasets directly through a series of RESTful endpoints.

Click here or visit the link https://data.chorizoproject.eu/about to learn about the chorizo project.

Base URL

All API requests should be made to the following base URL:

https://data.chorizoproject.eu/.

This is the base URL for the CKAN instance of the Chorizo FLW Datahub and Insighter. Ensure that your requests are directed to this endpoint to access the latest and most accurate data available.

Getting started

Our API is organized around REST (Representational State Transfer) principles, making it easy to use with a wide variety of programming languages and tools. Endpoints are structured to allow access to information about datasets, including searching for datasets, accessing dataset metadata, and downloading data files.

For more detailed information on specific endpoints, including request parameters and example responses, please refer to the subsequent sections of this documentation.

To start using the Chorizo FLW Datahub and Insighter data api, you need to -

- Use a valid API token to send requests to the API endpoints for API functions that require authorization. Some functions do not require authorization and will therefore not require an API token. Please consult subsequent sections of this documentation to see the API functions that require authorization.
- The API supports both HTTPS for secure communications and HTTP for unsecured requests, delivering identical results through either protocol.
- The API returns request responses in JSON format. When an API request returns an error, it is sent in the JSON response as an error key detailing the specific issue encountered.

Authentication

Some API functions require authorization. The API uses the same authorization functions and configuration as the web interface(https://data.chorizoproject.eu/), so if a user is authorized to do something in the web interface they'll be authorized to do it via the API as well.

When calling an API function that requires authorization, you must authenticate yourself by providing an API token with your HTTP request. API tokens ensure secure access to the API by requiring each request to be accompanied by

a unique token associated with your account.

Obtaining Your API Token

To access and interact with the API fully, you'll need to generate an API token. Follow these steps to create an API token:

1. **Register and Log in to the User Interface**: Access your user profile by logging into the CKAN interface at https://data.chorizoproject.eu/
2. **Generate a Token**: Navigate to **User Profile > API tokens.** Here, you will see the details of all previousely created tokens (if any). Click the "Create API Token" button to generate a new token.
3. **Customize Token Settings** (Optional): If needed, you can set an expiration date for your token using the `expire_api_token` plugin, enhancing the security of your API interactions.

Using Your API Token

Once you have your API token, you must include it in each API request that requires authentication. You can provide your token in the HTTP request headers as shown below:
Authorization:

Example Requests With Authentication

Here are examples of how to include your API token in requests using `curl` and `Python`:

- **Using Curl**

bash

- **Using Python**

```csharp
import urllib.request as urllib2
import json
request = urllib2.Request('https://data.chorizoproject.eu/api/3/action/organization_show?id
```

Make sure to use the actual token you generated in place of `'{Your-API-Token}'`.

Authentication error response

If an API key is missing, malformed, or invalid, you will receive an HTTP 403 Forbidden response code. Bellow is an example response for a request made with a wrong or no Api token.

```json
{
    "help": "https://data.chorizoproject.eu/api/3/action/help_show?name=datastore_create",
    "error": {
        "__type": "Authorization Error",
        "message": "Access denied: User  not authorised to edit resource 87d564db-988d-4572
```

Responsible Use

While the Chorizo Project Data API does not enforce specific rate limits, we encourage all users to make requests responsibly. Excessive or unnecessary requests can impact the availability and performance of our services for others. Please consider the potential impact of your requests on our system and other users, and avoid overwhelming the API with rapid, repeated calls.

Data API Requests

This section of the documentation provides comprehensive details on the important endpoints available in the Chorizo Project CKAN Data API. Each endpoint is a specific point of interaction where various data operations can be performed, such as retrieving, creating, or updating data stored within the CKAN instance.

The Chorizo CKAN data API basically contains a list of Data layers(Organisations), with each Data layer having a list of Datasets and each Dataset having a list or Resources. The endpoints explained in this documentation facilitate a broad range of tasks, from searching and accessing data to manipulating data collections.

The documentation is structured to give developers a clear path to integrating with the API, providing necessary request formats, expected responses, error codes, and example calls for clarity and ease of implementation. Here you will find descriptions of:

- **Data Retrieval**: Endpoints for querying and obtaining data, including search functionalities, filtering options, and data download capabilities.
- **Data Management**: Endpoints that allow for the creation, update, and deletion of data layers, datasets and resources.

The goal of this section is to empower users with the knowledge to effectively utilize the API, ensuring they can leverage the full potential of the Chorizo Project's data offerings. Each endpoint is documented with the intent to make the API accessible to developers of varying skill levels, encouraging innovation and the creation of value-added applications surrounded around the Chorizo CKAN data API.

Note:

- Some resources in the data api are private(protected), meaning even the open Get-Requests for such Resources will require authorization(API-key). In such situations, include your Api token in the Request-headers as; `Authorization: {your-Api-Token}`
- Requests to access private datasets or manage resources (such as the Create, Update and Delete requests) require the Administrator-role. To get access to private datasets or acquire the Admin-role, place your request by filling in the form https://forms.office.com/e/wEdcK1jPGZ.

DataLayers

In this section of the documentation, we will outline and explain the useful requests that can be done on an Organisation (DataLayer).

GET   Get All DataLayers

Retrieve List of Organizations (`organization_list`)

Endpoint Description:

The `organization_list` endpoint (`GET https://data.chorizoproject.eu/api/3/action/organization_list`) offers a straightforward method to obtain a list of all organizations registered within the CKAN instance. This endpoint is essential for users and developers seeking an overview of the organizational entities managing datasets on the platform. Being publicly accessible, it requires no authentication or authorization, making it a valuable resource for open data discovery and navigation.

Key Features:

- **Public Access**: This endpoint can be accessed without an API key, facilitating easy exploration of the CKAN instance's organizational structure.
- **Comprehensive Overview**: Provides a list of organization names, enabling quick identification and reference without needing detailed information.

Usage:

Simply send a `GET` request to the endpoint to retrieve a list of organizations. No query parameters or request body is required for basic usage.

Example Request:

- **Method**: GET
- **URL**: `https://data.chorizoproject.eu/api/3/action/organization_list`

Response:

```python
{
    "help": "https://data.chorizoproject.eu/api/3/action/help_show?name=organization_list",
    "success": true,
    "result": [
        "DataLayer1",
        "DataLayer2",
        "DataLayer3"
    ]
}
```

The response is a JSON object containing a list of the names of all organizations within the CKAN instance. Each name in the list represents an organization that can be further explored using the `organization_show` endpoint for detailed information.

Practical Applications:

- **Data Exploration**: Enables quick identification of organizations to explore the datasets they manage.
- **Application Integration**: Facilitates the integration of organizational structures into web applications, data catalogues, and analysis tools by providing a dynamic list of organizational entities.

This endpoint serves as a foundational tool for accessing and understanding the breadth of data and organizational structures hosted on CKAN platforms, promoting transparency and accessibility in open data initiatives.

GET   Get All datalayers with details

https://data.chorizoproject.eu/api/3/action/organization_list?all_fields=true

Endpoint Description: Retrieve List of All Organizations with Details

The `organization_list` endpoint (GET `https://data.chorizoproject.eu/api/3/action/organization_list?all_fields=true`) serves to provide a comprehensive list of all organizations registered on the CKAN instance, along with detailed information about each. By appending the `all_fields=true` query parameter, the request instructs the endpoint to return not just the names or IDs of the organizations but also additional metadata such as their descriptions, created and modified dates, and state among other details.

Key Features:

- **Comprehensive Organization Details**: Beyond just listing organization names, this endpoint delivers a rich set of metadata for each organization, enabling deeper insights into their profiles.
- **Simplified Access**: Designed for easy access, it requires no authentication, making it straightforward to retrieve organizational data for public CKAN instances.

This endpoint is particularly useful for users and developers looking to obtain an overview of the organizations within the Chorizo CKAN platform, facilitating data exploration, analysis, and integration tasks by providing a broad context of the data's organizational landscape.

PARAMS

all_fields   true

GET   Get Details of a specific DataLayer

https://data.chorizoproject.eu/api/3/action/organization_show?id=95bb65ba-32b8-498a-ab3d-d70bd911bf3
0

Endpoint Description:

The `organization_show` endpoint (GET `https://data.chorizoproject.eu/api/3/action/organization_show`) retrieves comprehensive details about a specific organization within the CKAN platform. This endpoint is invaluable for users seeking to understand the structure, datasets, and metadata associated with an organization.

Parameters:

- **id** (required): The name or ID of the organization for which details are requested.

Usage:

To obtain detailed information about an organization, append the organization's name or ID to the query parameters.

Example Request in Postman:

- **Method**: GET
- **URL**: `https://data.chorizoproject.eu/api/3/action/organization_show?id=my-organization`

PARAMS

id	95bb65ba-32b8-498a-ab3d-d70bd911bf30

GET   Get specific DataLayer including its datasets

https://data.chorizoproject.eu/api/3/action/organization_show?id=95bb65ba-32b8-498a-ab3d-d70bd911bf3
0&include_datasets=true

Endpoint Description: Retrieve Detailed Organization Information Including Datasets

The `organization_show` endpoint (`GET`
`https://data.chorizoproject.eu/api/3/action/organization_show?id=95bb65ba-32b8-498a-ab3d-`
`d70bd911bf30&include_datasets=true`) is specifically designed to provide in-depth information about a single organization identified by its unique ID, along with a comprehensive list of datasets associated with it. The inclusion of the `include_datasets=true` query parameter ensures that the response not only encompasses detailed metadata about the organization itself, such as its name, description, state, and creation date, but also includes detailed information on all the datasets that fall under the organization's purview.

Key Features:

- **In-depth Organization Metadata**: Delivers a wealth of information about the organization, facilitating a thorough understanding of its scope, purpose, and structure.
- **Dataset Inclusion**: Expands the utility of the endpoint by including detailed listings of all datasets managed by the organization, making it an invaluable tool for data exploration and management within the specific organizational context.

This endpoint is crucial for users seeking detailed insights into specific organizations within the CKAN platform, as well as for those looking to explore or manage the datasets associated with these organizations. It provides a holistic view of the organization's contributions to the CKAN instance, supporting informed decision-making and strategic planning for data utilization and governance.

PARAMS

id	95bb65ba-32b8-498a-ab3d-d70bd911bf30
include_datasets	true

POST   Create DataLayer

https://data.chorizoproject.eu/api/3/action/organization_create

Endpoint Description:

The `organization_create` endpoint (`POST` `https://data.chorizoproject.eu/api/3/action/organization_create`) enables the creation of new organizations on the CKAN instance. It allows administrators to define the organizational structure, metadata, and related attributes essential for categorizing and managing datasets effectively.

Parameters:

- Requires a JSON payload in the request body with fields such as **name**, **title**, **description**, and other organizational attributes.

Authentication:

- An API key is required for authentication and must be included in the request headers.

Example Use:

To create a new organization with basic details:

```json
{
  "name": "<name-of-your-organisation>",
  "title": "<title-of-your-organisation>",
  "description": "<description-of-your-organisation>"
}
```

AUTHORIZATION API Key

Key	Authorization
Value	<value>

Body raw (json)

```json
{
  "name": "new-organization",
  "title": "New Organization",
  "description": "A description of the new organization"
}
```

POST   Update DataLayer 🔒

https://data.chorizoproject.eu/api/3/action/organization_update

Endpoint Description:

The `organization_update` endpoint (`POST` `https://data.chorizoproject.eu/api/3/action/organization_update`) facilitates the modification of existing organization details. This endpoint is crucial for keeping organizational information up to date, including changes in metadata, description, or title.

Parameters:

- **id** (required): The ID of the organization to update.
- Additional fields to be updated must be included in the JSON payload of the request body.

Authentication:

- Requires an API key for authorization, included in the request header.

Example Use:

To update an organization's description:

```json
{
  "id": "existing-organization-id",
  "description": "Updated description of the organization"
}
```

AUTHORIZATION API Key

Key	Authorization
Value	<value>

Body raw (json)

```json
{
  "id": "new-organization",
  "description": "Updated description of the organization"
}
```

POST   Delete DataLayer 🔒

https://data.chorizoproject.eu/api/3/action/organization_delete

Endpoint Description:

The `organization_delete` endpoint (`POST` `https://data.chorizoproject.eu/api/3/action/organization_delete`) allows for the deletion of organizations from the CKAN instance. It is a powerful tool that must be used with caution, as it directly impacts the associated datasets and resources.

Parameters:

- **id** (required): The name or ID of the organization to be deleted.

Authentication:

- An API key must be included in the request header for authentication.

Caution:

- Consider the implications of deleting an organization, as this action may affect all associated datasets and cannot be easily reversed.

Example Use:

To delete an organization:

```json
{
  "id": "organization-to-delete"
}
```

AUTHORIZATION API Key

Key	Authorization
Value	<value>

Body raw (json)

```json
{
  "id": "new-organization"
}
```

Datasets

In this section of the documentation, we will outline and explain the useful requests that can be done on a Dataset.

GET Get All Datasets

https://data.chorizoproject.eu/api/3/action/package_list

Endpoint Description: Retrieve All Datasets (Package List)

This endpoint (`GET https://data.chorizoproject.eu/api/3/action/package_list`) serves as a gateway to access a comprehensive list of all datasets (packages) stored within the CKAN datastore. It is designed to facilitate data discovery and exploration by providing users with the names of all available datasets in a single, easily accessible list. This endpoint is particularly valuable for data analysts, developers, and the general public interested in leveraging open data for various applications.

Key Features:

- **Broad Accessibility**: This endpoint does not require an API Token for access, making it widely accessible for public use.
- **Comprehensive Data Overview**: Offers a complete list of dataset names, enabling users to identify and select datasets of interest without prior knowledge of specific identifiers.

Parameters:

- This endpoint does not require any parameters, making it straightforward to use for retrieving a list of all datasets.

Example Use:

To retrieve a list of all datasets:

- **URL**: `GET https://data.chorizoproject.eu/api/3/action/package_list`

Response:

The response is a JSON object that includes a success flag and an array of dataset names. Each item in the array is a string representing the name or identifier of a dataset available on the CKAN instance. For example:

```json
{
  "help": "https://data.chorizoproject.eu/api/3/action/help_show?name=package_list",
  "success": true,
  "result": [
    "dataset-name-1",
    "dataset-name-2",
    ...
  ]
}
```

Practical Applications:

- **Data Discovery**: Enables quick identification of available datasets for further exploration or analysis.
- **Application Integration**: Facilitates the integration of CKAN data into web applications, mobile apps, or analytical tools by providing a dynamic list of datasets.
- **Automated Processing**: Supports automated scripts and services designed to fetch and utilize data from a broad range of datasets.

Notes:

- Access to the list of datasets does not guarantee access to the contents of each dataset. Some datasets may have restrictions or require additional permissions for detailed access.
- For detailed information about a specific dataset, further requests to endpoints like `package_show` will be necessary, which may require authentication depending on the dataset's access controls.

This endpoint is a crucial tool for enhancing transparency and accessibility of data hosted on CKAN platforms, promoting open data initiatives, and enabling efficient data exploration and utilization.

GET   Get All Datasets in a specific DataLayer/Organisation

https://data.chorizoproject.eu/api/3/action/organization_show?id=95bb65ba-32b8-498a-ab3d-d70bd911bf30&include_datasets=true

Endpoint Description: Retrieve Organization Details Including Datasets

The `organization_show` endpoint (`GET https://data.chorizoproject.eu/api/3/action/organization_show?id=95bb65ba-32b8-498a-ab3d-d70bd911bf30&include_datasets=true`) is designed to fetch detailed information about a specific organization identified by its unique ID. When the `include_datasets=true` parameter is added, the endpoint not only returns information about the organization itself but also includes a comprehensive list of all datasets associated with that organization. This feature is invaluable for users seeking to explore or manage the datasets within a particular organizational context.

Key Features:

- **Detailed Organization Information**: Provides metadata about the organization, such as its name, description, and state.
- **Dataset Inclusion**: Optionally includes a list of all datasets associated with the organization, enhancing the endpoint's utility for data exploration and management.

This endpoint is essential for gaining insights into organizational structures within the CKAN instance and for facilitating efficient access to the datasets they manage.

PARAMS

id	95bb65ba-32b8-498a-ab3d-d70bd911bf30
include_datasets	true

GET   Get Info about Specific Datasets

https://data.chorizoproject.eu/api/3/action/package_show?id=master9a

Endpoint Description: Retrieve Dataset Details

The `package_show` endpoint (`GET https://data.chorizoproject.eu/api/3/action/package_show`) allows users to obtain comprehensive details about a specific dataset hosted on the CKAN instance. It is a key resource for accessing metadata, resources associated with the dataset, and other pertinent information without the need for authentication. This endpoint enhances data transparency and accessibility, supporting a wide range of applications from data analysis to application development.

Key Features:

- **Public Access**: This endpoint can be accessed without an API key, facilitating easy access to dataset details for public datasets.
- **Detailed Information**: Provides extensive details about a dataset, including metadata like the dataset's title, description, tags, and the resources (data files, links, etc.) it contains.

Usage:

To use this endpoint, a `GET` request is sent with the dataset's ID or name as a query parameter. No authentication is required for public datasets.

Query Parameters:

- **id** or **name** (required): The unique identifier or name of the dataset for which details are requested. This parameter is added to the query string of the request URL.

Example Request:

- **Method**: GET
- **URL**: `https://data.chorizoproject.eu/api/3/action/package_show?id=example-dataset-id`
- **Params**:
    - Key: `id`
    - Value: `example-dataset-id`

Response:

The response is a JSON object containing detailed information about the dataset. It includes the dataset's metadata, a list of resources (files or links) associated with the dataset, and other relevant details.

Practical Applications:

- **Data Exploration**: Enables users to explore the contents and metadata of datasets before downloading or using them in applications.
- **Integration**: Facilitates the integration of dataset metadata into web applications, mobile apps, or data cataloging tools.

This endpoint is essential for users seeking to explore, utilize, or integrate CKAN-hosted datasets into their projects or research, providing a foundation for informed data utilization and application development.

PARAMS

id	master9a

POST   Create Dataset 🔒

https://data.chorizoproject.eu/api/3/action/package_create

Endpoint Description:

The `package_create` endpoint (`POST https://data.chorizoproject.eu/api/3/action/package_create`) is designed to facilitate the creation of new datasets within the CKAN platform. It requires the submission of dataset metadata, including essential fields like the dataset's name, title, and the owning organization. This endpoint is crucial for data publishers and administrators looking to expand the CKAN instance's data catalog.

Key Features:

- **Dataset Creation**: Enables the addition of new datasets to the CKAN instance.
- **Metadata Specification**: Allows for detailed metadata to be specified, ensuring datasets are well-documented and searchable.

Required Parameters:

- **name** (string, required): A unique name for the dataset.
- **title** (string, required): A human-readable title for the dataset.
- **owner_org** (string, required): The ID of the owning organization(Data Layer).

Authentication:

- Requires an API key included in the request header for authentication.

Example Use:

To create a new dataset named "my-dataset" under a specific organization:

```json
{
  "name": "my-dataset",
  "title": "My Dataset",
  "owner_org": "the-organization-id"
}
```

AUTHORIZATION API Key

Key	Authorization
Value	<value>

Body raw (json)

```json
{
  "name": "my-dataset",
  "title": "My Dataset title",
  "notes": "A detailed description of my dataset.",
  "owner_org": "95bb65ba-32b8-498a-ab3d-d70bd911bf30"
}
```

POST   Update Dataset 🔒

https://data.chorizoproject.eu/api/3/action/package_update

Endpoint Description:

The `package_update` endpoint (`POST https://data.chorizoproject.eu/api/3/action/package_update`) provides the functionality to update existing datasets. This endpoint requires the dataset's ID or name and the fields you wish to update. Fields not included in the request will retain their current values, making selective updates straightforward.

Key Features:

- **Selective Updates**: Update specific fields of a dataset without altering other existing metadata.
- **Dataset Identification**: Datasets can be identified by either their ID or name for updates.

Required Parameters:

- **id** or **name** (string, required): The ID or name of the dataset to update.

Authentication:

- Requires an API key for authorization, included in the request header.

Example Use:

To update the description of a dataset named "my-dataset":

```json
{
  "id": "my-dataset",
  "notes": "An updated description of my dataset."
}
```

AUTHORIZATION API Key

Key	Authorization
Value	<value>

Body raw (json)

```json
{
  "id": "my-dataset",
  "notes": "An updated description of my dataset."
}
```

POST   Delete Dataset 🔒

https://data.chorizoproject.eu/api/3/action/package_delete

Endpoint Description:

The `package_delete` endpoint (`POST https://data.chorizoproject.eu/api/3/action/package_delete`) enables the deletion of datasets from the CKAN datastore. By providing the dataset's ID or name, users with the necessary permissions can remove datasets that are no longer needed or relevant. This action is critical for maintaining the cleanliness and relevance of the data catalog.

Key Features:

- **Dataset Removal**: Allows for the removal of datasets from the CKAN instance.
- **Simplified Process**: Requires only the dataset's ID or name for deletion.

Required Parameters:

- **id** or **name** (string, required): The unique identifier or name of the dataset to be deleted.

Authentication:

- An API key must be included in the request header for authentication.

Example Use:

To delete a dataset identified by "my-dataset":

```json
{
  "id": "my-dataset"
}
```

Caution:

- Use this endpoint with care, as deleting datasets is irreversible and may impact users relying on the data.

AUTHORIZATION API Key

Key	Authorization
Value	<value>

Body raw (json)

```json
{
  "id": "my-dataset"
}
```

GET   Get Private Datasets 🔒

https://data.chorizoproject.eu/api/3/action/package_search?fq=organization:case_studies_data_sets&rows=100000&start=0&include_private=True

Endpoint Description: Search for Datasets in an Organization (Including Private Datasets)

This endpoint retrieves a list of datasets associated with a specified organization, including both public and private datasets. To access private datasets, the request must be authenticated with an API key belonging to a user who is a member of the specified organization. The request supports pagination through the `start` parameter and limits the number of datasets returned in a single response with the `rows` parameter.

HTTP Method:

GET

URL: https://data.chorizoproject.eu/api/3/action/package_search

Query Parameters:

- `fq` (Filter Query): Specifies the organization for which datasets are to be retrieved. Format: `organization:`.
- `rows` : Determines the maximum number of datasets to return. Setting this to a high number attempts to retrieve all datasets in a single request.
- `start` : Specifies the starting point for dataset retrieval, useful for pagination.
- `include_private` : When set to `True`, includes private datasets in the search results. Requires authentication.

Headers:

- `Authorization` : Required for accessing private datasets. This should be set to the API key of an

- `Authorization`: Required for accessing private datasets. This should be set to the API key of an authenticated user who is a member of the specified organization.

Authentication:

This request requires an API key for authentication, provided in the request headers. The key should belong to a user who has membership permissions for the specified organization, enabling access to both public and private datasets.

Note:

The `rows` parameter is set to a high value (`100000`) in an attempt to retrieve all datasets in a single request. However, be mindful of the server's maximum limit for returned items and adjust accordingly based on performance and the server's configuration.

AUTHORIZATION API Key

Key	Authorization
Value	\<value\>

PARAMS

fq	organization:case_studies_data_sets
rows	100000
start	0
include_private	True

Resources

In this section of the documentation, we will outline and explain the useful requests that can be done on a Dataset Resource.

Datastore Search Requests

Here, we describe a collection of HTTP GET requests designed to interact with the datastore of the Chorizo Project's CKAN instance. Each request queries a specific resource within the datastore, identified by a unique `resource_id`. These endpoints are essential for retrieving data from individual datasets stored within the CKAN platform.

The base URL for all requests in this folder is structured as follows:
`https://data.chorizoproject.eu/api/3/action/datastore_search?resource_id=1234`

Where `1234` should be replaced with the actual UUID of the datastore resource you intend to query.

- **Resource ID**: A unique identifier for the dataset you want to access. This parameter is crucial and varies with each request.
- **Limit (Optional)**: Some requests may include a `limit` parameter to control the number of records returned by the query, providing a means to paginate through large datasets.

- **Query (Optional)**: Other requests might add a `q` parameter to filter the results by a search term, allowing for more refined data retrieval.

These endpoints are tailored for different use cases, such as obtaining a full list of records, previewing a subset of data, or performing a targeted search within a dataset. They offer a flexible way to access and analyze the data provided by the Chorizo Project.

GET   Get a Resource

https://data.chorizoproject.eu/api/3/action/datastore?resource_id=87d564db-988d-4572-adfb-4de2dfbae4cc

Endpoint Description

This endpoint(HTTP GET Request) facilitates a comprehensive search within a specific datastore resource identified by the `resource_id`. It allows for the retrieval of all records associated with the provided dataset identifier without applying any filter for search terms or limiting the number of records.

- **Resource ID**: This is a mandatory parameter that should be the UUID of the datastore resource to be queried. It uniquely identifies which dataset to retrieve from the CKAN datastore.

Example Use: To fetch all records from a particular dataset, you would use the request in the following format: `?resource_id=your-dataset-id`.

Response: The API will return a JSON object containing all records from the specified datastore resource. If the dataset is large, the response may be paginated, and additional parameters such as `offset` and `limit` can be used to navigate through the records.

This endpoint is useful when you need to access the entire dataset or when you want to perform local filtering and processing on the data. It serves as a foundational query operation for data retrieval in the Chorizo CKAN datastore API.

PARAMS

resource_id	87d564db-988d-4572-adfb-4de2dfbae4cc

GET   Get first 5 records of a datastore resource

https://data.chorizoproject.eu/api/3/action/datastore_sarch?resource_id=87d564db-988d-4572-adfb-4de2dfbae4cc&limit=5

Endpoint Description

This endpoint(HTTP GET request) performs a search query on a specific datastore resource. By providing a `resource_id`, users can retrieve data from the associated dataset.

- **Resource ID**: This parameter is mandatory and should contain the UUID of the datastore resource you wish to query.

- **Limit**: This optional parameter specifies the maximum number of records to return. If not provided, a default value will be used.

Example Use: To retrieve the first 5 records from a dataset, use `?resource_id=your-dataset-id&limit=5`.

Response: The response will be a JSON object containing an array of records from the specified resource, up to the limit specified.

Use this endpoint to preview data, implement pagination, or retrieve specific data for analysis.

One example response has been added here(Successful response). The other possible example responses can be seen attached to other requests(They were not repeated here since they are similar for all requests). These include the Resource not found response, the Missing value response and the bad-request response.

PARAMS

resource_id	87d564db-988d-4572-adfb-4de2dfbae4cc
limit	5

GET   Get records of a datastore resource with name='jones'

https://data.chorizoproject.eu/api/3/action/datastore_search?resource_id=87d564db-988d-4572-adfb-4de2
dfbae4cc&q=jones

This endpoint(HTTP GET request) conducts a search within a specific datastore resource for records that match a given query term. By supplying both a `resource_id` and a query parameter `q`, it filters the dataset to only return records that contain the search term.

- **Resource ID**: A mandatory parameter that must be the UUID of the datastore resource being queried.
- **q**: An optional search parameter for querying the data. It will filter the results to include only those records that have a field with the specified term.

Example Use: To search for records that include the term "jones" within a dataset, the request would be structured as `?resource_id=your-dataset-id&q=jones`.

Response: The response is a JSON object with an array of records that match the search criteria within the specified resource.

This endpoint is especially useful for performing targeted searches within a dataset. It is therefore useful for filtering purposes.

One example response has been added here(Successful response). The other possible example responses can be seen attached to other requests(They were not repeated here since they are similar for all requests). These include the Resource not found response, the Missing value response and the bad-request response.

PARAMS

resource_id	87d564db-988d-4572-adfb-4de2dfbae4cc

POST   Datastore Create Request   🔒

https://data.chorizoproject.eu/api/3/action/datastore_create

Endpoint Description

This endpoint (HTTP POST Request) is designed for creating a new datastore resource within a specified dataset in the CKAN datastore, or for inserting records into an existing datastore resource. Utilizing this endpoint, users can define the structure of the data (fields) and populate it with initial records.

Parameters:

- **resource_id** (optional): The ID of an existing datastore resource to insert records into. If omitted, a new datastore resource is created.
- **package_id** (required for new resources): The ID of the dataset under which the new datastore resource will be created. This parameter is part of the `resource` object.
- **fields** (required): A list of field definitions, where each field has an `id` and a `type`. This defines the schema of the datastore table.
- **records** (optional): A list of records to be inserted into the datastore resource. Each record should match the defined schema in fields.

Authentication:

This request requires an API token for authentication, which must be included in the request header as Authorization:

Example Use:

To create a new datastore resource with two fields (`a` and `b`) and insert two records, or to add records to an existing resource, the request payload would be:

```json
{
  "resource": {
    "package_id": "your-package-id"
  },
  "fields": [
    {"id": "a", "type": "int"},
    {"id": "b", "type": "text"}
  ],
  "records": [
    {"a": 1, "b": "xyz"},
    {"a": 2, "b": "zzz"}
```

Replace `"your-package-id"` with the actual ID of the dataset you are adding the resource to. If inserting into an existing resource, include `"resource_id": "your-resource-id"` instead of the `resource` object.

Response:

The response will be a JSON object containing details of the created or updated datastore resource, excluding the

The response will be a JSON object containing details of the created or updated datastore resource, excluding the `records` passed in the request. For a new resource, the response includes its `resource_id`.

This endpoint is crucial for dynamically managing the structure and content of datasets within the CKAN datastore, enabling both the initialization of new data resources and the augmentation of existing ones. It supports a wide range of data management activities, from defining data schemas to populating datasets with initial or additional records.

AUTHORIZATION API Key

Key	Authorization
Value	<value>

HEADERS

Content-Type	application/json

Body raw

```
{
  "resource": {
    "package_id": "master9a"
  },
  "fields": [
    {"id": "a", "type": "int"},
    {"id": "b", "type": "text"}
  ],
  "records": [
    {"a": 1, "b": "pqr"},
    {"a": 2, "b": "rrrr"}
  ],
  "primary_key": ["a"]
}
```

POST   Datastore Update/Insert Request

https://data.chorizoproject.eu/api/3/action/datastore_upsert

Endpoint Description

This endpoint (`POST https://data.chorizoproject.eu/api/3/action/datastore_upsert`) provides a powerful mechanism for updating or inserting records into an existing DataStore resource within the CKAN datastore. It supports three operational methods: *upsert*, *insert*, and *update*, catering to various data manipulation needs based on the presence of unique keys or identifiers.

Key Features:

- **Upsert**: Merges the capabilities of update and insert. It updates records that match a specified unique key or

_id field. If no matching record exists, it inserts a new record.

- **Insert**: Adds new records without checking for existing duplicates. This operation is faster than upsert but requires that inserted records do not match any existing records.
- **Update**: Modifies existing records identified by a unique key or `_id` field. This operation will fail if the specified key does not exist in the datastore.

Parameters:

- **resource_id** (string, required): Specifies the ID of the DataStore resource under which data will be stored.
- **force** (bool, optional, default: False): When set to True, allows the modification of read-only resources.
- **records** (list of dictionaries, optional): Contains the data records for insertion or updating.
- **method** (string, optional, default: 'upsert'): Determines the operation mode (`upsert`, `insert`, or `update`).
- **calculate_record_count** (bool, optional, default: False): Updates the stored record count to optimize datastore searches. Recommended to be set to True only on the final request in a series.

Authentication:

This request requires an API Token for authentication, which must be included in the request header as `Authorization: {YOUR-API-KEY}`.

Usage:

To use this endpoint, a JSON payload containing the parameters `resource_id`, `records`, and any optional parameters must be sent in the request body. The `force`, `method`, `calculate_record_count`, and `dry_run` parameters can be adjusted based on specific requirements.

Example Payload:

```json
{
  "resource_id": "39473770-6264-4824-a6c1-7376404859c5",
  "records": [
    {"a": 1, "b": "new-value-for-xyz"},
    {"a": 3, "b": "new-record"}
  ],
  "method": "upsert"
}
```

This payload does two things:

- Updates the record where `a` is 1 with a new value for `b`.
- Inserts a new record with `a` as 3 and `b` as "new-record", assuming there is no existing record with `a` as 3.

Response:

A successful request returns a JSON object with the modified data object, excluding the actual inserted or updated records. This endpoint is essential for efficiently managing data within the CKAN datastore, enabling seamless data updates and additions.

This endpoint is particularly useful for dynamic data environments where records require frequent updates or for batch processing scenarios where new data needs to be added without disrupting existing records.

Important

Use caution when using this endpoint. The system will replace the existing resource with the values passed in the request body.

Body raw

```
{
  "resource_id": "b39a60a9-b7b3-433c-be92-81964cccb52f",
  "records": [
    {"a": 1, "b": "pqrrrrrrr"},
    {"a": 3, "b": "kkk"}
  ],
  "method": "upsert"
}
```

POST   Datastore Delete Request

http://data.chorizoproject.eu/api/3/action/datastore_delete

Endpoint Description: Delete Datastore Resource

This endpoint (`POST https://data.chorizoproject.eu/api/3/action/datastore_delete`) provides the functionality to delete a specific datastore resource or records within it from the CKAN datastore. It is designed for administrators and users with the necessary permissions to manage datastore resources, allowing for the clean-up of data or resources that are no longer needed.

Key Features:

- **Resource-Specific Deletion**: Targets a specific datastore resource identified by its unique `resource_id` .
- **Selective Record Deletion**: Optionally, specific records can be deleted from a resource, provided their identifiers are specified.

Parameters:

- **resource_id** (string, required): The unique identifier of the datastore resource you wish to delete. Specifying this

ID without additional parameters will result in the deletion of the entire resource.

- **filters** (JSON object, optional): A JSON object representing the criteria used to select specific records for deletion. Only records matching these criteria will be deleted.

Authentication:

This request requires an API Token for authentication, which must be included in the request header as `Authorization: {YOUR-API-KEY}`.

Example Use:

To delete an entire datastore resource:

```json
{
  "resource_id": "unique-resource-id"
}
```

To delete specific records within a datastore resource:

```json
{
  "resource_id": "unique-resource-id",
  "filters": {"column_name": "value_to_match"}
}
```

Response:

A successful request returns a confirmation of the deletion. If the entire resource was targeted, the response indicates the resource has been removed from the datastore. If specific records were targeted, the response confirms the deletion of those records.

Caution:

Use this endpoint with care, as deleting data is irreversible. Ensure that any deletions are intentional and that you have backups of any data you may need to recover.

This endpoint is crucial for maintaining the cleanliness and relevance of the data stored within CKAN's datastore, enabling efficient data management and resource utilization.

AUTHORIZATION API Key

Key   Authorization

Value   <value>

Body raw (json)

```json
{
  "resource_id": "unique-resource-id"
}
```

Conclusion

Congratulations on completing the Chorizo CKAN Data API documentation. This concise guide has equipped you with essential tools and knowledge to interact with the Chorizo CKAN instance effectively. Through detailed exploration of datasets, organizations, and resources, to managing these entities, the API facilitates robust data access and manipulation.

Key Points:

- **Efficient Data Management**: The API provides endpoints for comprehensive data operations, ensuring full utilization of the Chorizo CKAN data.
- **Open Data Accessibility**: Emphasizing open access, the API enhances data transparency, enabling users to explore and utilize available data.
- **Innovation and Development**: The API serves as a foundation for creating data-driven solutions, encouraging experimentation and innovation.

Moving Forward:

We encourage you to use this documentation as a resource for your data projects. Whether contributing data, developing applications, or analyzing datasets, the Chorizo CKAN Data API is your gateway to open data exploration and utilization.

Thank you for exploring the Chorizo CKAN Data API. Your engagement with open data contributes to a broader understanding and innovation in the community.

For further information about CKAN data applications, please visit the main CKAN Data API and DataStore documentation.

(https://docs.ckan.org/en/latest/maintaining/datastore.html)