

Supplementary Material

1. OVERVIEW

This codebook was developed to systematically categorise all included studies across five analytical dimensions: supply chain stage, strategy type, evidence of implementation, CE operationalisation depth, and economic methodological rigour. All coding was performed independently by two reviewers, with discrepancies resolved through consensus. Inter-rater reliability was assessed on a random 20% subset ($n = 75$) using Cohen's κ .

2. CODING DIMENSIONS AND DEFINITIONS

2.1. Supply Chain Stage

- Production & Processing: Studies focusing on agricultural production, harvest, post-harvest handling, primary processing, or manufacturing.
- Distribution & Retail: Studies covering logistics, warehousing, wholesale, and retail operations (including supermarkets).
- HoReCa: Hospitality, restaurant, and catering sectors (including institutional foodservice).
- Consumer: Studies examining household or individual consumer behaviour, storage, and consumption.
- Cross-stage: Studies that explicitly analyse at least two stages with systemic linkages (not merely mentioning multiple stages).

2.2. Strategy Type

- Prevention: Interventions targeting ex-ante waste generation, e.g., demand forecasting, product redesign, packaging improvements, inventory optimisation, quality specification reform.
- Redistribution: Reuse of surplus edible food through food banks, secondary markets, or donation.
- Valorisation: End-of-pipe treatment of already generated waste, e.g., composting, anaerobic digestion, bio-refining, animal feed, energy recovery.
- Optimisation: Process improvements using digital technologies (IoT, AI) to enhance efficiency and reduce waste across operations.
- Systemic redesign: Fundamental restructuring of supply chain business models, governance, or value networks.

2.3 Evidence of Implementation

- Empirical (real operational conditions): Studies that collect primary data from real-world settings (e.g., field trials, company data) and report measurable outcomes.
- Partial/pilot-scale: Studies based on pilot projects, controlled experiments, or simulations with explicit limitations to generalisability.
- Theoretical/simulation only: Conceptual papers, review articles, or simulation models without primary empirical validation.

2.4 CE Operationalisation Depth

- Rhetorical framing: CE mentioned only in introduction or discussion without analytical application; no intervention logic derived from CE principles.
- Partial integration: CE principles inform intervention logic but no decision criteria, trade-offs, or measurable indicators are specified.
- Full operationalisation: CE embedded in research design with explicit intervention mechanisms, measurable circularity indicators, and decision rules.

2.5 Economic Methodological Rigour

- Formal methods: Use of Cost-Benefit Analysis (CBA), Life Cycle Costing (LCC), Techno-Economic Assessment (TEA), Net Present Value (NPV), Monte Carlo simulation, or cost-based optimisation.
- Descriptive cost references only: Studies mention costs or economic aspects in general terms without formal modelling.

3. CODING RULES AND DECISION CRITERIA

- For cross-stage studies, the dominant stage of analysis was assigned; if systemic, it was coded as cross-stage.
- Prevention was only coded if the intervention clearly aimed to reduce waste generation ex-ante; if it focused on handling waste already generated, it was valorisation.
- Partial implementation required that the study provided quantitative results from a pilot or simulation but acknowledged limited generalisability.
- CE operationalisation was rated by assessing whether the research design explicitly used CE principles to define interventions and success metrics.

4. INTER-RATER RELIABILITY (based on 75 randomly selected articles)

- Dimension: Supply Chain Stage, Cohen's $\kappa = 0.84$
- Dimension: Strategy Type, Cohen's $\kappa = 0.79$
- Dimension: CE Operationalisation Depth, Cohen's $\kappa = 0.81$
- Dimension: Evidence of Implementation, Cohen's $\kappa = 0.76$
- Dimension: Economic Methodological Rigour, Cohen's $\kappa = 0.82$

All discrepancies were resolved through discussion. The final dataset represents consensus.

5. EXAMPLE CODING ENTRIES (illustrative)

- Study ID: S001, SC Stage: Processing, Strategy: Valorisation, Evidence: Empirical, CE Ops.: Partial, Economic: Formal (TEA);
- Study ID: S002, SC Stage: Retail, Strategy: Prevention, Evidence: Pilot, CE Ops.: Full, Economic: Descriptive;
- Study ID: S003, SC Stage: Cross-stage, Strategy: Systemic, Evidence: Theoretical, CE Ops.: Rhetorical, Economic: Descriptive.

Additional rows follow the same structure in the full database.

6. CODING SHEET STRUCTURE

The full coding database is available in Table S1. It contains columns: Article ID, Authors, Year, Title, SC Stage, Strategy, Evidence, CE Ops., Economic Method, and additional notes.

Table S1. Complete coding codebook for systematic review of 374 articles on circular economy and food waste.

No.	Authors (Year)	Title/Topic	Journal/Source	SC Stage	Strategy Type	Evidence	CE Ops Depth	Economic Rigour
1	UNEP (2021)	Food Waste Index Report 2021	UNEP	Cross-stage	Prevention	Empirical	Rhetorical	Descriptive
2	Laaninen & Calasso (2020)	Reducing food waste in the European Union	EPRS	Cross-stage	Prevention	Theoretical	Rhetorical	Descriptive
3	Pandhi et al. (2025)	Agri-food waste into resistant starch	Bioresource Technology	Production & Processing	Valorisation	Empirical	Full	Formal Methods
4	Younis et al. (2025)	Non-thermal processing for sustainable food supply chains	Sustainable Futures	Production & Processing	Optimisation	Theoretical	Rhetorical	Descriptive
5	Ardra & Barua (2022)	Halving food waste by 2030: SDG 12.3	Journal of Cleaner Production	Cross-stage	Prevention	Theoretical	Rhetorical	Descriptive
6	European Council (2020+)	From Farm to Fork	European Council	Cross-stage	Prevention	Theoretical	Rhetorical	Descriptive
7	Hafiane et al. (2025)	Lean and Circular Economy integration	Sustainability	Production & Processing	Optimisation	Theoretical	Rhetorical	Descriptive
8	Prasanna et al. (2024)	Role of food industries in sustainability transition	Environmental Development and Sustainability	Production & Processing	Optimisation	Theoretical	Rhetorical	Descriptive
9	Domenech & Borrión (2022)	Circular economy principles, urban regeneration and waste management	Sustainability	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
10	Ouro-Salim et al. (2026)	Upcycling as a circular food-waste strategy	Urban Agriculture & Regional Food Systems	Production & Processing	Valorisation	Theoretical	Full	Descriptive
11	Boral et al. (2026)	Systems thinking and complexity modelling for CE quantification	Waste Management & Research	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
12	Sgroi & Marino (2021)	Digital food hubs and sustainable local agri-food systems	Science of the Total Environment	Distribution & Retail	Optimisation	Empirical	Full	Descriptive
13	Davoudi et al. (2025)	Real-time visibility in meat cold chains	Sustainability	Distribution & Retail	Optimisation	Empirical	Rhetorical	Formal Methods
14	Habib et al. (2024)	Temperature data loggers in vegetable supply chains	Applied Water Science	Distribution & Retail	Prevention	Empirical	Rhetorical	Descriptive
15	De Santana Filho et al. (2025)	Governance-centred industrial symbiosis	Sustainability	Production & Processing	Valorisation	Theoretical	Full	Descriptive
16	Gonçalves & Maximo (2022)	Circular economy in the food chain	Circular Economy and Sustainability	Cross-stage	Valorisation	Theoretical	Full	Descriptive
17	Doetsch & Huchzermeier (2024)	Supply-chain resilience and sustainability	Journal of Cleaner Production	Cross-stage	Optimisation	Theoretical	Rhetorical	Descriptive
18	Dakhia et al. (2025)	AI-enabled IoT for food computing	Sensors	Distribution & Retail	Optimisation	Theoretical	Rhetorical	Formal Methods

19	Ezeh et al. (2024)	Blockchain and IoT for supply-chain visibility	International Journal of Advanced Multidisciplinary Research Studies	Distribution & Retail	Optimisation	Theoretical	Rhetorical	Descriptive
20	Davidescu et al. (2025)	Smart packaging technologies for food industry	Foods	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
21	Llagas et al. (2025)	Date labelling, storage advice and food waste	Future Foods	Consumer	Prevention	Theoretical	Rhetorical	Descriptive
22	Aitken et al. (2024)	Food recovery policies, donations and waste reduction	Waste Management	Distribution & Retail	Redistribution	Empirical	Full	Formal Methods
23	Silvestri et al. (2022)	Sustainability and circular-economy indicators in agri-food	International Journal of Life Cycle Assessment	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
24	Page et al. (2021)	PRISMA 2020 systematic-review reporting guideline	BMJ	Cross-stage	Optimisation	Theoretical	Rhetorical	Descriptive
25	Visco et al. (2022)	Agri-food wastes for bioplastics	Polymers	Production & Processing	Valorisation	Theoretical	Full	Formal Methods
26	Thaha et al. (2025)	Biomass valorisation and second-generation biorefineries	Biomass	Production & Processing	Valorisation	Theoretical	Full	Formal Methods
27	Saha et al. (2025)	3D printing for food-processing waste valorisation	Waste Management Bulletin	Production & Processing	Valorisation	Theoretical	Full	Descriptive
28	Becerra et al. (2020)	Circular economy and inclusive development	Sustainability	Cross-stage	Valorisation	Theoretical	Rhetorical	Descriptive
29	Gueboudji (2024)	Waste valorisation techniques	Springer	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
30	Lit et al. (2024)	Circular business-model innovation	International Small Business Journal	Cross-stage	Optimisation	Empirical	Rhetorical	Descriptive
31	Jacob-John et al. (2022)	SDG 12.3 in food-supply-chain literature	Benchmarking: An International Journal	Cross-stage	Prevention	Theoretical	Rhetorical	Descriptive
32	Cano et al. (2025)	Circular supply-chain management assessment	Environments	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
33	Gál et al. (2025)	Historical analysis and bibliometrics of food waste	Cleaner Waste Systems	Cross-stage	Prevention	Theoretical	Rhetorical	Descriptive
34	Dzhengiz et al. (2023)	Problematising the circular economy	International Journal of Management Reviews	Cross-stage	Optimisation	Theoretical	Rhetorical	Descriptive
35	Ma et al. (2025)	Ecological and economic approaches to ecosystem services	Ecologies	Cross-stage	Optimisation	Theoretical	Rhetorical	Formal Methods

36	Gennari (2022)	Circular-economy transition framework for SMEs	Journal of Management and Governance	Cross-stage	Optimisation	Theoretical	Rhetorical	Descriptive
37	Blackburn et al. (2025)	Circular economy platforms	Business Strategy and the Environment	Cross-stage	Optimisation	Theoretical	Full	Descriptive
38	Balasbaneh et al. (2025)	MCDM for circular economy and cost assessment	Sustainability	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
39	Otasowie et al. (2025)	Circular economy in organisations and policies	Springer	Cross-stage	Optimisation	Theoretical	Rhetorical	Descriptive
40	Chalak et al. (2018)	Food waste in hospitality and food retail/wholesale	Food Security	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
41	Thamagasorn & Pharino (2019)	Food waste from flight catering	Journal of Cleaner Production	HoReCa	Prevention	Empirical	Full	Formal Methods
42	Todd & Faour-Klingbeil (2024)	Food waste at retail and foodservice levels	Foods	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
43	Hettiarachchi et al. (2025)	Net-zero supply-chain evaluations	Sustainability	Cross-stage	Optimisation	Theoretical	Rhetorical	Formal Methods
44	Suthiluk et al. (2025)	Zero-waste processing and carbon footprint	Agriculture	Production & Processing	Prevention	Empirical	Full	Formal Methods
45	Rabbi (2025)	Carbon emissions and SDG-12 in EU food system	Carbon Research	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
46	Majd et al. (2025)	Food-energy-water nexus and supply-chain design	Energy	Production & Processing	Optimisation	Empirical	Full	Formal Methods
47	Xue et al. (2024)	Environmental impacts of food loss and waste	Environmental Science & Technology	Cross-stage	Optimisation	Theoretical	Full	Formal Methods
48	Wilson et al. (2025)	Behavioural interventions for waste reduction	Frontiers in Psychology	Consumer	Prevention	Theoretical	Rhetorical	Descriptive
49	Nabi (2025)	Transition to circular waste management	Management Strategies and Engineering Sciences	Cross-stage	Optimisation	Theoretical	Rhetorical	Descriptive
50	Vennila & Karthikeyan (2025)	EOQ model for circular food-waste management	Mathematical Modelling and Numerical Simulation with Applications	Production & Processing	Optimisation	Theoretical	Full	Formal Methods
51	Saidu et al. (2025)	Blockchain, IoT and AI for traceability	IEEE Access	Distribution & Retail	Redistribution	Theoretical	Full	Descriptive
52	Ikram (2025)	Food security and environmental sustainability	Sustainability	Cross-stage	Redistribution	Empirical	Rhetorical	Formal Methods

53	Bentivoglio et al. (2022)	Vegetable-waste valorisation through biogas/biomethane	Frontiers in Sustainable Food Systems	Production & Processing	Valorisation	Empirical	Full	Formal Methods
54	Sharma et al. (2024)	Waste-to-hydrogen through gasification/pyrolysis	Journal of Thermal Analysis and Calorimetry	Production & Processing	Valorisation	Theoretical	Full	Formal Methods
55	Durak (2023)	Thermochemical waste management and resource recovery	Processes	Production & Processing	Valorisation	Theoretical	Full	Formal Methods
56	Sieradzka et al. (2025)	Food-industry waste into high-performance biochar	Scientific Reports	Production & Processing	Valorisation	Empirical	Full	Formal Methods
57	Ghinea et al. (2025)	Cost-benefit analysis of enzymatic hydrolysis	Foods	Production & Processing	Valorisation	Empirical	Full	Formal Methods
58	Beginkulov & Darr (2023)	Scaling strategies in agri-food SMEs	Frontiers in Sustainable Food Systems	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
59	Prasanna et al. (2019)	Sustainability of SMEs and technological challenges	Journal of Open Innovation	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
60	Hoehn et al. (2022)	Food-loss and waste quantification approaches	Resources, Conservation & Recycling	Cross-stage	Redistribution	Theoretical	Full	Formal Methods
61	Zhang et al. (2024)	Stage-matched waste source-separation interventions	Waste Management & Research	Consumer	Prevention	Empirical	Rhetorical	Formal Methods
62	Carvalho et al. (2025)	Policies, consumer behaviour and innovation	Sustainability	Cross-stage	Prevention	Theoretical	Rhetorical	Descriptive
63	Pillai et al. (2025)	Circular economy in international business	Sustainability	Cross-stage	Redistribution	Theoretical	Rhetorical	Descriptive
64	Mylan et al. (2023)	Sustainable food production and alternative proteins	PNAS	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
65	Renkema-Singh et al. (2026)	Business models of food hubs	Corporate Social Responsibility and Environmental Management	Distribution & Retail	Redistribution	Theoretical	Full	Descriptive
66	Setyadi et al. (2025)	Circular operations in manufacturing	Sustainability	Production & Processing	Redistribution	Theoretical	Full	Descriptive
67	Hodanić et al. (2025)	Built environment and sustainable development	Sustainability	Cross-stage	Redistribution	Theoretical	Rhetorical	Formal Methods
68	Pimentel et al. (2022)	Factors reducing food waste: retailer perspective	Cleaner Waste Systems	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
69	Pauwels et al. (2024)	Circular-economy monitoring for policy	Springer	Production & Processing	Redistribution	Theoretical	Full	Formal Methods
70	Gyoh et al. (2026)	Circular economy and energy-efficient retrofitting	Buildings	Production & Processing	Redistribution	Theoretical	Rhetorical	Formal Methods

71	Valvi et al. (2024)	Evaluation, competitiveness and SME development	Springer	Production & Processing	Redistribution	Theoretical	Rhetorical	Formal Methods
72	Versino et al. (2023)	Sustainable bio-based food packaging	Foods	Production & Processing	Valorisation	Theoretical	Full	Descriptive
73	Jafarzadeh et al. (2025)	Cereal by-product waste into eco-friendly plastics	Materials Today Chemistry	Production & Processing	Valorisation	Empirical	Full	Formal Methods
74	Cunha et al. (2026)	Circularity in online food delivery	Frontiers in Sustainable Food Systems	Consumer	Prevention	Theoretical	Rhetorical	Descriptive
75	Muñoz-Torres et al. (2024)	Food-loss and waste prevention solutions	Environmental Impact Assessment Review	Production & Processing	Prevention	Theoretical	Full	Formal Methods
76	Das & Mishra (2026)	CLEAN framework for microplastics	Green Technologies and Resilience	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
77	Utama et al. (2025)	Farm-to-HoReCa sustainable value chains	Frontiers in Sustainable Food Systems	HoReCa	Redistribution	Empirical	Full	Descriptive
78	Nosková (2025)	R-Frame circular-economy model	Green and Low-Carbon Economy	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
79	Alivojvodic & Kokalj (2024)	R-strategies and circular-economy metrics	Springer	Production & Processing	Redistribution	Theoretical	Full	Formal Methods
80	Fatorachian et al. (2025)	Digital technologies in food-supply-chain waste management	Sustainability	Distribution & Retail	Redistribution	Empirical	Full	Descriptive
81	Viscardi et al. (2025)	Preventing and recovering food waste in manufacturing	Business Strategy and the Environment	Production & Processing	Prevention	Empirical	Full	Descriptive
82	Eurostat (2026)	Food waste and food-waste prevention estimates	Eurostat	Production & Processing	Prevention	Empirical	Rhetorical	Descriptive
83	Sigala et al. (2025)	AI-based waste tracking in HoReCa	Waste Management	HoReCa	Redistribution	Empirical	Full	Descriptive
84	Buczacki et al. (2021)	HoReCa food waste and SDGs	Sustainability	HoReCa	Prevention	Theoretical	Rhetorical	Descriptive
85	Kozic et al. (2025)	Consumer attitudes in food services	Sustainability	HoReCa	Prevention	Empirical	Rhetorical	Descriptive
86	Ogwu et al. (2025)	Food waste for sustainable hog farming	Global Challenges	Production & Processing	Valorisation	Theoretical	Full	Descriptive
87	Al-Banna et al. (2024)	Industry 4.0 and supply-chain resilience	Cogent Business & Management	Distribution & Retail	Redistribution	Empirical	Rhetorical	Descriptive
88	Mkhitaryan et al. (2026)	Sustainability indicators and urban decision-making	Urban Science	Production & Processing	Redistribution	Theoretical	Full	Descriptive
89	Herman & Zsido (2023)	Financial sustainability of retail food SMEs	Mathematics	Distribution & Retail	Redistribution	Empirical	Rhetorical	Descriptive

90	Chakraborty et al. (2025)	Circular economy in SMEs	Systems	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
91	Kgakatsi et al. (2024)	Big data and SME performance	Businesses	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
92	Adelodun et al. (2024)	Food loss and waste, resource use and climate mitigation	Waste Management & Research	Production & Processing	Prevention	Theoretical	Full	Descriptive
93	Jha et al. (2024)	Systems thinking in bioresource waste management	Sustainability	Production & Processing	Redistribution	Theoretical	Full	Descriptive
94	Rahaman & Pranta (2025)	Linear-to-circular economy transition	Materials Circular Economy	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
95	Kusumowardani et al. (2021)	Circular capabilities addressing food waste and losses	Journal of Business Research	Production & Processing	Prevention	Theoretical	Full	Descriptive
96	Cahyadi et al. (2024)	Circular economy in agri-food supply chains	Sustainability	Production & Processing	Redistribution	Theoretical	Full	Descriptive
97	Handayati & Widyanata (2024)	Food-waste management in sustainable agricultural supply chains	Scientific Reports	Production & Processing	Prevention	Empirical	Rhetorical	Descriptive
98	Figueirinhas et al. (2026)	Packaging, recycling and material recirculation	Packaging Technology and Science	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
99	Olabode et al. (2025)	Food-loss and waste management in retail supply chains	Journal of Environmental Management	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
100	Ikpe & Shamsuddoha (2024)	Supply-chain waste reduction strategies for retailers	Logistics	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
101	Friant et al. (2023)	Circular cities and urban circular-economy policies	Local Environment	Production & Processing	Redistribution	Theoretical	Rhetorical	Descriptive
102	Abu-Bakar & Charnley (2024)	Circular-economy roadmapping methodology	Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
103	Montag (2022)	Circular economy and supply chains	Circular Economy and Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
104	Mirabelli & Solina (2022)	Perishable supply-chain optimisation	Journal of Industrial Engineering and Management	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
105	Björklund et al. (2025)	Food redistribution supply-chain costs and benefits	International Journal of Logistics Management	Distribution & Retail	Redistribution	Empirical	Rhetorical	Descriptive
106	Hermans et al. (2025)	Circular-economy interventions in agrifood systems	Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive

107	Tan et al. (2022)	Information systems, strategy and network design for food waste	Sustainability	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
108	Munonye (2025)	Circular-economy metrics	Circular Economy and Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
109	Fesenfeld et al. (2022)	Public support for food-waste regulation	Nature Food	Consumer	Prevention	Empirical	Rhetorical	Descriptive
110	Vittuari et al. (2023)	Household food-waste drivers and behavioural levers	Sustainable Production and Consumption	Consumer	Prevention	Theoretical	Rhetorical	Descriptive
111	Kaur et al. (2025)	Zero-waste programme indicators	Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
112	Lee et al. (2023)	Food-safety management in small/medium food enterprises	Foods	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
113	Vidanagamachchi et al. (2025)	Viable agri-food supply chains and systemic adaptation	Systems	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
114	Garima et al. (2024)	Sustainable grain-supply-chain decision-making	Sustainability	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
115	Padilla-Rivera et al. (2024)	ESG performance and life-cycle sustainability assessment	Sustainable Development	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
116	Dhiman et al. (2025)	Technological innovation in food-waste valorisation	Discover Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
117	Ezeudu & Bristow (2024)	Financing solid-waste management and CE	Sustainable Development	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
118	Sutar et al. (2025)	Food-supply-chain disruptions and resilience	OPSEARCH	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
119	Sehnm et al. (2022)	Circular economy in food-tech businesses	Sustainable Development	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
120	Heydari (2024)	Global food supply chains and food-loss mitigation	Journal of Cleaner Production	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
121	Shadid et al. (2025)	Data-driven food-waste and loss management	Cleaner Waste Systems	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
122	Onyeaka et al. (2025)	AI for food spoilage and waste reduction	Journal of Agriculture and Food Research	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
123	Andika et al. (2025)	Zero-waste agri-food supply chains	Sustainable Futures	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
124	Alvarez et al. (2024)	Waste management and innovation trends	Waste Management & Research	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
125	Taneja et al. (2023)	Waste biomaterials and value addition	Metabolites	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
126	Selvam et al. (2025)	Agricultural-waste biopolymers for food packaging	Polymers	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive

127	Dwivedi et al. (2022)	Product recovery systems in circular economy	Management Decision	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
128	Messner et al. (2022)	Systemic solutions and food-waste lock-in	Journal of Rural Studies	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
129	Carnia et al. (2026)	Circular-economy waste-management decision framework	Mathematics	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
130	Widianarko et al. (2025)	Short food-supply-chain model	Open Agriculture	Distribution & Retail	Valorisation	Empirical	Rhetorical	Descriptive
131	Obayi et al. (2025)	Strategic interventions for minimising food loss	Benchmarking: An International Journal	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
132	Nisa et al. (2022)	Effectiveness of food-waste messaging	Environmental Science & Policy	Consumer	Prevention	Empirical	Rhetorical	Descriptive
133	Ghosh et al. (2023)	Circular economy in food-processing SMEs	Business Strategy and the Environment	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
134	Aretoulaki et al. (2026)	Circular-economy and sustainability indicators	Circular Economy and Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
135	Lwesya & Achanta (2022)	Food-supply-chain research trends	Journal of Agribusiness in Developing and Emerging Economies	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
136	Traverso et al. (2024)	Social hotspot analysis of e-waste	Waste Management	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
137	Abu-Bakar et al. (2023)	Circular-economy roadmaps	Journal of Cleaner Production	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
138	Singh et al. (2023)	Resilient construction supply-chain indicators	Business Strategy and the Environment	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
139	Mohammed et al. (2024)	Food-waste causes and solutions in fresh food supply chains	British Food Journal	Production & Processing	Prevention	Empirical	Rhetorical	Descriptive
140	Teixeira et al. (2025)	AI contributions to intelligent supply-chain management	Information	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
141	Alquraish (2025)	Digital transformation and supply-chain sustainability	Sustainability	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
142	Roy et al. (2023)	Food-waste valorisation: environmental and economic impacts	ACS Environmental Au	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
143	Chatti et al. (2024)	Food-waste management in NENA	Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
144	Nazibudin et al. (2025)	Food-waste generation and SDG 12 in Malaysia	Cleaner Waste Systems	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive

145	UNFCCC (2022+)	Food loss and waste, emissions and economic cost	UNFCCC	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
146	UNEP (2022+)	Food Loss and Waste	UNEP	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
147	Hu et al. (2026)	Food-waste management and SDG 12.3 in Asia	Frontiers in Sustainable Food Systems	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
148	Fatorachian & Pawar (2025)	Digital transformation of cold-chain waste management	Procedia Computer Science	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
149	Amir et al. (2022)	Circular supply-chain implementation framework	Business Strategy and the Environment	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
150	Vahdanjoo et al. (2025)	Digital transformation of agri-food systems	Current Opinion in Food Science	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
151	Tsegaye, Jaiswal & Jaiswal (2021)	Food Waste Biorefinery	Foods	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
152	Friedrich et al. (2021)	Valorized Food Processing By-Products	Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
153	Awasthi et al. (2022)	Myco-biorefinery approaches	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
154	Singh et al. (2022)	Food Waste Valorisation for Biogas	Frontiers in Energy Research	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
155	Hagman (2023)	Sustainable side-stream management	Frontiers in Food Science & Technology	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
156	Sarker et al. (2024)	Comprehensive review of food waste valorization	Sustainable Food Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
157	Preethi et al. (2024)	Nanotechnology-powered innovations	Process Safety & Environmental Protection	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
158	Patel et al. (2024)	Innovative biorefinery approaches	Chemical Engineering Journal	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
159	Zou et al. (2020)	Valorization of food waste to multiple bio-energies	Journal of Cleaner Production	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
160	Ng et al. (2020)	Sustainable approaches for conversion of food wastes	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
161	Caldeira et al. (2020)	Sustainability of food waste biorefinery	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
162	Kannah et al. (2020)	Food waste valorization: Biofuels and value added product recovery	Bioresource Technology Reports	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
163	Kim et al. (2020)	The valorization of food waste via pyrolysis	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive

164	Patrizi et al. (2020)	Sustainability Assessment of Biorefinery Systems	Frontiers in Sustainable Food Systems	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
165	Richter et al. (2020)	Utilization of Food Processing By-products in Extrusion	Frontiers in Sustainable Food Systems	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
166	Sharma et al. (2021)	Sustainable processing of food waste	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
167	Talan et al. (2021)	Food waste valorization: Energy production	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
168	Chung & Dhar (2021)	Microbial electrochemical technologies for food waste	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
169	Dutta et al. (2021)	Sustainable management of food waste anaerobic digestate	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
170	Friedrich et al. (2021)	Valorized Food Processing By-Products in the EU	Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
171	Do et al. (2021)	Food loss and waste prevention for circular economy	International Journal of Production Economics	Production & Processing	Prevention	Theoretical	Rhetorical	Descriptive
172	Kassim et al. (2022)	Integrated conversion technologies for agri-food waste	Biomass and Bioenergy	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
173	Rajendran & Han (2022)	Techno-economic analysis of food waste valorization	Bioresource Technology	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
174	Chen et al. (2022)	Process design for fuel ethanol from food waste	Bioresource Technology	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
175	Chojnacka et al. (2022)	Valorisation of agri-food waste to fertilisers	Environmental Pollution	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
176	Awasthi et al. (2022)	Myco-biorefinery approaches for food waste	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
177	Narisetty et al. (2022)	Integrated biorefineries for food wastes	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
178	Caponio et al. (2022)	Valorization of Food Processing By-Products	Foods	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
179	Zhu et al. (2022)	Valorization of food waste fermentation liquid	Bioresource Technology	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
180	Greses Huerta et al. (2022)	Food waste valorization into bioenergy and bioproducts	Journal of Cleaner Production	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
181	Ortiz-Sanchez et al. (2023)	Food waste valorization applying the biorefinery concept	Biochemical Engineering Journal	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
182	Sarangi et al. (2023)	Biorefinery solutions for food processing wastes	Industrial Crops and Products	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive

183	Rao et al. (2023)	Food waste valorisation from supply chain actors	Agricultural and Food Economics	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
184	Said et al. (2023)	Intelligent approaches for food waste management	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
185	Banu & Sharmila (2023)	Food waste valorisation for bioplastic production	Sustainable Energy & Fuels	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
186	Dominguez Aldama et al. (2023)	Allocation methods in LCA of food waste valorization	Journal of Cleaner Production	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
187	Uen & Rodríguez (2023)	Integrated approach for food waste management	Journal of Cleaner Production	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
188	Sridhar et al. (2023)	Valorization of food and agro-industrial waste	Frontiers in Nutrition	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
189	Sarker et al. (2024)	Comprehensive review of food waste valorization	Sustainable Food Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
190	Yeo et al. (2024)	Food circular economy and safety considerations	npj Science of Food	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
191	Preethi et al. (2024)	Nanotechnology-powered innovations for food waste	Process Safety and Environmental Protection	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
192	Patel et al. (2024)	Innovative biorefinery approaches for food waste	Chemical Engineering Journal	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
193	Darko et al. (2024)	Food processing by-products as sources of high value-added compounds	Foods	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
194	Şahin & Kurtulbaş (2024)	Green Extraction and Valorization of By-Products	Foods	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
195	Fernandes et al. (2024/2025)	Agrifood by-products: phytochemicals and industrial applications	Waste and Biomass Valorization	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
196	Pal et al. (2024)	Circular Bioeconomy: Transforming Food Wastes	Foods	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
197	Ezeorba et al. (2024)	Biotechnological valorization of agro-food wastes	Bioresource Technology Reports	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
198	Ligarda-Samanez et al. (2025)	Technological Innovations in Agri-Food By-Products	Foods	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
199	Dhiman et al. (2025)	Closing the loop: technological innovations in food waste valorisation	Discover Sustainability	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
200	Pandhi et al. (2025)	Transforming agri-food waste into resistant starch	Bioresource Technology	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive

201	Zhao (2025)	Advanced Technologies for Food Waste Valorization	Journal of Agricultural and Food Chemistry	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
202	Chellamboli et al. (2025)	Agri-food waste valorisation and nanoencapsulation	Discover Food	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
203	Tariq et al. (2025)	Cross-regional meta-analysis of economic opportunities	Bioresource Technology Reports	Production & Processing	Valorisation	Empirical	Partial	Descriptive
204	Remijnse et al. (2025)	Optimising agri-food supply chains	Journal of Cleaner Production	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
205	Yusoff et al. (2025)	Valorizing shrimp waste through circular economy	Journal of Environmental Chemical Engineering	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
206	Zambela et al. (2025)	Valorization of Agri-Food Waste for Agriculture	Agronomy	Production & Processing	Valorisation	Empirical	Partial	Descriptive
207	Mia et al. (2025)	Valorization of food waste into functional ingredients	Discover Food	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
208	Khanna et al. (2025)	Advancing circular-economy in food processing	Environment Conservation Journal	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
209	Vladić & Nastić (2025)	Trends on valorization of agri-food waste	Frontiers in Nutrition	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
210	Kumar et al. (2026)	Innovative strategies for sustainable food processing	Food Chemistry: X	Production & Processing	Prevention	Theoretical	Partial	Descriptive
211	Yeo et al. (2024)	Food circular economy and safety considerations	npj Science of Food	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
212	Sarangi et al. (2023)	Biorefinery solutions for food processing wastes	Industrial Crops and Products	Production & Processing	Valorisation	Theoretical	Partial	Descriptive
213	Rao et al. (2023)	Food waste valorisation from supply chain actors	Agricultural and Food Economics	Production & Processing	Valorisation	Empirical	Partial	Descriptive
214	Greses Huerta et al. (2022)	Food waste valorization into bioenergy	Journal of Cleaner Production	Production & Processing	Valorisation	Empirical	Rhetorical	Descriptive
215	Ortiz-Sanchez et al. (2023)	Food waste valorization applying biorefinery	Biochemical Engineering Journal	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
216	Rajendran & Han (2022)	Techno-economic analysis of food waste valorization	Bioresource Technology	Production & Processing	Valorisation	Theoretical	Rhetorical	Descriptive
217	Chen et al. (2022)	Fuel ethanol production from food waste	Bioresource Technology	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
218	Sakcharoen et al. (2021)	Zero-waste system for food waste management	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
219	Zhu et al. (2022)	Valorization of food waste fermentation liquid	Bioresource Technology	Production & Processing	Valorisation	Empirical	Partial	Descriptive

220	Cicatiello & Franco (2020)	Disclosure of unrecorded food waste at retail stores	Journal of Retailing and Consumer Services	Distribution & Retail	Valorisation	Empirical	Partial	Descriptive
221	De Moraes et al. (2020)	Retail food waste: Causes and reduction practices	Journal of Cleaner Production	Distribution & Retail	Prevention	Theoretical	Partial	Descriptive
222	Goodman-Smith et al. (2020)	Retail food waste in New Zealand	Food Policy	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
223	Aschemann-Witzel et al. (2020)	Suboptimal food, careless store?	Journal of Cleaner Production	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
224	Huang et al. (2021)	Retailers' business practices for food waste management	Journal of Cleaner Production	Distribution & Retail	Prevention	Theoretical	Partial	Descriptive
225	Gustavo Jr. et al. (2021)	Green marketing in supermarkets	Journal of Cleaner Production	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
226	Guarnieri et al. (2021)	Logistics in Food Waste Reduction in Wholesalers	Logistics	Distribution & Retail	Prevention	Empirical	Rhetorical	Descriptive
227	Buisman et al. (2021)	Discounting and shelf-life management for waste reduction	European Journal of Operational Research	Distribution & Retail	Valorisation	Empirical	Rhetorical	Descriptive
228	Ceryes et al. (2021)	Factors influencing food waste in U.S. supermarkets	Appetite	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
229	Franco & Cicatiello (2021)	Waste taxes to increase surplus food redistribution	Waste Management	Distribution & Retail	Redistribution	Theoretical	Rhetorical	Descriptive
230	Mandal et al. (2021)	Optimal allocation of near-expiry food	Journal of Cleaner Production	Distribution & Retail	Redistribution	Theoretical	Rhetorical	Descriptive
231	Bilska et al. (2020)	Risk of food losses in small retail stores	Sustainability	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
232	Tonini et al. (2021)	Environmental impacts of food waste at retail level	Resources, Conservation & Recycling	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
233	Mattsson & Williams (2022)	Avoidance of Supermarket Food Waste	Sustainability	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
234	Riesenegger & Hübner (2022)	Reducing Food Waste at Retail Stores	Sustainability	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
235	Kayikci et al. (2022)	Data-driven dynamic pricing for perishable food	Journal of Cleaner Production	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
236	Franco & Cicatiello (2022)	Redistribution of fresh fruit and vegetables	Journal of Cleaner Production	Distribution & Retail	Redistribution	Empirical	Rhetorical	Descriptive
237	Eitaité et al. (2022)	Food waste in the retail sector in Central/Eastern Europe	Journal of Retailing and Consumer Services	Distribution & Retail	Prevention	Empirical	Partial	Descriptive

238	Zhang et al. (2022)	Mitigating Food Waste in the Retail Supply Chain	Journal of Sustainable Marketing	Distribution & Retail	Prevention	Theoretical	Partial	Descriptive
239	Närvänen et al. (2023)	Consumer food waste through grocery retailers' data	International Journal of Consumer Studies	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
240	Yang et al. (2023)	Food waste management for UK grocery retail	Production Planning & Control	Distribution & Retail	Prevention	Empirical	Rhetorical	Descriptive
241	Riesenegger & Hübner (2023)	Minimizing food waste in grocery store operations	Sustainability Analytics and Modeling	Distribution & Retail	Valorisation	Theoretical	Partial	Descriptive
242	Rao et al. (2023)	Food waste valorisation from supply chain actors	Agricultural and Food Economics	Distribution & Retail	Valorisation	Empirical	Partial	Descriptive
243	Dominguez Aldama et al. (2023)	Allocation methods in LCA of food waste valorization	Journal of Cleaner Production	Distribution & Retail	Valorisation	Theoretical	Rhetorical	Descriptive
244	Sanders (2024)	Dynamic Pricing and Organic Waste Bans	Marketing Science	Distribution & Retail	Valorisation	Empirical	Rhetorical	Descriptive
245	Hobson & de Lange (2024)	Profiling food waste in retail sector of developing economies	Agrekon	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
246	Rao et al. (2024)	Holding Retail Corporations Accountable for Food Waste	Journal of Business Ethics	Distribution & Retail	Prevention	Theoretical	Partial	Descriptive
247	Todd & Faour-Klingbeil (2024)	Impact of Food Waste on Society	Foods	Distribution & Retail	Prevention	Theoretical	Rhetorical	Descriptive
248	Yeo et al. (2024)	Food circular economy and safety considerations	npj Science of Food	Distribution & Retail	Valorisation	Theoretical	Partial	Descriptive
249	Montero-Vega et al. (2025)	Food waste management in retail sector in Costa Rica	Uniciencia	Distribution & Retail	Prevention	Empirical	Partial	Descriptive
250	Abbas et al. (2026)	Environmental sustainability in retail food supply chain	Frontiers in Sustainable Food Systems	Distribution & Retail	Prevention	Theoretical	Partial	Descriptive
251	Garrone et al. (2022)	Portion Standardisation & Menu Engineering in Catering	Journal of Cleaner Production	HoReCa	Prevention	Empirical	Partial	Descriptive
252	Filimonau et al. (2022)	Digital Food Waste Tracking Systems in Hotel Kitchens	International Journal of Hospitality Management	HoReCa	Valorisation	Empirical	Partial	Descriptive
253	Martin-Rios et al. (2022)	Sustainable Business Model Innovation in Hospitality	International Journal of Hospitality Management	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
254	Nara et al. (2022)	Anaerobic Digestion from Kitchen Waste	Journal of Cleaner Production	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive

255	Charlebois et al. (2022)	Secondary Market Redistribution Platforms	International Journal of Hospitality Management	Distribution & Retail	Redistribution	Empirical	Partial	Descriptive
256	Dhir et al. (2023)	Nudging & Trayless Dining in Self-Service Dining	International Journal of Hospitality Management	HoReCa	Prevention	Empirical	Partial	Descriptive
257	Tomaszewska et al. (2023)	Demand-Driven Algorithms in Institutional Dining	Sustainability	Production & Processing	Prevention	Partial/Pilot	Rhetorical	Descriptive
258	Aschemann-Witzel et al. (2023)	App-Based Dynamic Pricing for Restaurant Meals	Journal of Cleaner Production	HoReCa	Redistribution	Empirical	Partial	Descriptive
259	Vizzari et al. (2023)	Black Soldier Fly Larvae Processing	Waste Management	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
260	Stangherlin et al. (2023)	Smart Inventory Management Systems	International Journal of Hospitality Management	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
261	Gao et al. (2023)	AI-Powered Visual Recognition Smart Bins	International Journal of Hospitality Management	HoReCa	Prevention	Partial/Pilot	Rhetorical	Descriptive
262	Principato et al. (2023)	Zero-Waste Culinary Frameworks	British Food Journal	HoReCa	Prevention	Partial/Pilot	Rhetorical	Descriptive
263	Rombach et al. (2023)	Institutional Food Donation Partnerships	International Journal of Hospitality Management	HoReCa	Redistribution	Partial/Pilot	Partial	Descriptive
264	Mattsson et al. (2023)	Lunch Schedule Adjustment in Schools	International Journal of Hospitality Management	HoReCa	Prevention	Partial/Pilot	Partial	Descriptive
265	Chauhan et al. (2024)	IoT Temperature-Sensor Networks in Restaurants	Journal of Hospitality and Tourism Technology	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
266	Khatter et al. (2024)	Environmental Management System Certification	International Journal of Hospitality Management	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
267	Bizzarri et al. (2024)	On-Site Composting Units in Catering	Sustainability	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
268	Ahmad et al. (2024)	Menu Customer Educational Prompts	International Journal of	HoReCa	Prevention	Partial/Pilot	Partial	Descriptive

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269	Molina-Besch et al. (2024)	Reusable Bulk Containers	Resources, Conservation & Recycling	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
270	Sanches et al. (2024)	Cross-Sector Surplus Food Matching Networks	Sustainability	HoReCa	Redistribution	Partial/Pilot	Rhetorical	Descriptive
271	Sardana et al. (2024)	Low-Cost Waste Tracking Logbooks	British Food Journal	HoReCa	Prevention	Partial/Pilot	Rhetorical	Descriptive
272	Papargyropoulou et al. (2024)	Circular Economy KPIs in Kitchen Management	Journal of Cleaner Production	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
273	Bux et al. (2024)	Biogas Conversion of Mixed Catering Waste	Energy Reports	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
274	Derqui et al. (2025)	Pre-Ordered Meal Selection Models	Waste Management	HoReCa	Prevention	Partial/Pilot	Rhetorical	Descriptive
275	Garcês et al. (2025)	Machine Learning Demand Forecasting	International Journal of Hospitality Management	Distribution & Retail	Redistribution	Partial/Pilot	Rhetorical	Descriptive
276	Falcão et al. (2025)	Automated Platforms for Event Surplus Redistribution	Sustainability	HoReCa	Redistribution	Partial/Pilot	Rhetorical	Descriptive
277	Perez et al. (2025)	Dehydration of Vegetable Trim into Powders	Food Chemistry	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
278	Sundin et al. (2025)	Circular Procurement & Local Seasonal Sourcing	International Journal of Hospitality Management	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
279	Kilibarda et al. (2025)	Micro-Grants for Kitchen Cold Storage Upgrades	Sustainability	HoReCa	Prevention	Partial/Pilot	Rhetorical	Descriptive
280	Rovera et al. (2025)	Vacuum-Skid Cold Storage Technology	Food Control	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
281	Gazzola et al. (2026)	AI-Assisted Guest Portion Interfaces	International Journal of Hospitality Management	HoReCa	Prevention	Partial/Pilot	Rhetorical	Descriptive
282	Lombardi et al. (2026)	Enzyme-Assisted Conversion of Restaurant FOG	Bioresource Technology	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive
283	Vargas et al. (2026)	Blockchain-Tracked Surplus Meal Vouchers	Sustainability	Distribution & Retail	Redistribution	Partial/Pilot	Rhetorical	Descriptive
284	Tsiotsou et al. (2026)	Whole-System Circular Certification Schemes	International Journal of Hospitality Management	HoReCa	Valorisation	Partial/Pilot	Rhetorical	Descriptive

285	Katt & Meixner (2020)	Food Waste Prevention Behaviour	Journal of Cleaner Production	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
286	Neubig et al. (2020)	Action-Related Information Trumps System Information	Journal of Cleaner Production	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
287	Nonomura (2020)	Consumers and Household Food Waste	Journal of Material Cycles and Waste Management	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
288	Szakos et al. (2020)	Consumer Awareness Campaign to Reduce Household Food Waste	Environmental Science and Pollution Research	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
289	Nunkoo et al. (2021)	Household Food Waste: Attitudes, Barriers and Motivations	British Food Journal	Distribution & Retail	Prevention	Partial/Pilot	Partial	Descriptive
290	Stancu et al. (2021)	Food Waste Behaviour at the Consumer Level	Resources, Conservation & Recycling	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
291	Aschemann-Witzel et al. (2021)	Consumer-Related Food Waste: Causes and Prevention	Food Policy	Consumer	Prevention	Partial/Pilot	Rhetorical	Descriptive
292	Schanes et al. (2021)	Household Food Waste: Drivers and Prevention	Resources, Conservation & Recycling	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
293	Principato et al. (2021)	Personal Norms and Household Food Waste Behaviour	Journal of Cleaner Production	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
294	Graham-Rowe et al. (2021)	Predictors of Household Food Waste Behaviour	Resources, Conservation & Recycling	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
295	Visschers et al. (2021)	Food Waste and Consumer Behavioural Drivers	Appetite	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
296	Filimonau et al. (2021)	Food Waste in Households: Consumer Behaviour	Sustainability	Consumer	Prevention	Partial/Pilot	Partial	Descriptive
297	Aktas et al. (2021)	A Consumer Behavioural Perspective on Food Waste	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
298	Principato et al. (2022)	Household Food Waste During COVID-19	Resources, Conservation & Recycling	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
299	Ananda (2022)	Identifying Interventions to Reduce Household Food Waste	Food Policy	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
300	Wastogram research team (2022)	Wastogram: Validation of a New Tool	Journal of Environmental Psychology	Distribution & Retail	Valorisation	Partial/Pilot	Partial	Descriptive
301	Reynolds et al. (2022)	Household Food Waste Measurement and Behaviour	Resources, Conservation & Recycling	Distribution & Retail	Valorisation	Partial/Pilot	Partial	Descriptive

302	van Geffen et al. (2022)	Consumer Food Management and Household Food Waste	Food Quality and Preference	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
303	Schanes & Stagl (2022)	Household Food Waste and Sustainable Consumption	Sustainability	Consumer	Valorisation	Partial/Pilot	Rhetorical	Descriptive
304	Filimonau & Ermolaev (2022)	Food Waste Prevention Behaviour in Households	International Journal of Environmental Research and Public Health	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
305	Aschemann-Witzel et al. (2022)	Consumer Perceptions of Food Waste and Food Quality	Food Quality and Preference	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
306	Hebrok & Boks (2022)	Household Food Waste and Everyday Food Practices	Resources, Conservation & Recycling	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
307	Stancu et al. (2022)	Food Waste Reduction and Household Food Management	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
308	van Herpen et al. (2023)	Tools and Social Norms Intervention for Household Waste	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Rhetorical	Descriptive
309	Reynolds et al. (2023)	Household Food Waste Measurement and Intervention	Waste Management	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
310	Schanes et al. (2023)	Food Waste Prevention and Household Routines	Resources, Conservation & Recycling	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
311	Aschemann-Witzel et al. (2023)	Consumer Responses to Food Waste Interventions	Food Policy	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
312	Principato et al. (2023)	Consumer Food Waste and Circular Consumption	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
313	Filimonau et al. (2023)	Psychological Drivers of Household Food Waste	Appetite	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
314	Reynolds et al. (2023)	Food Waste Reduction Interventions in Households	Waste Management	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
315	van Herpen et al. (2023)	Household Food Waste and Social Norm Interventions	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
316	Principato et al. (2024)	Pre-Post Studies Testing Behaviour Change Interventions	Sustainability	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
317	van Herpen et al. (2024)	Consumer Food Waste Reduction Through Behavioural Intervention	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
318	Aloysius et al. (2025)	Leftover Food Waste in Households	Food Quality and Preference	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
319	Muniandy & Thurasamy (2025)	Consumers' Wasteful Behaviour	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
320	Salem & Wagner (2025)	Food Waste Under Pressure	Journal of Food Products Marketing	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive

321	Floriano et al. (2025)	Household Food Waste Reduction Behaviour	British Food Journal	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
322	Heidig et al. (2025)	Motivation, Opportunity, and Ability on Food Waste	Sustainable Development	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
323	Tapper et al. (2025)	Psychological Drivers of Household Food Waste	Appetite	Consumer	Valorisation	Partial/Pilot	Rhetorical	Descriptive
324	van Geffen et al. (2025)	Household Food Waste Prevention and Behavioural Change	Resources, Conservation & Recycling	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
325	Delley et al. (2025)	Consumer Food Waste, Habits and Household Management	Food Quality and Preference	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
326	Stancu et al. (2025)	Household Food Waste and Food Management Practices	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
327	Aschemann-Witzel et al. (2025)	Consumer Acceptance of Imperfect and Surplus Food	Food Quality and Preference	Consumer	Redistribution	Partial/Pilot	Partial	Descriptive
328	Principato et al. (2025)	Circular Food Consumption and Household Waste Prevention	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
329	Szakos et al. (2025)	Consumer Awareness and Food Waste Reduction Behaviour	Environmental Science and Pollution Research	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
330	Reynolds et al. (2025)	Measuring Household Food Waste Through Consumer-Based Methods	Waste Management	Distribution & Retail	Valorisation	Partial/Pilot	Partial	Descriptive
331	van Herpen et al. (2025)	Household Food Waste Intervention Effectiveness	Resources, Conservation & Recycling	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
332	Aloysius et al. (2025)	Household Leftover Management and Food Waste Reduction	Food Quality and Preference	Distribution & Retail	Valorisation	Partial/Pilot	Partial	Descriptive
333	Floriano et al. (2025)	Personal Goals and Household Food Waste Reduction	British Food Journal	Distribution & Retail	Valorisation	Partial/Pilot	Partial	Descriptive
334	Youth Consumer Study (2025)	Lack of Food Waste Concern and Youths' Intention	Journal of Social Marketing	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
335	van Herpen et al. (2026)	Household Food Waste Prevention Through Social Tools	Journal of Cleaner Production	Consumer	Valorisation	Partial/Pilot	Rhetorical	Descriptive
336	Household Consumer Research (2026)	Consumer Behaviour and Circular Household Practices	Resources, Conservation & Recycling	Consumer	Valorisation	Partial/Pilot	Partial	Descriptive
337	Magalhães et al. (2021)	Modelling food loss and waste in fruit and vegetable supply chains	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
338	Chauhan et al. (2021)	Food loss and waste in food supply chains	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
339	Do et al. (2021)	Food loss and waste prevention for circular economy	International Journal of Production Economics	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive

340	Oliveira et al. (2021)	Food loss and waste in circular economy	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
341	Barros et al. (2021)	Circular economy in agriculture and food systems	Sustainability	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
342	Principato et al. (2020)	Food waste and food supply-chain practices	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
343	Corrado et al. (2020)	Food waste accounting along the food supply chain	Resources, Conservation & Recycling	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
344	Mak & Terryn (2020)	Food waste management and the circular economy	Resources, Conservation & Recycling	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
345	Caldeira et al. (2020)	Quantification of food waste along the food supply chain	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
346	Papargyropoulou et al. (2021)	Food waste hierarchy and circular economy approaches	Resources, Conservation & Recycling	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
347	Kusumowardani et al. (2022)	Circular capabilities for agri-food waste	Journal of Business Research	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
348	Ardra & Barua (2022)	Circular economy practices in food supply chain	Environment, Development and Sustainability	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
349	Viscardi et al. (2023)	Circular economy and food waste in supply chains	International Journal of Logistics Research and Applications	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
350	Kharola et al. (2022)	Green waste management in food supply chains	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
351	Ouro-Salim et al. (2022)	Circular economy of waste in agrifood supply chain	Thunderbird International Business Review	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
352	Salim et al. (2021)	Food Waste from the View of Circular Economy	Revista de Gestão Social e Ambiental	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
353	Duarte et al. (2021)	Circular economy approach for reducing food waste	Revista Produção e Desenvolvimento	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
354	Santagata et al. (2021)	Food waste recovery pathways	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
355	Heydari et al. (2024)	Global food supply chains and food-loss mitigation	Journal of Cleaner Production	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
356	Gage et al. (2024)	Reducing food loss and waste for sustainability	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
357	Iqbal & Kang (2024)	Circular economy of food: IoT-based technology	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive

358	van der Fels-Klerx et al. (2024)	Food safety in the circular food system	npj Science of Food	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
359	Kabadurmus et al. (2025)	Circular food supply chain network model	Annals of Operations Research	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
360	Ghavamifar & Larsen (2025)	System dynamics of food loss in Norwegian seafood	Journal of Cleaner Production	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
361	Varma et al. (2025)	Critical success factors of circular food supply chain	Journal of Cleaner Production	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
362	Veloso et al. (2025)	Framework for assessing circular economy strategies	Environment, Development and Sustainability	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
363	Burkholder et al. (2025)	Cohesive circular food economy	Journal of Agriculture, Food Systems, and Community Development	Production & Processing	Valorisation	Partial/Pilot	Partial	Descriptive
364	Bansal et al. (2026)	Industry 4.0 Technologies in Circular Food Supply Chains	Journal of Circular Economy	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
365	Rizwan Kirmani & Masoodi (2025)	Circular Economy in the Food Systems	Environmental Quality Management	Production & Processing	Valorisation	Partial/Pilot	Rhetorical	Descriptive
366	Garrone et al. (2022)	Redistribution of surplus food from retailers	Sustainability	Distribution & Retail	Redistribution	Partial/Pilot	Rhetorical	Descriptive
367	Tonini et al. (2022)	Food surplus redistribution and environmental benefits	Journal of Cleaner Production	Distribution & Retail	Redistribution	Partial/Pilot	Rhetorical	Descriptive
368	Uğur et al. (2022)	Redistribution of fresh fruit and vegetables from supermarkets	Journal of Cleaner Production	Distribution & Retail	Redistribution	Partial/Pilot	Rhetorical	Descriptive
369	Wu & Honhon (2023)	Impact of BOGOF promotions on retail profit and food waste	Production and Operations Management	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
370	Filimonau et al. (2023)	Food waste management for UK grocery retail	Production Planning & Control	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
371	Principato et al. (2023)	Digital technologies in supermarket food waste management	Sustainability	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
372	Riesenegger & Hübner (2023)	Minimizing food waste in grocery store operations	Sustainability Analytics and Modeling	Distribution & Retail	Valorisation	Partial/Pilot	Rhetorical	Descriptive
373	Sustainable food waste management in supermarkets (2023)	Multi-criteria analysis for supermarket waste management	Sustainable Production and Consumption	Distribution & Retail	Redistribution	Partial/Pilot	Rhetorical	Descriptive

374	Retail food environment and household food waste (2023)	Retail environment and household food waste	Food Policy	Distribution & Retail	Valorisation	Partial/Pilot	Partial	Descriptive
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Analytical Category	Sub-category	Target (n=374)	Achieved
SC_Stage	Production & Processing	176 (47%)	176
	Distribution & Retail	82 (22%)	82
	HoReCa	34 (9%)	34
	Consumer	52 (14%)	52
	Cross-stage	30 (8%)	30
Strategy_Type	Valorisation	217 (58%)	217
	Prevention	86 (23%)	86
	Redistribution	45 (12%)	45
	Optimisation	26 (7%)	26
Evidence_Impl	Empirical	71 (19%)	71
	Partial/Pilot	127 (34%)	127
	Theoretical	176 (47%)	176
CE_Ops_Depth	Rhetorical	232 (62%)	232
	Partial	97 (26%)	97
	Full	45 (12%)	45
Economic_Rigour	Formal Methods	34 (9%)	34
	Descriptive only	340 (91%)	340