



The Italian Food Waste policy: data and perspectives

Prof. Laura Rossi, Coordinator of the Observatory on Food Waste, Research Director, CREA Food and Nutrition

Context (policy framework; food waste diagnosis)

- **Waste Framework Directive** (Directive 2008/98/EC) as revised in 2018 requires Member States to integrate food waste prevention programmes in national waste prevention programmes.
- Italy adopted in 2016, the law n. 166 – so called “**legge Gadda**”. The law encourages food donation, through simplification, rationalization and harmonization of the legislative framework (procedural, fiscal and hygienic-sanitary) that regulates this sector.
- Italy's participation in the **EU Platform on Food Losses and Food Waste** from 2018.
- **The National Strategy on Circular Economy** – one of the Mission of the Recovery and Resilience National Plan – updated in 2022, includes “food waste” indicators.
- **The National Sustainable Development Strategy**, updated in 2022.
- **The National Waste Prevention Programme**, currently under review, identifies food waste as one of the main priority flows on which prevention measures are concentrated.
- By Decree of the Ministry for Environment and Energy Security 10th march 2020, the «**Minimum Environmental Criteria (MEC) on catering services and food supplies**» have been adopted, that are mandatory under the art. 34 of the D.Lgs n. 50/2016 (code of public contracts).
- **Minimum environmental criteria on all events.** With DM 19 ottobre 2022 n. 459, G.U. n. 282 del 2 dicembre 2022 have been established **MEC on EVENTS**, issued to implement mission 1, component 3 of the *National Recovery and Resilience Plan (NRRP)*.
- **Some National Waste Prevention Programme implementation measures: behaviour change from global to local restaurant and school.**



Law 19 agosto 2016, n. 166 (Legge Gadda) establishes a round table with:

- All the food supply chain;
- Charitable Organizations;
- Ministries, Regions and Municipalities.

The Table is coordinated by the Ministry of agriculture.



THE COMPOSITION OF THE TABLE

Primary sector



Confagricoltura
Confcooperative
Coldiretti
Confartigianato
CNA
Agrea

Industry



Federalimentare
Confesercenti
Confartigianato
CNA

Wholesale Distribution



Italmercati
Fedagro

Retail Distribution



Federdistribuzione
ANCC-Coop
ANCD-Conad
Confcommercio

Collective and private catering



Angem
Fipe

Charitable organizations



Banco alimentare
Caritas italiana
Croce Rossa Italiana
Sempre Insieme per la Pace
Comunità S. Egidio
Banco delle opere di carità
ANCI



THE TABLE WORKING GROUPS

WG1 - Consumer behavior and information also through labeling

Aim: evaluation of labeling information of household FW

WG2 - Measurements of losses at the level of primary production - products of plant and animal origin

Aim: Differentiation of FLs impact of different food sources

WG3 - Measurements of losses at the level of primary production - fisheries

Aim: Impact of fisheries and fishery products on FLs

WG4 - Local policies and regional best practices for the prevention of waste

Aim: Collection of local best practices

WG5 - Donations: measurements, policies and impact assessments

Aim: Impact of redistribution on FW indicators

Key actions undertaken

Observatory on food losses and waste, surplus, recovery and reuse

Directive Action 1: To Fill Information Gaps

- Collecting primary sector data and information through the Agencies for Agricultural Supply, at the national and regional levels, carrying out an exploratory survey on the primary sector companies.
- Collecting information at distribution and consumer level.
- Carrying out an exploratory survey on the food service sector.
- Carrying out qualitative and quantitative surveys with consumers.

Directive Action 2: To Improve Policy and Intervention Actions

Carrying out educational programs aimed at increasing the awareness of food chain operators and consumers of the importance of preventive actions to be established, alongside counteractions for food surplus redistribution and recovery. Two other actions aimed at reducing or preventing FLW during redistribution were identified: the optimization of the use of



The Italian Observatory on Food Surplus, Recovery, and Waste: The Development Process and Future Achievements

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Products: reports, website, social network, and scientific papers

(Available at: <https://www.crea.gov.it/web/alimenti-e-nutrizione/-/osservatorio-sugli-sprechi-alimentari>)

L'IMPATTO DELL'EMERGENZA COVID-19 SULLE ABITUDINI ALIMENTARI DEGLI ITALIANI NEL PERIODO DELLA QUARANTENA DI MARZO-APRILE 2020

RICOGNIZIONE DELLE MISURE E PROPOSTE DI

REPORT FINALE DELLA PRIMA

L'OSSERVATORIO SULLE ECCEDENZE, RECUPERI E SPRECHI ALIMENTARI

LE POTENZIALITÀ DEL PRIMARIO E DEL CONSUMATORE NELLA GESTIONE DELLE ECCEDENZE

SECONDA ANNUALITÀ

Open Access Article

Comprehensive Measurement of Italian Domestic Food Waste in a European Framework

by Maria Luisa Scialvea and Laura Rossi

CREA Council for Agricultural Research and Economics, Research Center Author to whom correspondence should be addressed.

Sustainability 2021, 13(3), 1492; <https://doi.org/10.3390/su13031492>

Received: 7 December 2020 / Revised: 14 January 2021 / Accepted: [date]

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Abstract

Food management is an inefficient activity, and households are the main supply chain. Ten years remain to halve household food waste as zero Development. Up to now, Italian investigations into household food waste measurement and sampling. The need to establish a monitoring system and Waste to apply a methodology that permits comparison with other representative sample of 1142 Italian households was carried out. The wasted 370 g of food during the last week, evidence in line with data found in Germany, Hungary, and Spain. Perishable products, such as drinks, were mainly wasted. The most frequently disposed foods were causes, household food waste was significantly associated with prevent segment household food waste based on possible drivers and barriers! supporting policy action, and educational intervention. View Full-Text Keywords: household food waste; food waste monitoring; consumption

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Editor by: [name]

Reviewed by: [name]

*Correspondence: [name]

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Article

Food Waste of Italian Families: Proportion in Quantity and Monetary Value of Food Purchases

Vittoria Aureli*, Maria Luisa Scialvea and Laura Rossi

CREA Council for Agricultural Research and Economics—Research Center for Food and Nutrition, Rome, Italy

Abstract: Having per capita 6 Goals. This study aims to reveal Italian families. In a represent and in charge of preparing the quantity and byology of FW, average of four weeks. Italian purchased), which corresponds Clustering the food groups a possible to show that prior ha the higher the quantity of was results of this study showed to this should be considered in s

Keywords: food waste; money

The Italian Observatory on Food Surplus, Recovery, and Waste Achievements

Federica Grant* and Laura Rossi*

Council for Agricultural Research and Economics—Research Center for Food and Nutrition, Rome, Italy

Food loss and waste (FLW) is an environmental, social, and economic problem. Countries all around the world are looking for efficient strategies to prevent and reduce FLW, as recommended by target 12.3 of the Sustainable Development Goals (SDGs) of the United Nations. The European Union (EU) is strongly committed to helping solve the FLW issue, setting up the Platform on Food Losses and Food Waste, and adopting the Farm to Fork Strategy. Italy has also adopted a consolidated approach toward this issue, in particular through the redistribution of food surplus to those in need, a policy that was instituted with the Gadda Law 186/2016. Importantly, this normative framework also provided for the establishment of the National Observatory on Food Surplus, Recovery, and Waste (Observatorio sulle Eccedenze, i Recuperi e gli Sprechi Alimentari (OERSA)). This article describes the creation and development of the OERSA, as the technical entity supporting national FLW policies. One of the first actions taken by the OERSA was that of mapping the FLW initiatives that were being implemented along the entire food supply chain in Italy. This gave the OERSA a solid foundation on which to begin working on two different fronts: (1) Collecting data regarding the primary production sector and at the consumer level and (2) Establishing educational programs and awareness campaigns. The data collected by the OERSA highlight that, although several actors of the Italian supply chain are already conscious of the causes of FLW, new strategies that focus on innovation and cooperation should be encouraged.

Keywords: food loss, food waste, food donation, legislative framework, measurements, Italy

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- 120 persone seguono questa Pagina
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servatory on food surplus, recycling and waste, a partnership between Ricerca and MIPAAFT

Joined April 2021

5 Followers

Following

Nutrition Knowledge as a Driver of Adherence to the Mediterranean Diet in Italy

Vittoria Aureli* and Laura Rossi

CREA Council for Agricultural Research and Economics Research Center for Food and Nutrition, Rome, Italy

Background: An optimal Nutrition knowledge (NK) among the population could result in greater Adherence to the Mediterranean Diet (AMD), a recognized dietary pattern capable of preventing chronic food-related diseases. This study aimed to evaluate the association between NK and AMD in Italy.

Methods: A national representative sample of 2,869 adults took part in an assessment that was carried out through a self-administered questionnaire including sections relating to NK and AMD. AMD was evaluated following the FREEMED PLUS methodology. Descriptive statistics were provided, and ordinal measures of NK score and AMD were calculated based on quartiles of the quantitative scores. A contingency analysis was performed to check associations between variables.

Results: In Italy, the average NK score was 50 ± 13.3, equivalent to 56.8% of correct answers. The average value of AMD was 6.8, corresponding to 40% of the maximum score with 31.4% of the population demonstrating low AMD, 31.3% in the lower-middle range, 24% in the medium-high range, and only 13.3% reporting a high AMD. A significant association between NK and AMD was found: respondents who reported the lowest AMD corresponded to those with the lowest NK (36.7%; p < 0.05) and similarly, those with the highest level of adherence to MD also achieved the highest NK scores (41.7%; p < 0.05).

Conclusion: This study showed that AMD in Italy is generally low, and the strong association between NK and AMD demonstrated that there is a clear connection between a healthy dietary pattern and the nutrition literacy of the population. Those with the highest AMD corresponded to the highest NK and, conversely, those with the lowest AMD displayed the lowest NK. The study also highlighted that socioeconomic aspects were strong determinants of both AMD and NK.

Keywords: adherence to Mediterranean diet, nutrition knowledge, socioeconomic characteristics, consumers,

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L'OSSERVATORIO NAZIONALE O-ERSA

L'Osservatorio nazionale O-ERSA, frutto della convenzione tra MIPAAFT e CREA, realizza studi scientifici, diffonde informazione e dati e promuove buone pratiche in relazione alla generazione di eccedenze alimentari e al loro recupero allo scopo di supportare il Tavolo Tecnico istituito dalla legge 166/2016 e il cittadino per stimolare innovazione nelle strategie e nelle politiche di prevenzione e contrasto nei confronti dello spreco alimentare in Italia.

LEGGI ALTRO

ATTUALITÀ

I NODI ATTUALI NELLA RICERCA SULLA MISURAZIONE DELLO SPRECO ALIMENTARE

L'analisi di 202 documenti scientifici selezionati dal 1930 al 2014 mette in evidenza una copertura geografica su 84 Paesi

Reporto finale della prima annualità

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AGENDA 2030

LA NOSTRA VISIONE

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<https://twitter.com/OERSA>

Key actions undertaken

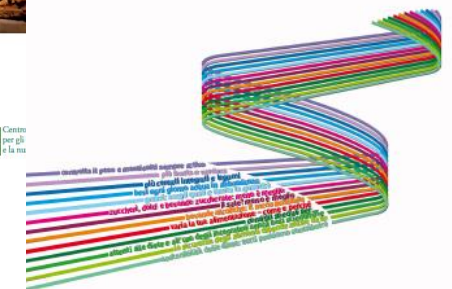
- Website: The OERSA official website.
- Weekly updates on social networks.
- The Second Edition of the National Nutrition Day carried out in 2019 was dedicated to food waste and was entitled “Nutrinformation: Waste on the Plate”.
- A chapter dedicated to FLW was included in the Italian Food based Dietary Guidelines that were updated in 2018 by the CREA Food and Nutrition Research Center.
- The “Decalogue against Food Waste,” a set of 10 recommendations that can be publicized in schools, events, and information sessions.
- A booklet with creative recipes showing how to use no longer fresh foods that have been in the fridge for a while as well as how to prepare meals with leftovers.



Spunti(ni)creativi
anti-spreco



Linee guida per una sana alimentazione





Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

Waste Management

journal homepage: www.elsevier.com/locate/wasman



Characterization of household food waste in Italy: Three year comparative assessment and evaluation of seasonality effects

Federica Grant^{*}, Jacopo Niccolò Di Veroli, Laura Rossi

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- 2021 (171) RESEARCH METHODS
- Use of questionnaires, qua Opportunity and Ability) as
- Comparisons with other EL
- Internal monitoring
- MOA and adherence to nut monitoring of HH preventiv

 | Frontiers in Nutrition

TYPE Original Research
PUBLISHED 14 December 2022
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SPECIALTY SECTION

Fu

Waste

itary level of household level:

to Mediterranean data and ns)

Sustainable choices: The relationship between adherence to the dietary guidelines and food waste behaviors in Italian families

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Main outcomes:

- Average HH food waste was **370 g/family/week in 2018 and 480 g/family/week in 2021**. Quantity of food wasted off in 2018 were in line with Netherlands (365 g/week), progressively different from Germany (425 g/week), Hungary (464 g/week), and Spain (534 g/week).
- **Fresh and perishable foods** such as fruit, vegetables, bread, milk, and yogurt, were the most wasted products.
- Foods were most commonly thrown away as **unopened packages**.
- The assessment of consumer behaviors related to preventing or reducing HFW showed that difficulties in planning and organizing the meals due to unforeseen events were frequently reported.
- The **leftovers were largely reused**, and the waste of cooked foods was an uncommon practice.
- It was observed a **strong correlation** among the adherence to nutritional recommendations and the attitude at preventing waste at home, indicating the importance of setting up actions against food waste in the framework of nutritional educations activities.

Next step of monitoring process:

Italian Household Food Waste Surveillance: data collection, methodologies, and policy recommendations

- Data collection with different methodologies (Questionnaire and Diaries).
- The data collected will allow the development of indicators to monitor the progress of the implementation of preventive measures and the development of correlation indices that would optimize the FW surveillance system.
- The outcomes of WASTE-FITS will be a user-friendly data collection template that could be used for future data collection and the provision of informative, usable and searchable datasets.
- Based on the WASTE-FITS results, actionable recommendations will be developed to propose a system where indirect measurement methodology could be corrected to provide, to some extent, comparable results with direct measurements optimizing resource allocation.



WASTE-FITS



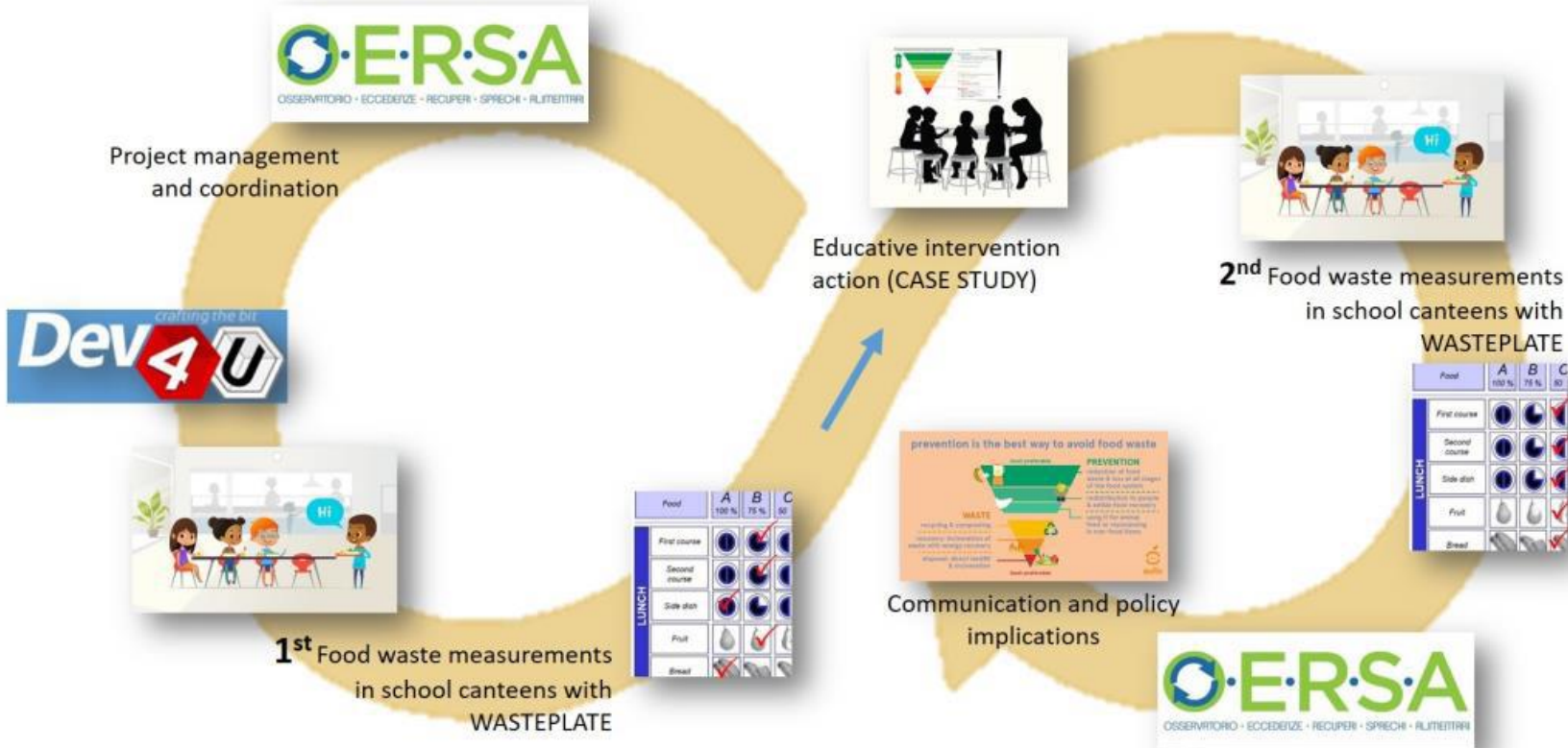
Funded by the
European Union

Covering the other aspects of the food chain: Waste in school canteens



MYWASTE-PLATE

Measurement, reduction and prevention of food waste in school canteens: proposal of a strategic approach





OERSA Research 1

THE FOCUS WAS ON THE AGRICULTURAL PRODUCTION SECTOR,
PARTICULARLY ON FRUIT AND VEGETABLE AREA

The analysis of statistical archives:

- The survey concerning land and farm production (ISTAT)



Data concerning unharvested fruit and vegetables vary significantly for every product and can fluctuate considerably depending on the harvest every year.



MONITORING PROGRESS: the action of the Producers Organizations to collect unsold products for social purposes



- The annual PO (Producer Organisations) document: the **2017** Report shows that **32.237 tonnes** of products were collected from the fruit and vegetables trade, the majority of which consisted of fruit (**84%**)

The total collection rate amounted to **0.3 %** of products in the organizational system

Compared to national production, there was a higher collection rate for fruit, especially fruit from fruit trees and orchards

In the five years between **2013** and **2017** plums, peaches and kiwis were the most commonly recovered products

The majority of food collected was distributed for human nutrition (**82%**)
Nevertheless, only **27 % of POs** take advantage of this system



- The aggregation of farming companies and cooperatives into POs has been shown to create competitive advantages in preventing criticalities generated by food surpluses and therefore food waste.
- Thanks to the incentive mechanism, the majority of food collected was distributed for human nutrition (82%).
- Nevertheless, only 27 % of POs take advantage of this system with positive economic results and the the optimisation of the recycling of surplus production.



MONITORING PROGRESS: the efficiency of the system

OERSA Research 2

AN EXPLORATORY SURVEY WAS CARRIED OUT BETWEEN NOVEMBER 2019 AND MARCH 2020

Representatives of the supply chain for kiwis, peaches and plums were interviewed



It was used a qualitative and quantitative quest
The POs that participated in this survey mar
commercialized production and trading collection compared to the total

The average surplus rate (considering surplus compared to production) of 23 crops in 2018 which produced excess food was 3%, while there was no surplus for another 9 crops
The organisations analysed in the study reported to have had a higher surplus of plums, a variable level in peach and apple production, while kiwi production produced a lower excess



The 17 POs work in different fruit supply chains, and for this reason many of them completed more than one questionnaire, reaching a maximum of 39 questionnaires

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The organisations analysed in the study reported to have had a higher surplus of plums, a variable level in peach and apple production, while kiwi production produced a lower excess



Causes:

- the difficulty of finding space in the market
- product appearance and shape, changing customer orders
- weather conditions and market contingencies

Over 10% of products were processed despite not being planned for this purpose in nearly half of the answers

Causes: strong hailstorms, the Asiatic cimicid invasion and commercial problems

Causes:

- the difficulty of finding space in the market
- product appearance and shape, changing customer orders
- weather conditions and market contingencies



MONITORING PROGRESS: food surplus was donated

To prevent food surplus: improving production (**32 answers**), recovering food surplus for human nutrition (**26 answers**) and looking for new space in the market to redirect the sales of the surplus food (**19 answers**)

The POs were careful about the food surplus that was low also thanks to the processing of food into edible products

(V gamma products, juices, vegetable extract, ingredients for cakes etc.)

Another interesting fact that emerged from the survey was the avoidance of landfill disposal



In many cases, food surplus was given to



In many cases, food surplus was given to people in economic difficulty

Another interesting fact that emerged from the survey was the avoidance of landfill disposal



Thanks for your attention

The screenshot shows the top portion of the O-ERSA website. At the top left is the O-ERSA logo with the tagline "Osservatorio - Scienze - Riciclo - Spreco - Alimentari". To its right is the Crea logo, "Consorzio Nazionale per la Ricerca e l'Informazione Agricola". On the right side of the header, there are links for "PRESS ROOM", "NEWS", "CONTATTI", and "LOGIN", along with a search icon. Below the header is a green navigation bar with the following menu items: "IL PERCORSO", "CHI SIAMO", "LA NOSTRA ATTIVITÀ", "PUBBLICAZIONI", "COME CONTRIBUIRE", and "ALTRE INIZIATIVE". The main content area features a grid of eight icons representing various aspects of food waste and sustainability: wheat stalks, a factory with a plant, a circular arrow, a hand holding a shopping bag, a person in a red uniform, the "12 RESPONSABILI CRONOMETRI ALIMENTARI" logo, a plate of food, and a magnifying glass over a bar chart. Below the grid is a stylized illustration of a person sitting at a desk with a computer. To the right of the grid is the heading "L'OSSERVATORIO NAZIONALE O-ERSA" followed by a paragraph of text describing the organization's mission and its role in supporting the technical table established by Law 166/2016. At the bottom right of the main content area is a link that says "LEGGI ALTRO»".

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[LEGGI ALTRO»](#)