	T								ı	ı		1				1	
						Industrie	Industrie	System		Introduction/Goal and Scope: Activites on CE	Inventory analysis: Data on CE activities	CE activities:	Impact assessment: Specific indicator for CE activities	Results: Statement on relevance of CE activities with regard to final LCA	Interpretation: Sensitivity on	Outlook: Suggestions for further CE activities	Reproducibility: Final LCA results were documented in a reproducible way by distinguishing between several
Paper	Author(s)	Year	Title	DOI	(End-)Product	Macro	Meso	boundaries	Functional unit	described	reported	R-Principles	applied	results	CE analyzed	derived	life cycle stages
	Abd Rashid, AF:		Environmental Impact Analysis on Residential Building in Malaysia				Construction	cradle-to-						No			
1	Idris, J; Yusoff, S	2017	Using Life Cycle Assessment	http://dx.doi.org/10.3390/su9030329	House	Construction	of buildings	grave	1 m^2 of gross floor area	Brief	Basic	Recycle	No	statement	No	No	No
			Life Cycle Assessment Framework														
	Abouhamad, M;		for Embodied Environmental Impacts of Building Construction				Construction	cradle-to-			Out of		Out of	Out of			
2	Abu-Hamd, M	2021	Systems	http://dx.doi.org/10.3390/su13020461	University building	Construction	of buildings	grave	n.d.	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
			Life Cycle Assessment of an NMC Battery for Application to Electric														
	Accardo, A;		Light-Duty Commercial Vehicles				Manufacture		1 kWh of Nominal								
2	Dotelli, G; Musa, ML; Spessa, E	2021	and Comparison with a Sodium- Nickel-Chloride Battery	http://dx.doi.org/10.3390/app11031160	NMC battery for electric vehicle	Manufacturing	of electrical equipment	cradle-to-	energy capacity of the battery pack	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
3	ML; Spessa, E	2021	Nickei-Chionde Battery	nttp://dx.doi.org/10.5590/app11051160	electric venicie	Manuracturing	Crop and	grave	battery pack	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
							animal										
			Environmental life cycle assessment of utilizing stem waste for banana			Agriculture,	production, hunting and										
	Adsal, KA; Uctug,		production in greenhouses in			forestry and	related service	cradle-to-	2 tons of bananas		Out of		Out of	Out of			
4	FG; Arikan, OA Ahamed, A;	2020	Turkey Life cycle assessment of plastic	http://dx.doi.org/10.1016/j.spc.2020.02.009	Banana	fishing	activities	grave	produced	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
	Vallam, P; Iyer,		grocery bags and their alternatives				Manufacture										
	NS; Veksha, A;		in cities with con fi ned waste management structure: A Singapore				of rubber and	anadla ta	920 million has		Out of		Out of	Out of			
5	Bobacka, J; Lisak, G	2021	case study	http://dx.doi.org/10.1016/j.jclepro.2020.123956	grocery bags	Manufacturing	plastics products	cradle-to- grave	820 million bag equivalents	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
			-			Electricity,	Electricity,										
						gas, steam and air	gas, steam and air										
	Al-Behadili, SH;		Life Cycle Assessment of Dernah			conditioning	conditioning	cradle-to-	the kWh electricity		Out of		Out of	Out of			
6	El-Osta, WB Alberola-Borras,	2015	(Libya) wind farm	http://dx.doi.org/10.1016/j.renene.2015.05.041	Wind farm	supply	supply	grave	produced	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
7	JA; Vidal, R; Juarez-Perez, EJ; Mas-Marza, E; Guerrero, A; Mora-Sero, I	2018	Relative impacts of methylammonium lead triiodide perovskite solar cells based on life cycle assessment	http://dx.doi.org/10.1016/j.solmat.2017.11.008	Perovskite solar cells	Manufacturing	Manufacture of electrical equipment	cradle-to- grave	1 cm^2 of active surface area	Comprehensive	Basic	Reuse, Recycle	No	Low	No	No	No
			Optimum operational lifespan of household appliances considering														
	Alejandre, C;		manufacturing and use stage		washing machine,		Manufacture										
8	Akizu-Gardoki, O; Lizundia, E	2022	improvements via life cycle assessment	http://dx.doi.org/10.1016/j.spc.2022.04.007	microwave, dishwasher	Manufacturing	of electrical equipment	cradle-to- grave	operating lifespan of each electric appliance	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
J	Alhazmi, H;	2022	assessment	http://dx.doi.org/10.1010/j.spc.2022.01.007	distivusios	Manufacturing	equipment	grave	сиси стесите аррианес	Out of Scope	Беоре	Out of Beope	Беоре	Беоре	Out of Beope	out of Beope	Out of Beope
	Alduwais, AK; Tabbakh, T;								villa with a total gross								
	Aljamlani, S;		Environmental Performance of						floor area (GFA) of 387								
0	Alkahlan, B; Kurdi, A	2021	Residential Buildings: A Life Cycle Assessment Study in Saudi Arabia	http://dx.doi.org/10.3390/su13063542	house (villa)	Construction	Construction of buildings	cradle-to- grave	m^2 and a lifespan of 50 years	No	No	No	No	No statement	No	No	No
,	Kurui, 71	2021	Assessment Study in Saudi Arabia	http://dx.doi.org/10.3370/su13003342	nouse (vina)	Electricity,	Electricity,	grave	years	110	110	110	110	Statement	140	110	110
	Al-Khori, K; Al- Ghamdi, SG;		Life Cycle Assessment for Integration of Solid Oxide Fuel			gas, steam and	gas, steam and										
	Boulfrad, S; Koc,		Cells into Gas Processing			air conditioning	air conditioning	cradle-to-			Out of		Out of	Out of			
10	M	2021	Operations	http://dx.doi.org/10.3390/en14154668	fuel cell	supply	supply	grave	1 MW electricity output	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
			Comparative Cradle-to-Grave Life Cycle Assessment of Low and Mid-														
	Aller IZ Di III		Rise Mass Timber Buildings with		5112		Const	11			0		0-4 6	0			
11	Allan, K; Phillips, AR	2021	Equivalent Structural Steel Alternatives	http://dx.doi.org/10.3390/su13063401	5- and 12-story building	Construction	Construction of buildings	cradle-to- grave	n.d.	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
	Almutairi, K;															3. 2. Jope	2.2.20
	Thoma, G; Burek, J; Algarni, S;		Life cycle assessment and ecoNomic analysis of residential air				Manufacture of electrical	cradle-to-	climate control of 1 m^2								
12	Nutter, D	2015	conditioning in Saudi Arabia	http://dx.doi.org/10.1016/j.enbuild.2015.06.004	air conditioning	Manufacturing	equipment	grave	of living area	Brief	Basic	Recycle	No	Low	No	No	No
	Alvarez-del- Castillo, MD;								1								
	Garrido-Soriano,		Environmental Impact of Chicken						equivalent mass necessary to make all the								
	N; Casadesus, M;		Feathers Based Polypropylene				Manufacture		internal panels of an								
	Macanas, J; Molins-Duran, G;		Composites Developed for Automotive and Stationary				of motor vehicles,		average car; 2. equivalent mass to								
	Carrillo-		Applications and Comparison with		automotive/stationary		trailers and	cradle-to-	manufacture fat Non-			_		No			
13	Navarrete, F	2022	Glass-Fibre Analogues	http://dx.doi.org/10.1007/s12649-022-01810-0	applications (panels)	Manufacturing	semi-trailers Manufacture	grave	structural panels required number of	Brief	Basic	Recover	No	statement	No	No	No
	Anil, SK; Ma, JF;		Life cycle assessment comparison				of rubber and		wooden or plastic pallets			Reuse, Repair,					
14	Kremer, GE; Ray, CD; Shahidi, SM	2020	of wooden and plastic pallets in the grocery industry	http://dx.doi.org/10.1111/jiec.12974	wodden and plastic pallets	Manufacturing	plastics products	cradle-to- grave	for a certain number of trips	Brief	Basic	Recycle, Recover	No	Low	Quantitative	Brief	No
17	CD, Gilainui, Givi	2020	5.0001 industry	impirandonoig (0.1111/jicc.127/4	puncts		products	Siuve	1 kWh electricity	Dile:	Dusic	Recover	110	LOW	Zuminunve	Bilei	110
	Analonia M		Life Cycle Assessment of an		Waya caraas		Manufacture of electrical	aradla t	delivered to the								
15	Apolonia, M; Simas, T	2021	Oscillating Wave Surge Energy Converter	http://dx.doi.org/10.3390/jmse9020206	wave energy converter	Manufacturing	equipment	cradle-to- grave	Portuguese electricity network	Brief	Basic	Recycle	No	High	Quantitative	Brief	No
	Asadi, S;		Environmental and ecoNomic life				Manufacture		required amount of								
	Babaizadeh, H; Foster, N; Broun,				PEX and copper		of fabricated metal	cradle-to-	piping for each alternative for the under					No			
16	R	2016	study	http://dx.doi.org/10.1016/j.jclepro.2016.08.006	pipes	Manufacturing	products,	grave	study building	Brief	No	Recycle	No	statement	No	No	No
	Babaizadeh, H;		cycle assessment of PEX and copper plumbing systems: A case		PEX and copper		of fabricated	cradle-to-	piping for each					No			
1 16	K	2016	study	nttp://dx.doi.org/10.1016/j.jclepro.2016.08.006	pipes	Manufacturing	products,	grave	study building	Brief	No	Recycle	No	statement	No No	No	No

	1	1		T	1	1	1	1	T	1		1			T		
							except machinery and										
							equipment										
	Ata-Ali, N; Penades-Pla, V;		Recycled versus Non-recycled insulation alternatives: LCA				Specialized										
	Martinez-Munoz,		analysis for different climatic				construction	cradle-to-						No			
17	D; Yepes, V	2021	conditions in Spain	http://dx.doi.org/10.1016/j.resconrec.2021.105838	ventilated facedes	Construction	activities	grave	1 m^2	Brief	No	Recycle	No	statement	No	No	No
			Comparative life cycle assessment of electric motors with different														
			efficiency classes: a deep dive into				Manufacture		provision of mechanical								
18	Auer, J; Meincke,	2018	the trade-offs between the life cycle	http://dx.doi.org/10.1007/s11367-017-1378-8	alaatria matara	Manufacturing	of electrical	cradle-to-	power in an applied	Brief	Basic	Recycle, Recover	No	Low	No	Community	No
18	A	2018	stages in ecodesign context Environmental Overcost of Single	http://dx.doi.org/10.100//s1136/-01/-13/8-8	electric motors	Manufacturing	equipment	grave	usage scenario	Brief	Basic	Recover	N0	Low	No	Comprehensive	No
			Family Houses in Insular Context:														
19	Ayagapin, L; Praene, JP	2020	A Comparative LCA Study of Reunion Island and France	http://dx.doi.org/10.3390/su12218937	single family houses	Construction	Construction of buildings	cradle-to- grave	1 m^2 of constructed area floor	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
19	Babaizadeh, H;	2020	Reunion Island and France	http://dx.doi.org/10.3390/su12216937	shighe family houses	Construction	of buildings	grave	area moor	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
	Haghighi, N;		Life cycle assessment of exterior				Specialized										
20	Asadi, S; Broun, R; Riley, D	2015	window shadings in residential buildings in different climate zones	http://dx.doi.org/10.1016/j.buildenv.2015.03.038	exterior shades	Construction	construction activities	cradle-to- grave	1 unit of shading	Brief	Basic	Recycle	No	No statement	No	No	No
20	K, Kiley, D	2013	A comparative life cycle assessment	http://dx.doi.org/10.1010/j.bundenv.2015.05.050	steel and concrete	Construction	activities	grave	1 tillt of shading	Brief	Dasic	Recycle	110	Statement	110	140	110
	D		(LCA) of concrete and steel-		prefinished		Specialized	.,									
21	Balasbaneh, AT; Ramli, MZ	2020	prefabricated prefinished volumetric construction structures in Malaysia	http://dx.doi.org/10.1007/s11356-020-10141-3	volumetric construction	Construction	construction activities	cradle-to- grave	1 m^2 of a wall component	Brief	Basic	Reuse, Recycle	No	High	No	No	No
	1441111, 1412	2020	Construction structures in Manaysia	mapin distance of the second s	Construction	Construction	Crop and	grave	Component	Ditt.	Duore	Trease, Treeyere	110	111511	110	110	110
	Bandekar, PA:		Credle to creave life evole				animal										
	Putman, B;		Cradle-to-grave life cycle assessment of production and			Agriculture,	production, hunting and										
	Thoma, G;		consumption of pulses in the United			forestry and	related service	cradle-to-			Out of		Out of	Out of			
22	Matlock, M	2022	States	http://dx.doi.org/10.1016/j.jenvman.2021.114062	pulses	fishing	activities	grave	60 g of pulses	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
23	Baydar, G; Ciliz, N; Mammadov, A	2015	Life cycle assessment of cotton textile products in Turkey	http://dx.doi.org/10.1016/j.resconrec.2015.08.007	T-Shirt	Manufacturing	Manufacture of textiles	cradle-to- grave	1000 items of knitted and dyed cotton T-shirt	No	No	No	No	No statement	No	No	No
23	Benavides, PT;	2013	Exploring Comparative Energy and	http://dx.doi.org/10.1010/j.resconice.2015.06.007	1-Sillit	Waliuracturing	of textiles	grave	and dyed cotton 1-smit	110	140	No	110	statement	No	110	NO
	Dunn, JB; Han, J;		Environmental Benefits of Virgin,				Man 6	11	26 . 500 . 1 7777								
24	Biddy, M; Markharn, J	2018	Recycled, and Bio-Derived PET Bottles	http://dx.doi.org/10.1021/acssuschemeng.8b00750	PET Bottle	Manufacturing	Manufacture of beverages	cradle-to- grave	one 26 g, 500 ml PET bottle	Brief	Basic	Recycle	No	Low	No	Brief	No
	Benveniste, G;			l l l l l l l l l l l l l l l l l l l				8									
	Pucciarelli, M; Torrell, M;		Life Cycle Assessment of microtubular solid oxide fuel cell				Manufacture										
	Kendall, M;		based auxiliary power unit systems		auxiliary power unit		of electrical	cradle-to-	450 MJ of energy			Reduce,		No			
25	Tarancon, A	2017	for recreational vehicles	http://dx.doi.org/10.1016/j.jclepro.2017.07.130	systems	Manufacturing	equipment	grave	produced	Brief	Basic	Recycle	No	statement	Quantitative	No	No
			Past, present and future environmental footprint of the			Electricity, gas, steam and	Electricity, gas, steam and										
	Besseau, R;		Danish wind turbine fleet with			air	air										
26	Sacchi, R; Blanc, I; Perez-Lopez, P	2019	LCA_WIND_DK, an online interactive platform	http://dx.doi.org/10.1016/j.rser.2019.03.030	wind turbine fleet	conditioning supply	conditioning supply			Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
20	i, reiez-Lopez, r	2019	Cradle-to-grave life cycle	http://dx.doi.org/10.1010/j.isei.2015.03.030	wind turbine freet	suppry	suppry			Out of scope	Scope	Out of Scope	Scope	Scope	Out of scope	Out of Scope	Out of Scope
	Bhatt, A;		assessment (LCA) of low-impact-		low-impact-				1 m^2 of impervious								
27	Bradford, A; Abbassi, BE	2019	development (LID) techNologies in southern Ontario	http://dx.doi.org/10.1016/j.jenvman.2018.10.033	development (LID) parking lot	Construction	Civil engineering	cradle-to- grave	area treated by the system	Brief	Basic	Reuse, Recycle	No	No statement	No	No	No
	71000331, BE	2017	Life cycle environmental impact	http://dx.doi.org/10.1010/j.jenvinan.2010.10.055	parking for	Construction	engineering	grave	System	Bilei	Busic	reuse, recycle	110	Statement	110	110	110
			comparison of solid oxide fuel cells fueled by natural gas, hydrogen,			Electricity, gas, steam and	Electricity, gas, steam and										
			ammonia and methaNol for			air	air										
28	Bicer, Y; Khalid,	2020	combined heat and power	http://dx.doi.org/10.1016/j.ijhydene.2018.11.122		conditioning	conditioning			Out of Scope	Out of Scope	Out of Samue	Out of	Out of	Out of Source	Out of Scope	Out of Scope
28	F	2020	generation Carbon and Energy Footprints of	nttp://dx.doi.org/10.1016/j.ijnydene.2018.11.122		supply	supply			Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
			Prefabricated Industrial Buildings:														
29	Bonamente, E; Cotana, F	2015	A Systematic Life Cycle Assessment Analysis	http://dx.doi.org/10.3390/en81112333	prefabricated industrial buildings	Construction	Construction of buildings	cradle-to- grave	1 m^3 of prefabricated building	Brief	No	Recycle	No	No statement	No	No	No
27	Bonamente, E;	2013	Assessment Analysis	http://dx.doi.org/10.3370/en01112333	maustrai bundings	Electricity,	Electricity,	grave	bunding	Dilei	110	Recycle	110	Statement	110	110	110
	Pelliccia, L;		The Multifunctional Environmental			gas, steam and	gas, steam and										
	Merico, MC; Rinaldi, S;		Energy Tower: Carbon Footprint and Land Use Analysis of an		stand-alone renewable energy	air conditioning	air conditioning	cradle-to-	1 kWh of produced								
30	Petrozzi, A	2015	Integrated Renewable Energy Plant	http://dx.doi.org/10.3390/su71013564	plant	supply	supply	grave	energy	Brief	Basic	Recycle	No	Low	Quantitative	No	No
	Bonamente, E; Scrucca, F;																
	Rinaldi, S;																
	Merico, MC; Asdrubali, F;		Environmental impact of an Italian wine bottle: Carbon and water				Manufacture	cradle-to-						No			
31	Asdrubali, F; Lamastra, L	2016	footprint assessment	http://dx.doi.org/10.1016/j.scitotenv.2016.04.026	wine bottle	Manufacturing	of beverages	grave	0,75 1 wine bottle	No	Basic	Recycle	No	statement	No	No	No
	Botejara-Antunez,		•														
1	M; Gonzalez- Dominguez, J;		Comparative analysis of flat roof systems using life cycle assessment				Specialized										
	Garcia-Sanz-		methodology: Application to				construction	cradle-to-			1		[No			
33	Calcedo, J	2022	healthcare buildings	http://dx.doi.org/10.1016/j.cscm.2022.e01212	flat roof	Construction	activities	grave	1 m^2 of roof area	No	No	No	No	statement	No	No	No
			Life cycle assessment of two packaging materials for carbonated														
			beverages (polyethylene														
			terephthalate vs. glass): Case study for the lebanese context and														
	Boutros, M; Saba,		importance of the end-of-life				Manufacture	cradle-to-	hold 50 ml of a								
34	S; Manneh, R	2021	scenarios	http://dx.doi.org/10.1016/j.jclepro.2021.128289	bottles	Manufacturing	of beverages	grave	carbonated beverage	Brief	Basic	Reuse, recycle	No	High	Quantitative	No	No
1	Buccino, C; Ferrara, C;		LCA of an ice cream cup of polyethylene coated paper: how				Manufacture of rubber and										
1	Malvano, C; De		does the choice of the end-of-life				plastics	cradle-to-						No			
35	Feo, G Burchart-Korol,	2019	affect the results?	http://dx.doi.org/10.1080/09593330.2017.1397771	ice cream cup	Manufacturing	products Manufacture	grave	one ice cream cup	No	No	Recover	No	statement	No	No	No
	D; Jursova, S;						of motor										
	Folega, P; Korol,		Environmental life cycle assessment				vehicles,	11						N			
36	J; Pustejovska, P; Blaut, A	2018	of electric vehicles in Poland and the Czech Republic	http://dx.doi.org/10.1016/j.jclepro.2018.08.145	electric vehicle	Manufacturing	trailers and semi-trailers	cradle-to- grave	150.000 km	No	No	No	No	No statement	No	No	No
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						Water supply; sewerage,											
						waste											
			Environmental life cycle assessment			management and											
	Burchart-Korol,		of septic tanks in urban wastewater			remediation		cradle-to-									
37	D; Zawartka, P	2019	system - a case study for Poland Sustainability assessment of circular	http://dx.doi.org/10.24425/aep.2019.130243	septic tanks	activities	Sewerage	grave	1 population-equivalent	Brief	Basic	Recycle	No	Low	No	No	No
			building alternatives: Consequential														
	Buyle, M; Galle, W; Debacker, W;		LCA and LCC for internal wall assemblies as a case study in a				Specialized construction	cradle-to-	one 1m^2 space dividing								
38	Audenaert, A	2019	Belgian context	http://dx.doi.org/10.1016/j.jclepro.2019.01.306	wall	Construction	activities	grave	wall	Comprehensive	Basic	Reuse, Recycle	No	High	Qualitative	Brief	No
			Integrating life cycle assessment (LCA) and life cycle costing (LCC)				Manufacture										
			in the early phases of aircraft				of other										
40	Calado, EA; Leite, M: Silva, A	2019	structural design: an elevator case study	http://dx.doi.org/10.1007/s11367-019-01632-8	aircraft elevator	Manufacturing	transport equipment	cradle-to- grave	one medium size cargo aircraft elevator	Brief	Basic	Recycle, Recover	No	Low	No	No	No
40	Cappucci, GM;	2019	study	http://dx.doi.org/10.1007/811307-019-01032-8	ancian elevator	Manuracturing	equipment	grave	aliciali elevatoi	Blici	Basic	Recover	NO	Low	NO	NO	NO
	Ruffini, V; Barbieri, V;						Specialized										
	Siligardi, C;		Life cycle assessment of wheat husk				construction	cradle-to-									
41	Ferrari, AM Carvalho, ML;	2022	based agro-concrete block Life Cycle Assessment of	http://dx.doi.org/10.1016/j.jclepro.2022.131437	wall	Construction	activities Manufacture	grave	1 m^2 of wall	Brief	Basic	Recycle	No	Low	Quantitative	Brief	No
	Temporelli, A;		Stationary Storage Systems within				of electrical	cradle-to-	1 kWh of energy			Recycle,					
42	Girardi, P	2021	the Italian Electric Network	http://dx.doi.org/10.3390/en14082047	battery	Manufacturing	equipment Manufacture	grave	released	Brief	Basic	Recover	No	Low	No	No	No
	Casamayor, JL;		Comparative life cycle assessment				of electrical	cradle-to-	the production of 948 lm			Reduce,		No			
43	Su, D; Ren, Z	2018	of LED lighting products	http://dx.doi.org/10.1177/1477153517708597	table lamp	Manufacturing	equipment	grave	of light	Brief	Basic	Recycle	No	statement	Quantitative	No	No
	Cascione, V; Roberts, M; Allen,																
	S; Dams, B; Maskell, D; Shea,		Integration of life cycle assessments				Specialized					Reuse, Remanufacture.				1	
	A; Walker, P;		(LCA) in circular bio-based wall				construction	cradle-to-				Recycle,					
44	Emmitt, S Casson, A; Beghi,	2022	panel design	http://dx.doi.org/10.1016/j.jclepro.2022.130938	wall	Construction	activities	cradle	1 m^2	Brief	No	Recover	No	Low	No	No	No
	R; Giovenzana, V;		Visible Near Infrared Spectroscopy				Manufacture										
	Fiorindo, I; Tugnolo, A;		as a Green TechNology: An Environmental Impact Comparative				of vegetable and animal oils	cradle-to-	the pool of analyses necessary to obtain the					No			
45	Guidetti, R	2019	Study on Olive Oil Analyses	http://dx.doi.org/10.3390/su11092611	olive oil	Manufacturing	and fats	grave	three parameters	No	No	No	No	statement	No	No	No
	Cecchel, S; Chindamo, D;																
	Collotta, M;						Manufacture										
	Cornacchia, G; Panvini, A;		Lightweighting in light commercial vehicles: cradle-to-grave life cycle				of motor vehicles,										
	Tomasoni, G;		assessment of a safety-relevant				trailers and	cradle-to-									
46	Gadola, M	2018	component Life Cycle Assessment of	http://dx.doi.org/10.1007/s11367-017-1433-5	vehicle	Manufacturing	semi-trailers Manufacture	grave	350000 km driven	Brief	Basic	Recycle	No	Low	Quantitative	No	No
			Environmental Emissions and				of motor										
	Chen, YS; Ding,		Scenario Simulation of an Automotive Power Seat		automotive power		vehicles, trailers and	cradle-to-	usage of seats for 15			Reuse, Remanufacture,					
47	ZS; Liu, JH	2019	Considering Scrap Recycling	http://dx.doi.org/10.1089/ees.2018.0507	seats	Manufacturing	semi-trailers	grave	years	Brief	Basic	Recycle	No	Low	No	No	No
			Life Cycle Assessment of Fuel Cell Vehicles Considering the Detailed				Manufacture										
			Vehicle Components: Comparison				of motor										
	Chen, YS; Hu, X;		and Scenario Analysis in China Based on Different Hydrogen		fuel cell vehicle		vehicles, trailers and	cradle-to-									
48	Liu, JH	2019	Production Schemes	http://dx.doi.org/10.3390/en12153031	(Toyota Mirai)	Manufacturing	semi-trailers	grave	250000 km driven	Brief	Basic	Recycle	No	High	No	No	No
			Comparative Life-Cycle Assessment of a High-Rise Mass														
	Chara 71. Ca		Timber Building with an Equivalent														
	Chen, ZJ; Gu, HM; Bergman,		Reinforced Concrete Alternative Using the Athena Impact Estimator				Construction	cradle-to-									
49	RD; Liang, SB	2020	for Buildings	http://dx.doi.org/10.3390/su12114708	building	Construction	of buildings	grave	n.d.	Brief	No	Reuse, Recycle	No	Low	No	No	No
							Crop and animal										
	Cibelli, M; Cimini, A;					Agriculture,	production, hunting and										
	Cerchiara, G;		Carbon footprint of different			forestry and	related service	cradle-to-									
50	Moresi, M	2021	methods of coffee preparation Effect of Brewery Size on the Main	http://dx.doi.org/10.1016/j.spc.2021.04.004	Coffee	fishing	activities	grave	one 40 ml cup of coffee	Brief	Basic	Recycle	No	Low	No	No	No
			Process Parameters and Cradle-to-						1 hL of lager beer								
51	Cimini, A; Moresi, M	2018	Grave Carbon Footprint of Lager Beer	http://dx.doi.org/10.1111/jiec.12642	beer	Manufacturing	Manufacture of beverages	cradle-to- grave	packed in 66-cL (glass or PET) bottles	Comprehensive	Basic	Reuse, Repair, Recycle	No	Low	Quantitative	Brief	No
31		2010	Mitigation measures to minimize	mp mandonoig 10/1111/jico.12072		uructuring	or coverages	510		20mprononsive	Dasie	1.0000	1.0	25"	Zuminutivo .	2	1.0
			the cradle-to-grave beer carbon footprint as related to the brewery						1 hL of lager beer packed in 66-cL glass			Reduce,				1	
	Cimini, A;		size and primary packaging	l			Manufacture	cradle-to-	(GB) or PET (PB)			Recycle,		1_			
52	Moresi, M	2018	materials	http://dx.doi.org/10.1016/j.jfoodeng.2018.05.001	beer	Manufacturing	of beverages Manufacture	grave	bottles	Brief	Basic	Recover	No	Low	No	No	No
							of wood and of										
							products of wood and										
							cork, except										
							furniture; manufacture of										
			The environmental footprint of				articles of		closure + separation of 2								
	Cobut, A; Blanchet, P;		interior wood doors in Non- residential buildings - part 1: life				straw and plaiting	cradle-to-	rooms with communicating surface					No			
=-	Blancher, P:			1-4//d d-:/10 1016/: :-1 2015 04 070	door	Manufacturing	materials	grave	of 2.1 by 0.9 m	No	No	No	No	statement	No	Brief	No
53	Beauregard, R	2015	cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2015.04.079	door			5.4.0	· ·			-10			110		
53		2015	Life cycle assessment and energy-	nttp://dx.doi.org/10.1016/j.jciepro.2015.04.079	door	Electricity,	Electricity,	giuro							110		
53	Beauregard, R Comodi, G; Bevilacqua, M;	2015	Life cycle assessment and energy- CO2-ecoNomic payback analyses of renewable domestic hot water	http://dx.doi.org/10.1016/j.jciepro.2015.04.079		Electricity, gas, steam and air	Electricity, gas, steam and air		entire equipment able to satisfy the hot water						110		
53	Beauregard, R Comodi, G;	2015	Life cycle assessment and energy- CO2-ecoNomic payback analyses of	http://dx.doi.org/10.1016/j.gciepro.2013.04.079	domestic hot water	Electricity, gas, steam and	Electricity, gas, steam and	cradle-to-	entire equipment able to	Brief	No	Recycle	No	No statement		No	No

	Pelagalli, L;																
	Venella, P Cordella, M;		Evolution of disposable baby														
	Bauer, I; Lehmann, A;		diapers in Europe: life cycle assessment of environmental				Manufacture		production and								
55	Schulz, M; Wolf, O	2015	impacts and identification of key areas of improvement	http://dx.doi.org/10.1016/j.jclepro.2015.02.040	disposable baby diapers	Manufacturing	of wearing apparel	cradle-to- grave	consumption of one unit of product	Brief	No	Recycle, Recover	No	Low	No	Brief	No
56	Corradini, G; Pierobon, F;	2019	Product environmental footprint of a cross-laminated timber system: a	hu//- 1-:/10.1007/-11267.010.1541	MHM (Massiv-Holz-	Construction	Specialized construction	cradle-to-	1 42	Dist	N-	Reduce,	N-	No	N	D.:f	N
50	Zanetti, M Cossutta, M; Vretenar, V;	2019	case study in Italy	http://dx.doi.org/10.1007/s11367-018-1541-x	Mauer) wall element	Construction	activities	grave	1 m^2 of wall element	Brief	No	Recycle	No	statement	No	Brief	No
	Centeno, TA; Kotrusz, P;		A comparative life cycle assessment				Manufacture		1 supercapacitor rack of								
57	McKechnie, J; Pickering, SJ	2020	of graphene and activated carbon in a supercapacitor application	http://dx.doi.org/10.1016/j.jclepro.2019.118468	supercapacitor application	Manufacturing	of electrical equipment	cradle-to- grave	5 supercapacitors with capacitance of 5 F	Comprehensive	Basic	Reuse, Recycle	No	High	No	Brief	No
	Cucinotta, F; Raffaele, M;		A comparative Life Cycle Assessment of two sister cruise				Manufacture of other										
58	Salmeri, F; Sfravara, F	2021	ferries with Diesel and Liquefied Natural Gas machinery systems	http://dx.doi.org/10.1016/j.apor.2021.102705	ship	Manufacturing	transport equipment	cradle-to- grave	1 ship during its lifetime	Brief	Basic	Recycle	No	No statement	No	No	No
	Cusenza, MA; Guarino, F;		An integrated energy simulation and life cycle assessment to measure the operational and embodied energy of				Specialized										
59	Longo, S; Cellura,	2022	a Mediterranean net zero energy building	http://dx.doi.org/10.1016/j.enbuild.2021.111558	Net zero energy building	Construction	construction	cradle-to- grave	1 m^2 conditioned area during one year	Comprehensive	Advanced	Recycle, Recover	No	Low	No	No	No
	Dalla Riva, A; Burek, J; Kim, D;	2022	Environmental life cycle assessment	mps/axaololg 10.1010/jellediid.20211111556	bunding	Construction	uctivities	grave	during one year	Comprehensive	ravancea	Recover	110	Low	110	110	110
	Thoma, G; Cassandro, M; De		of Italian mozzarella cheese: Hotspots and improvement		High moisture		Manufacture of dairy	cradle-to-	l kg of HM mozzarella					No			
60	Marchri, M	2017	opportunities	http://dx.doi.org/10.3168/jds.2016-12396	mozzarella cheese	Manufacturing	products Crop and	grave	cheese	Brief	Basic	Recycle	No	statement	No	No	No
	D'Ammaro, D; Capri, E;		Benchmarking of carbon footprint				animal production,										
61	Valentino, F; Grillo, S; Fiorini, E: Lamastra, L	2021	data from the Italian wine sector: A comprehensive and extended analysis	hun-//dm dm:/10 1016/5 text 2001 146416	wine	Agriculture, forestry and fishing	hunting and related service activities	cradle-to-	1 bottle of 0.75 L of wine	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
01	Dani, AA; Roy, K; Masood, R; Fang,	2021	A Comparative Study on the Life Cycle Assessment of New Zealand	http://dx.doi.org/10.1016/j.scitotenv.2021.146416	wine	nsning	Construction	grave cradle-to-	annual carbon emissions per gross floor area	Out of Scope	Scope	Reuse, Recycle,	Scope	No	Out of Scope	Out of Scope	Out of Scope
62	ZY; Lim, JBP David, G; Vega,	2022	Residential Buildings	http://dx.doi.org/10.3390/buildings12010050	residential building	Construction	of buildings	cradle	(GFA)	Brief	Basic	Recover	No	statement	No	No	No
	GC; Sohn, J; Nilsson, AE;								1 tray of standard model								
	Helias, A; Gontard, N;		Using life cycle assessment to quantify the environmental benefit				Manufacture of rubber and		(176 × 162 × 40 mm, GN 1/6 type), 25 cm3 in								
63	Angellier-Coussy, H	2021	of upcycling vine shoots as fillers in biocomposite packaging materials	http://dx.doi.org/10.1007/s11367-020-01824-7	rigid tray	Manufacturing	plastics products	cradle-to- grave	volume, for single-use packaging	Brief	No	Recycle	No	No statement	No	Brief	No
	De Marco, I;		Uncertainty of input parameters and sensitivity analysis in life cycle				Processing and preserving of		500 g of mashed tomato								
64	Riemma, S; Lannone, R de Otazu, RLDD:	2018	assessment: An Italian processed tomato product	http://dx.doi.org/10.1016/j.jclepro.2017.12.258	mashed tomatos	Manufacturing	fruit and vegetables	cradle-to- grave	produced and packaged in Tetra Pak®	Brief	Basic	Recycle, Recover	No	No statement	No	Brief	No
	Akizu-Gardoki, O; de Ulibarri, B;		Ecodesign coupled with Life Cycle				Manufacture										
	Iturrondobeitia, M; Minguez, R;		Assessment to reduce the environmental impacts of an		industrial enzymatic		of chemicals and chemical	cradle-to-	1 kg of detergent in its			Reduce, Reuse,					
65	Lizundia, E Delgado, MAS;	2022	industrial enzymatic cleaner Comparative Life Cycle Assessment	http://dx.doi.org/10.1016/j.spc.2021.11.016	multipurpose cleaner	Manufacturing	products Manufacture	grave	container (1) per cell manfactured,	Brief	Basic	Recycle	No	Low	Quantitative	Brief	No
66	Usai, L; Pan, QY; Stromman, AH	2019	of a Novel Al-Ion and a Li-Ion Battery for Stationary Applications	http://dx.doi.org/10.3390/ma12193270	Al-ion battery	Manufacturing	of electrical equipment	cradle-to- grave	(2) per Wh of storage capacity	Comprehensive	Advanced	Recycle	No	Low	No	No	No
	Deng, YL; Paraskevas, D;		Life cycle assessment of flax-fibre														
67	Tian, YJ; Van Acker, K; Dewulf, W; Duflou, JR	2016	reinforced epoxidized linseed oil composite with a flame retardant for electronic applications	http://dx.doi.org/10.1016/j.jclepro.2016.05.172	biobased PCB substrate	Manufacturing	Manufacture of electrical equipment	cradle-to- grave	1 m^2 of PCB substrate with a thickness of 1.6 mm	Comprehensive	Advanced	Recycle, Recover	No	Low	No	No	No
07	w, Dullou, JK	2010	енесновые аррисацовія	map.a/ux.uoi.org/10.1010/j.jciepi0.2010.05.172	Substrate	ivianuracturing	Manufacture of other non-	grave	ndii	Comprehensive	Auvanced	Recover	INU	LOW	INU	INU	INU
	Diaz-Basteris, J; Rivero, JCS;		Life cycle assessment of restoration				metallic mineral	cradle-to-									
68	Menendez, B Donahue, LM;	2022	mortars and binders	http://dx.doi.org/10.1016/j.conbuildmat.2022.126863	mortar	Manufacturing	products	grave	1 t mortar	Brief	No	Recycle	No	Low	No	Brief	No
(0	Hilton, S; Bell, SG; Williams, BC;	2020	A comparative carbon footprint analysis of disposable and reusable	hun//d- d-:/10 10165 : - 2020 02 027		Mari S. J.	Other	cradle-to-	completion of 20 gynecologic	D.i.f.	N	P.···	V	Tr. 1	Omerica di	Dist	N
69	Keoleian, GA	2020	Pathway to domestic natural rubber	http://dx.doi.org/10.1016/j.ajog.2020.02.007	vaginal specula	Manufacturing	manufacturing Manufacture	grave	examinations	Brief	No	Reuse	Yes	High	Quantitative	Brief	No
	Eranki, PL;		production: a cradle-to-grave life cycle assessment of the first guayule automobile tire manufactured in the				of rubber and plastics	cradle-to-	(1) 1 kg of natural					No			
70	Landis, AE	2019	United States	http://dx.doi.org/10.1007/s11367-018-1572-3	guayule tire	Manufacturing	products Manufacture	grave	rubber, (2) 1 tire	Brief	Basic	Recover	No	statement	No	No	No
	Erkayaoglu, M;		A comparative life cycle assessment of material handling systems for		off-highway trucks		of machinery and equipment	cradle-to-			Out of		Out of	Out of			
71	Demirel, N Evangelista, PPA;	2016	sustainable mining Environmental performance	http://dx.doi.org/10.1016/j.jenvman.2016.03.011	and belt conveyors	Manufacturing	n.e.c.	operation	square meters of total	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
72	Kiperstok, A; Torres, EA;	2018	analysis of residential buildings in Brazil using life cycle assessment	http://dv.doi.org/10.1016/j.combuild	maidantial building	Construction	Construction	cradle-to-	built-up area of the building per year	No	No	No	No	No	No	No	No
72	Goncalves, JP Evangelisti, S;	2018	(LCA)	http://dx.doi.org/10.1016/j.conbuildmat.2018.02.045	residential building	Construction	of buildings Manufacture of computer,	grave	(m^2/year)	No	No	No	INO	statement	No	NO	No
	Evangelisti, S; Tagliaferri, C; Brett, DJL;		Life cycle assessment of a polymer electrolyte membrane fuel cell				electronic and optical	cradle-to-	1 km driven by one			Recycle,					
73	Lettieri, P	2017	system for passenger vehicles	http://dx.doi.org/10.1016/j.jclepro.2016.11.159	fuel cell vehicle	Manufacturing	products	grave	vehicle (car)	Brief	Basic	Recover	No	Low	No	No	No

Part		1		_	Г	1					1		1		1		ı	
1				Comparing environmental impacts				Manufacture		manufacturing of two specific parts in								
1				of additive manufacturing vs						acrylonitrile butadiene								
Control Cont	74		2015		http://dx.doi.org/10.1108/RPI-07-2013-0067		Manufacturing				Brief	No		No	Low	Qualitative	No	No
Part	7.4		2013	ussessinen	http://dx.doi.org/10.1100/R13-07-2013-0007	macinics	Wandracturing	II.C.C.	grave	similar polymer	Bilei	110	Recover	110	Low	Quartative	110	110
No. Proc.																		
No. 19									cradle-to-						No			
No. Control	75		2021		http://dx.doi.org/10.1016/j.scitotenv.2020.144392	gas heat pump	Manufacturing			1 kWh of thermal energy	Brief	Advanced	Recycle	No		No	No	No
1.		E MALL M										0		06	0			
Property	76		2015		http://dx.doi.org/10.1016/j.iclepro.2014.07.057		Manufacturing	1			Out of Scope		Out of Scope		1	Out of Scope	Out of Scope	Out of Scope
Mark No.				2, 2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2							0.00.00.00.00	2397	0.0000000000000000000000000000000000000	22372	2297		0.0000000000000000000000000000000000000	
20								Othor	anadla ta						No			
March Marc	77		2021		http://dx.doi.org/10.3390/su13126657	inhaler	Manufacturing				Brief	No	Recycle	No		No	No	No
March Marc							Ĭ											
Mathematical Math				A comparative life cycle assessment				1		to transport 46 people								
Contact Cont									cradle-to-									
Part	78	Gheewala, SH	2021	and diesel buses in Thailand	http://dx.doi.org/10.1016/j.jclepro.2021.128013	diesel/electric bus	Manufacturing		grave	years	Brief	No	Recycle	No	Low	No	Brief	No
Proc. ACAS Section and an elementary of the control of the con		Gagliardi, F;																
19. March of Control 19.		Rosa, ADL;						vehicles,										
Control Cont	70		2021	, i	http://dv.doj.org/10.1016/j.jcleppo.2021.128528		Manufacturing				Brief	Racio	Pacycla	No	Low	No	No	No
Part	19		2021	The side door initiasion beam	http://dx.doi.org/10.1010/j.jciepi0.2021.128328	beams	Manuracturing	seilli-traffets	grave	01 17,7 KJ	Bilei	Dasic	Recycle	NO	LOW	NO	NO	NO
Marchant Control Con																		
March Control Contro								1										
Column C		Pontrandolfo, A;		hollow glass containers for food				mineral	cradle-to-									
Control Cont	80	Paiano, A	2021	1 6 6 11	http://dx.doi.org/10.1007/s11367-020-01797-7	glass container	Manufacturing	1	grave	glass	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
March Co. Post		Galve. JE:		-		plastic component												
Column C		Elduque, D; Pina,		Polypropylene: A Comparison with		present in the		plastics										
Column	81	C; Javierre, C	2022	Alternative Virgin Materials	http://dx.doi.org/10.1007/s40684-021-00363-2	induction cooktops	Manufacturing			to the costumer	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
Action No. Control		Gamboa, CJO;																
18				, ,														
County C	82		2021		http://dx.doi.org/10.1007/s11367-021-01992-0	rubberized asphalt	Manufacturing				Out of Score		Out of Scope			Out of Scope	Out of Scope	Out of Scope
Prof. Act. Manufactures Manufa	02	, .	2021	Tubberized uspilar	http://dx.doi.org/10.100//511307/021/01992/0	ruoocrizea aspitati	Wandracturing	products			Out of Beope	Беоре	Out of Beope	Беоре	Беоре	Out of Beope	Out of Beope	out of scope
Manual August 2011 Collection Collec				Y:0 1 . 11:0 1		1:./1		N 6 1										
Month Colored Part Part Colored Base									cradle-to-	the whole Turboalgor								
Concession C. Friefrey Concession C. Friedrich C. Friefrey Concession C. Friedrich C. Fr	83		2021	for refrigeration units	http://dx.doi.org/10.1016/j.jclepro.2021.126442		Manufacturing				Brief	Advanced	Recycle	No	Low	No	Brief	No
Les Cycle Assistance and any of control of LA Assistance deal for a control of control of the co		Candraault C		,						The demostic use of 1 tra								
Section Part								Manufacture										
Convex. J.P. Conv			2020								D . c	.,	_		1 1			
Solven GA De Normal Automated Marche Service	84		2020		http://dx.doi.org/10.100//s11367-020-01765-1	corrugated box	Manufacturing		grave	US in 2014	Brief	No	Recover	No	statement	No	No	No
Mailington, T. 2018 Biffers State St		Keoleian, GA; De		Connected and Automated				of motor										
Section Carlos									anadla ta						No			
Gildaon, S. Brosspelle, I.; Some B, Liu, G; Wholin, R. Gomes, R. Bristin, D, 2019 Brin, J 2019 B	85		2018		http://dx.doi.org/10.1021/acs.est.7b04576		Manufacturing				No	No	No	No	1.7	No	No	No
Gildanon, S. Bolto, D. Son, B. Liu, G. Sones, R. Silversy, D. de Silversy, D.							Ĭ											
Gallacion, S. Bolla, S. Bo																		
Briseglello, L. Son, B. Lu, G. Son, B. Lu, G. Son, B. Lu, G. Son, B. Lu, G. Gomes, R. Silvae, D. de Silvae, D. de Gouveia, R. Silvae, E. Munt,		Gislason, S;																
Son, B. Liu, G. Noboul, R. Son, B. Liu, G. Noboul, R. Son, B. Liu, G. Noboul, R. Son, C. Silvestic, D.; de Silvestic, D.																		
Section Sect								Other	cradle-to-									
Gomes, R; Silvester, ID; de Silvester, ID; de Silvester, ID; de Companie and Life Cycle Assessment of Thermal Insulation himself in mineral insulation in the first of the Part of the Par	86				http://dx.doi.org/10.1007/s10098-022-02343-9	load-bearing beam	Manufacturing	manufacturing	1	50 years	Brief	Basic	Reuse, Recycle	No	Low	Quantitative	Brief	No
Gomes, R; Silvestr, D; de Brito, J. 2019 Life cycle assessment of a renewable energy generation system with a vanatime meds filto battery in a NZEB household A joint organization of University of A point (SEP) and SCIENCE Man, Dist. Catenon, NS: R8 Martis, AA Gordon, I. B. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robins, C. Bright, C. Gomes, R. Bright, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robinson, C. Bright, C. Gomes, R. Bright, C. Gomes, R. Bright, A; Cadama, J. Daon, J. Daon, J. Daon, J. Ludditt, S; Robinson, C. Bright, C. Gomes, R. Brig																		
Brito, J. 2019 Tiles for Flat Roofs I fire yell assessment of a renewable energy generation system with a vanadium redox flow battery in a NZEB household A joint organization of University of the NZyberhouse of Proving (IA), School of Engineering of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZyberhouse of Proving (ISB) and the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization of University of the NZEB household A joint organization organization of University of the NZEB household A joint organization								metallic										
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Cadman, J; Dixon, J; Ludditt, S; Robinson, C; Solitation of converting from single-use to reusable sharps of plastics of plast				Before/after intervention study to						total fill line litres (FLL)								
Robinson, C; 2021 single-use to reusable sharps containers in 40 UK NHS trusts containers in		Cadman, J; Dixon,		determine impact on life-cycle						of sharps containers								
89 Toping, C 2021 containers in 40 UK NHS trusts http://dx.doi.org/10.1136/bmjopen-2020-046200 sharps container Manufacturing products grave years across the 40 trusts Brief Basic Recycle No High Qualitative Brief No Gul, H; Uctug, FG; 90 Gurger, IV; Moretti, C; Hamelin, L; Jakobsen, LG; Steingrimsdottir, Steingrims									cradle-to				Reduce					
Gul, H; Uctug, FG; of industrially produced pickled and roasted vegetables http://dx.doi.org/10.1007/s13762-021-03740-1 pickled cucumbers, roasted capia peppers Manufacturing products grave household Brief Basic Recycle No statement No	89		2021		http://dx.doi.org/10.1136/bmjopen-2020-046200	sharps container	Manufacturing	products			Brief	Basic		No	High	Qualitative	Brief	No
90 Gungormusler, M roasted vegetables http://dx.doi.org/10.1007/s13762-021-03740-1 roasted capia peppers Manufacturing products grave household Brief Basic Recycle No statement No		Gul, H; Uctug,		Environmental life cycle assessment				Manufacture	**	one 1-kg jar (gross-								
Gursel, IV; Moretti, C; Hamelin, L; Jakobsen, LG; Steingrimsdottir, Comparative cradle-to-grave life cycle assessment of bio-based and Comparative cradle-to-grave life terephthalate (PET) Manufacture Cradle-to-providing a shelf life of Out of Out of Out of Out of	90				http://dx.doi.org/10.1007/s13762-021-03740-1	1	Manufacturing		1		Brief	Basic	Recycle	No	1 1	No	No	No
Hamelin, L; Jakobsen, LG; Steingrimsdottir, Comparative cradle-to-grave life cycle assessment of bio-based and Comparative cradle-to-grave life terephthalate (PET) Manufacture Cradle-to- providing a shelf life of Out of Out of Out of	70	Gursel, IV;		Tousion regonitories	mp=/unidonorg/10.100//313/02*021*03/40*1	Tousted capita peppers	ivianuracturing	products	State	nousciroiu	Dilei	Dusic	recjeic	110	Statement	110	110	110
Jakobsen, LG; Comparative cradle-to-grave life Steingrimsdottir, cycle assessment of bio-based and polyethylene terephthalate (PET) Manufacture cradle-to-providing a shelf life of Out of Out of Out of										packagina water in an								
Steingrimsdottir, cycle assessment of bio-based and terephthalate (PET) Manufacture cradle-to- providing a shelf life of Out of Out of		1 1		Comparative cradle-to-grave life		polyethylene												
91 MM; Junginger, 2021 petrochemical PET bottles http://dx.doi.org/10.1016/j.scitotenv.2021.148642 bottles Manufacturing of beverages grave at least 9 months Out of Scope Scope Scope Out of	0.1	Steingrimsdottir,	202	cycle assessment of bio-based and		terephthalate (PET)				providing a shelf life of	0 . 62		0			0	0	0
	91	MM; Junginger,	2021	petrochemical PET bottles	http://dx.doi.org/10.1016/j.scitotenv.2021.148642	bottles	Manufacturing	of beverages	grave	at least 9 months	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope

	M; Hoibye, L; Shen, L																
92	Hahnel, G; Whyte, A; Biswas, WK	2021	A comparative life cycle assessment of structural flooring systems in Western Australia	http://dx.doi.org/10.1016/j.jobe.2020.102109	structural flooring systems	Construction	Specialized construction activities	cradle-to- cradle	floor area of 25 m^2	Comprehensive	Advanced	Reduce, Recycle, Recover	No	Low	No	Brief	No
93	Hampo, CC; Ya, HH; Abd Majid, MA; Mokhtar, AA; Rasangika, AHDK; Muhammed, M	2021	Life Cycle Assessment of a Vapor Compression Cooling System Integrated within a District Cooling Plant	http://dx.doi.org/10.3390/su132111940	vapor compression system	Electricity, gas, steam and air conditioning supply	Electricity, gas, steam and air conditioning supply	cradle-to- grave	he VCC systems used to charge the TES tank in a DC plant	Brief	Basic	Reduce, Recycle, Recover	No	No statement	No	No	No
94	Han, BL; Wang, RS; Yao, L; Liu, HX; Wang, ZG	2015	Life cycle assessment of ceramic facade material and its comparative analysis with three other common facade materials	http://dx.doi.org/10.1016/i.iclepro.2015.03.032	ceramic façade	Construction	Specialized construction activities	cradle-to- grave	1 m^2 CFP	Comprehensive	Advanced	Reduce, Reuse, Recycle	No	Low	No	Brief	No
95	Hasik, V; Escott, E; Bates, R; Carlisle, S; Faircloth, B; Bilec, MM	2019	Comparative whole-building life cycle assessment of reNovation and new construction	http://dx.doi.org/10.1016/j.buildenv.2019.106218	building	Construction	Construction of buildings	cradle-to- grave	1 building	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
96	Hayek, J; El Bachawati, M; Manneh, R	2021	Life cycle assessment and water footprint scarcity of yogurt	http://dx.doi.org/10.1007/s10668-021-01445-6	yogurt	Manufacturing	Manufacture of dairy products	cradle-to- grave	1 kg of yogurt in a transportable container	Brief	Basic	Reuse	No	Low	No	Brief	No
	He, MB; Zong, SX; Li, YC; Ma, MM; Ma, X; Li, K; Han, X; Zhao, MY; Guo, LP; Xu,		Carbon footprint and carbon neutrality pathway of green tea in			Agriculture, forestry and	Crop and animal production, hunting and related service	cradle-to-				Reduce,					
97	YL Helmers, E; Dietz,	2022	China Sensitivity Analysis in the Life- Cycle Assessment of Electric vs. Combustion Engine Cars under Approximate Real-World	http://dx.doi.org/10.1016/j.accre.2022.04.001	green tea	fishing	activities Manufacture of motor vehicles, trailers and	grave cradle-to-	n.d.	Brief	Basic	Recover	No	High	No	Comprehensive	No
98	J; Weiss, M Herrando, M; Elduque, D; Javierre, C;	2020	Conditions Life Cycle Assessment of solar energy systems for the provision of heating, cooling and electricity in	http://dx.doi.org/10.3390/su12031241	car	Manufacturing Electricity, gas, steam and air conditioning	semi-trailers Electricity, gas, steam and air conditioning	grave cradle-to-	building energy system able to provide the energy demand of the	Brief	Basic	Reduce, Reuse	No	Low	No	Brief	No
100	Fueyo, N Hicks, AL; Halvorsen, H	2022	buildings: A comparative analysis Environmental impact of evolving coffee techNologies	http://dx.doi.org/10.1016/j.enconman.2022.115402	coffee brewing	supply	supply Manufacture of electrical	grave cradle-to-	6,5 years of coffee brewer lifetime	No No	No No	No No	No No	No	No No	No No	No No
101	Hidalgo-Crespo, J; Moreira, CM; Jervis, FX; Soto, M; Amaya, JL; Banguera, L	2022	Circular ecoNomy of expanded polystyrene container production: Environmental benefits of household waste recycling considering renewable energies	http://dx.doi.org/10.1007/s11367-018-1575-0 http://dx.doi.org/10.1016/j.egyr.2022.01.071	food containers	Manufacturing Manufacturing	Manufacture of rubber and plastics products	grave cradle-to-grave	1.00 kg of 5 × 5 inch. with an average weight of 5.00 grams EPS food containers in Guayaquil, Ecuador, meaning that 200 food containers are needed to fulfill the total weight	Comprehensive	Advanced	Recycle	No	statement	Quantitative	Brief	No
102	Horowitz, N; Frago, J; Mu, DY	2018	Life cycle assessment of bottled water: A case study of Green2O products	http://dx.doi.org/10.1016/j.wasman.2018.02.043	bottled water	Manufacturing	Manufacture of beverages	cradle-to- grave	12 bottles, as this amount is typically found in one pack of Green 20 water bottles	Comprehensive	Advanced	Recycle	No	High	Quantitative	Brief	No
103	Iyer, RK; Pilla, S	2021	Environmental profile of thermoelectrics for applications with continuous waste heat generation via life cycle assessment	http://dx.doi.org/10.1016/j.scitotenv.2020.141674	thermoelectric modules	Manufacturing	Manufacture of electrical equipment	cradle-to- grave	1 kWh of electricity generation	Comprehensive	Advanced	Reuse, Remanufacture, Recycle	No	Low	Qualitative	Brief	No
104	Jang, H; Jang, Y; Jeong, B; Cho, NK	2021	Comparative Life Cycle Assessment of Marine Insulation Materials	http://dx.doi.org/10.3390/jmse9101099	Out of scope			Out of scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
105	Jang, H; Jeong, B; Zhou, PL; Ha, S; Nam, D; Kim, J; Lee, JU Jasper, FB;	2020	Development of Parametric Trend Life Cycle Assessment for marine SOx reduction scrubber systems	http://dx.doi.org/10.1016/j.jclepro.2020.122821	marine SOx reduction scrubber systems	Manufacturing	Manufacture of machinery and equipment n.e.c.	cradle-to- grave	correlations between input parameters and emission levels	No	Basic	Recycle	No	No statement	No	No	No
106	Spathe, J; Baumann, M; Peters, JF; Ruhland, J; Weil, M	2022	Life cycle assessment (LCA) of a battery home storage system based on primary data	http://dx.doi.org/10.1016/j.jclepro.2022.132899	battery home storage system	Manufacturing	Manufacture of electrical equipment	cradle-to- grave	1 kWh of energy delivered by the considered systems over their lifetime	Brief	Advanced	Recycle, Recover	No	Medium	Quantitative	No	No
	Jenu, S; Deviatkin, I; Hentunen, A; Myllysilta, M; Viik, S; Pihlatie,		Reducing the climate change impacts of lithium-ion batteries by their cautious management through integration of stress factors and life		Li-ion batteries for		Manufacture of electrical	cradle-to-	25.3 MWh of electricity, low voltage, delivered to								
107	Jia, XJ; Lv, F; Li, P; Wang, WJ	2020	Life-cycle assessment of p-type multi-Si back surface field (BSF) solar module in China of 2019	http://dx.doi.org/10.1016/j.est.2019.101023 http://dx.doi.org/10.1016/j.solener.2019.12.018	p-type multi-Si back surface field (BSF) solar module	Manufacturing Manufacturing	Manufacture of electrical equipment	grave cradle-to- grave	the customers 1 kWh of AC (alternating current) electricity generated by a photovoltaic module	No Brief	Basic	Recycle Reduce, Repair	No No	Low	No Quantitative	No No	No
109	Jiang, L; Xiang, D; Tan, YF; Nie, YH; Cao, HJ; Wei, YZ; Zeng, D; Shen, YH; Shen, G	2018	Analysis of wind turbine Gearbox's environmental impact considering its reliability	http://dx.doi.org/10.1016/j.jclepro.2018.01.078	gearbox of a wind turbine	Manufacturing	Manufacture of machinery and equipment n.e.c.	cradle-to- grave	A gearbox whose rated power is 2MW, service lifetime equals 20 years and transmission efficiency (the ratio of output power to input power) equals 96%	Brief	Advanced	Reuse, Remanufacture, Recycle	No	High	Quantitative	Brief	No
110	Jonkers, N; Krop, H; van Ewijk, H; Leonards, PEG	2016	Life cycle assessment of flame retardants in an electronics application	http://dx.doi.org/10.1007/s11367-015-0999-z	flame retardants	Manufacturing	Manufacture of chemicals and chemical products	cradle-to- grave	the complete life cycle of a laptop containing flame retarded polymers, with a lifetime of 4 years	Brief	Advanced	Recycle, Recover	No	High	Quantitative	Brief	No

March Marc				Live i car						ı								
14 10 10 10 10 10 10 10 10 10 10				Life cycle assessment of Non- alcoholic single-serve polyethylene						amount of PET			Reduce,					
			2015	terephthalate beverage bottles in the	1, 1, 1, 1, 10, 10, 10, 10, 10, 10, 10,	prom pt					n. c			.,			n . c	
Part	111	R; Sing, J	2017	state of California	http://dx.doi.org/10.1016/j.resconrec.2016.09.011	PET Bottle	Manufacturing	- U	grave	1000 L of beverage	Brief	Advanced	Recover	No	Medium	Quantitative	Brief	No
10 10 10 10 10 10 10 10																		
13		Variables E.				amant sutility valuiala			anadla ta				Damain					
10 10 10 10 10 10 10 10	112	, ,	2018	1 2	http://dx.doi.org/10.1007/s11367-017-1315-x		Manufacturing		1		No	Basic		No	Low	No	No	No
14 15 15 15 15 15 15 15		Karan, H;		•	Tarana da marana		g	Manufacture										
March Marc	113		2020		http://dv.doi.org/10.1177/0957650919867191		Manufacturing			1 1/Wh	Rrief	Racio		No		No	Rrief	No
1	113	Harrison, Or	2020	surge wave energy converters	http://dx.doi.org/10.1177/0937030919607191		Wandracturing	equipment	grave		Brief	Dasic	Recycle	110	Statement	140	Bilei	140
15 15 15 15 15 15 15 15																		
March Column Co	114	Karasu, H; Dincer,	2020		http://dx.doi.org/10.1016/j.enbuild.2020.109940		Construction		1		Brief	No		No		No	No	No
March Color	114	1	2020	buildings. 11 case study in Canada	http://dx.doi.org/10.1010/j.chbdhd.2020.107740	bundings		activities	grave	over its metinic	Brief	110	Recycle	110	statement	140	110	140
March March Color American March M		V		Life Coult Assessment of Assess			, ,	D 4										
Proceedings		, - ,																
10													· · · · · · · · · · · · · · · · · · ·					
March Marc	115		2018	1	http://dx.doi.org/10.1111/jiec.12720						Rrief	Advanced		No	High	Quantitative	No	No
No. Cont.	110		2010		http://dx.doi.org/10.1111/jec.12720	эршэ	uctivities	SCIVICCS	grave	nght crude on	Bilei	riavancea	Recover	110	Ingn	Quantitutive	110	110
100 Jan. P. 201 100 According to the branch of the property of the p									anadla ta									
March Control Contro	116	0 , ,	2021		http://dx.doi.org/10.3390/en14020447	air conditioning	Manufacturing		1		Brief	No	Recycle	No	Low	No	No	No
19. Service 19. Servic																		
March Marc	117		2021		http://dx.doi.org/10.3390/su132413630		Manufacturing				Rrief	No		No	Low	No	Brief	No
March Company Compan	117		2021	11	http://dx.doi.org/10.3370/84132413030	generator	Manaractaring		gruve	(specified in Tubic 1)	Bilei	110	Recover	110	Low	110	Bilei	110
Marchane State Companies State Companies State Companies State				1 7					oug.#1 - 4							1		
But Company	118		2021		http://dx.doi.org/10.1007/s11367-021-01953-7	pallet	Manufacturing		1	1000 trips	Brief	Advanced		No	High	Ouantitative	Brief	No
Description Company		,	-	••	Table 10 to		g	Manufacture										
19 Total Post No. 19						Stirling cycle-based			cradle-to-	a hoiler (lifespan 15			Renair					
Companies 16 Cycle Accounter Cycle Accou	119	, , ,	2020		http://dx.doi.org/10.3390/en13174469		Manufacturing				Brief	No		No	Medium	No	No	No
3				Comment Life Coult Assessment														
196 See, Virial 300 Designed reclange from the product of any \$11,300 and \$11,300						packaging for liquid			cradle-to-	10.000 loads of					No			
Ristance Fig.	120		2020		http://dx.doi.org/10.3390/su12114669		Manufacturing	1	1	detergent	Brief	Advanced	Recycle	No	statement	No	No	No
Description Proceedings Procedings Proceedings Procedings Procedings Proceedings Procedings Proceding		/ /																
23. 24. 25.				Business viability and carbon		freeze-dried												
Companies center to green Companies Companies center to green Companies Companie	101	1 0/	2020		1,, ,,, 1, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,						N.		N.	N.		N.	27	NY.
Record, 3 Manufel, 10 Control of the Column	121	P	2020		http://dx.doi.org/10.1016/j.jciepro.2020.119991	drink mix	Manufacturing	of beverages	grave	drink mix	No	No	No	No	statement	No	No	No
Novey, Y. F. D. Vegenitive confere in application for the officient ranging Contraction Cont				environmental life cycle assessment														
Packward According Accor						two different roofing			cradle-to-						No			
Stein-Morey, M., Park Decrete, 123. Tr., George, M. S., Common Processes, 124. Tr., George, M. S., Common Processes, 125. Tr., George, M. S., Common Proce	122		2020	11	http://dx.doi.org/10.1007/s11367-019-01700-z		Construction		1	, and the second	Brief	Basic	Recycle	No		Quantitative	No	No
Part Activation Controlled Controlle							Electricity	Electricity										
Part M. Docester, 17. Cheester, 3d. 302. Third genomical of photocolates panels. Mile Cycle assessment of large-discholar plants of large-discholar										connected photovoltaic								
13.				military control of the second			11		11 .									
Monte H. Azold, A. Copula, S. Sharma, F. S	123		2021		http://dx.doi.org/10.1016/j.renene.2020.09.054	photovoltaic panels					No	Basic	Reuse, Recycle	No	High	Ouantitative	Brief	No
Sharma, J. Billy wash, H. Billy wash						•		11.7										
Berwani, H. Lathewarn, NK. 2021 Lathewarn, NK.				COVID-19 Creating aNother				Manufacture										
Manufacturing Note		Bherwani, H;		problem? Sustainable solution for				of rubber and										
Kocka, D. Lesk, A. Koze, F. Damm, V. Pintza, M. Specialized Support Predictions of Control Con	124		2021	1 5	1.44//d- d-:/10.1007/-10669.030.01032.0		Manufacturina		1		Daine	N.	D D	N/-	TT: -1.	0	N.	N/-
A K Koze, F. Ducman, V.; David, C.; David, C.; Lapsolov, O.; L	124		2021	approach	nttp://dx.doi.org/10.100//s10668-020-01033-0	equipment kit	Manuracturing	products	grave	protective equipment kit	Впеі	NO	Reuse, Recover	NO	High	Quantitative	NO	NO
Paltaza, M: Toutis, C:		A; Knez, F;																
Touris, C; 200 Fractions of Recycled Construction and Demolition Waste 1 Lagselov, O; Larson, G; Larsolle, A; 201 Hanson, PA 202 Hanson, PA 2								Specialized										
Lagselev, O; Larsolle, A; Larso	4	Tsoutis, C;		Fractions of Recycled Construction				construction					_					
Larsson, G; Larsson, G; Larsson, A; Larsso	125		2020	and Demolition Waste	http://dx.doi.org/10.3390/ma13183931	panels	Construction		cradle	panel	Comprehensive	Basic	Recycle	No	Medium	Quantitative	Brief	No
Lee, YD; Ahn, KY; Morosuk, T; Lee, YD; Ahn, KY; Morosuk, T; To The Topic Advanced (Arguer and power of the passes and for size of the passes (Arguer and power of the passes (Arguer and power of the passes (Arguer and power of the passes)		Larsson, G;						of machinery								1		
Lee, AWL; Noo, ERK; Khoo, ZY; Veo, ZQ; Tan, YS; Chog, SY; Veo, ZQ; Tan, YS; Chog, SY; Van, WJ; Lok, Eaver (EFL) reusable face mask http://dx.doi.org/10.1016/j.resconrec.2021.105580 face mask http://dx.doi.org/10.1016/j.resconrec.2021.10580 face mask http://dx.doi.org/10.1016/j.resconrec.2021.10580 face mask http://dx.doi.org/10.1016/j.resconrec.2021.10580 face mas	126		2021		http://dv.doj.org/10.2200/ou122011295		Manufacturins		1		Brief	Advonced		No	Medines	Quantitativa	No	No
ERK; Khoo, XY; Yoo, ZQ; Tan, YS; Chng, SY; Yan, WJ; Lok, ZO; Tan, YS; Chng, SY; Yan, WJ; Lok, Zo; Life cycle assessment of single-use surgical and embedded filtration http://dx.doi.org/10.1016/j.resconrec.2021.105580 face mask Manufacturing manufacturing grave person Brief Advanced Recover Yes High Quantitative Brief No	120		2021	in sweaish Agriculture	http://ux.uoi.org/10.5590/80152011285	ciecuic tractor	ivianuracturing	II.C.C.	grave	cerear, i nar-i yr-i	DIICI	Auvanced	Recover	140	iviedium	Quantitative	INU	INU
YS; Chug, SY; Ya, W; Lok, BK; Low, JSC 2021 Life cycle assessment of single-use surgical and embedded filtration http://dx.doi.org/10.1016/j.resconrec.2021.105580 face mask Manufacturing manufacturing manufacturing gas steam and air air conditioning conditioning conditioning spensor. Steam and air air conditioning conditioning conditioning spensor. Steam and air air conditioning conditioning conditioning conditioning conditioning spensor. Steam and air air conditioning		ERK; Khoo, ZY;																
Yan, W.J. Lok, BK; Low, JSC 2021 layer (EFL) reusable face mask http://dx.doi.org/10.1016/j.resconrec.2021.10580 face mask http://dx.doi.org/10.1016/j.resconr				Life cycle assessment of single-use														
Lee, YD; Ahn, KY; Morosuk, T; Statsaronis, G Leppakoski, L; Martilia, MP; Uusitalo, V; Levanen, J; Halonen, V; Halonen, V; Halonen, V; OD; Nam, OD; Pei, G; Su, OD; Pei, G; Su, OD; Su, OD; Pei, G; Su, OD; Su, OD; Pei, G; Su, OD; Solid-oxide fuel-cell-based combined-heat-and-power-generation system solid-oxide fuel-cell-based combined-heat-and-power-generation system solid-oxide fuel-cell-based combined-heat-and-power-generation system solid-oxide fuel-cell-based combined-heat-and-power-generation system solid-oxide fuel-cell-based combined-heat-and-power-generation system air conditioning cradle-to-grave n.d. No No No Recover No No No No Recover No No No No Recover No Manufacture of chemicals and chemical and c		Yan, WJ; Lok,		surgical and embedded filtration					cradle-to-									
Lee, YD; Ahn, KY; Morosuk, T; Combined-heat-and-power- combined-heat-and-power- combined-heat-and-power- generation system 128 Tsatsaronis, G Lepakoski, L; Martila, MP; Uusitalo, V; Levanen, J; Halonen, V; Hal	127	BK; Low, JSC	2021	layer (EFL) reusable face mask	http://dx.doi.org/10.1016/j.resconrec.2021.105580	face mask			grave	person	Brief	Advanced	Recover	Yes	High	Quantitative	Brief	No
Lee, YD; Ahn, KY; Morosuk, T; combined-heat-and-power- generation system http://dx.doi.org/10.1016/j.energy.2014.11.035 generation system supply supply grave n.d. No No Recover No statement No Brief No Leypakoski, L; Martila, MP; Uusitalo, V; Levanen, J; Halonen, V; Halonen, V; Levanen, J; Halonen, V; Low Marginal Lands in Finland http://dx.doi.org/10.3390/su131810097 biochar Manufacturing products grave n.d. Manufacturing products grave in soil for 100 years Brief Advanced Recover No Medium Quantitative Brief No Out of O				Environmental impact assessment		solid-oxide fuel-cell-										1		
Tastsaronis, G 2015 generation system http://dx.doi.org/10.1016/j.energy.2014.11.035 generation system supply supply grave n.d. No No Recover No statement No Brief No Leppakoski, L; Marttila, MP; Usitalo, V; Levanen, J; Assessing the Carbon Footprint of Halonen, V; Biochar from Willow Grown on Mikkila, MH 2021 Marginal Lands in Finland http://dx.doi.org/10.3390/su131810097 biochar Manufacturing products grave in soil for 100 years Brief Advanced Recover No Medium Quantitative Brief No Life-cycle assessment of a low-				of a solid-oxide fuel-cell-based		based combined-	air	air	**						N.			
Lepakoski, L; Marttila, MP; Uusitalo, V; Levanen, J; Halonen, V; Mikkila, MH 2021 Life-cycle assessment of a low- Life-cycle assessment of a low- Lepakoski, L; Manufacture of chemicals and chemical grave in soil for 100 years of electrical Manufacture of chemicals and chemical grave in soil for 100 years of electrical Out of	128		2015		http://dx.doi.org/10.1016/j.energy.2014.11.035	•			1	n.d.	No	No	Recover	No		No	Brief	No
Uusitalo, V; Levanen, J; Halonen, V; Mikkila, MH 2021 Marginal Lands in Finland Li, GQ; Yuan, QD; Pei, G; Su, Uusitalo, V; Levanen, J; Assessing the Carbon Footprint of Biochar from Willow Grown on Http://dx.doi.org/10.3390/su131810097 Biochar from Willow Grown on Http://dx.doi.org/10.3390/su131810097 biochar Manufacturing products grave in soil for 100 years Manufacture of chemicals and chemical products grave in soil for 100 years Manufacture of electrical cradle-to- of electrical cr		Leppakoski, L;	2013	a-normion of storin		Seneration system	эшрэгу	опры	5.410		0	1,0	1.000,01	1,0	Statement	1.0	2	1.0
Levanen, J; Halonen, V; Mikkila, MH 2021 Li, GQ; Xuan, QD; Pei, G; Su, Life-cycle assessment of a low- Life-cycle assessment of a low- Levanen, J; Biochar from Willow Grown on http://dx.doi.org/10.3390/su131810097 May and chemical and chemical in soil for 100 years grave in soil for 100 years Manufacture of electrical cradle-to- QD; Pei, G; Su, Life-cycle assessment of a low- Out of Assessing the Carbon Footprint of Biochar from Willow Grown on http://dx.doi.org/10.3390/su131810097 Brief Advanced Recover No Medium Quantitative Brief No Out of Out of Out of		Marttila, MP;						Monufacture										
Halonen, V; Biochar from Willow Grown on Mikkila, MH 2021 Marginal Lands in Finland http://dx.doi.org/10.3390/su131810097 biochar biochar Manufacturing products grave in soil for 100 years Brief Advanced Recover No Medium Quantitative Brief No QD; Pei, G; Su, Uniform Contentration low-concentration				Assessing the Carbon Footprint of														
Li, GQ; Xuan, QD; Pei, G; Su, Life-cycle assessment of a low- low-concentration Manufacture of electrical cradle-to- Out of Out of Out of	100	Halonen, V;	2021	Biochar from Willow Grown on	1,, //1 1 : //6 2222 / 1212 - 222	1. 1	W. C.	and chemical			D: C	.,	, n				D: c	V.
QD; Pei, G; Su, Life-cycle assessment of a low- low-concentration of electrical cradle-to- Out of Out of Out of	129		2021	Marginal Lands in Finland	nttp://dx.doi.org/10.3390/su131810097	biochar	Manufacturing		grave	in soil for 100 years	Brief	Advanced	Recover	No	Medium	Quantitative	Brief	No
130 YH; Lu, YS; Ji, J 2018 concentration PV module for http://dx.doi.org/10.1016/j.apenergy.2018.02.005 PV module Manufacturing equipment grave 1 kWp electricity supply Out of Scope Scope Out of S		QD; Pei, G; Su,						of electrical	1							1 _		
	130	YH; Lu, YS; Ji, J	2018	concentration PV module for	http://dx.doi.org/10.1016/j.apenergy.2018.02.005	PV module	Manufacturing	equipment	grave	1 kWp electricity supply	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope

			building south wall integration in		T		1	l	T	Ι	1		1	1			1
			China														
131	Liang, SB; Gu, HM; Bergman, R	2021	Environmental Life-Cycle Assessment and Life-Cycle Cost Analysis of a High-Rise Mass Timber Building: A Case Study in Pacific Northwestern United States	http://dx.doi.org/10.3390/su13147831	high-rise mass timber building	Construction	Specialized construction activities	cradle-to- grave	1 m² of living/working floor area in a mixed-use commercial/residential building in the Pacific Northwestern United States for 60 years	No	Advanced	Repair, Recycle, Recover	No	No statement	Quantitative	Brief	Yes
	Lima, MSS; Hajibabaei, M; Hesarkazzazi, S; Sitzenfrei, R; Buttgereit, A; Queiroz, C; Haritonovs, V;		Determining the Environmental Potentials of Urban Pavements by Applying the Cradle-to-Cradle LCA Approach for a Road Network of a				Civil	cradle-to-				Repair, Refurbish,					
132	Gschosser, F Liu, MY; Li, Y; Yuan, XL; Xu, Y; Qiao, L; Wang,	2021	Midscale German City Life Cycle Environmental Impact Assessment of Sulfur-Based Compound Fertilizers: A Case	http://dx.doi.org/10.3390/su132212487	urban pavements	Construction	engineering Manufacture of chemicals and chemical	cradle	1 m ² of road pavement	Comprehensive	Advanced	Recycle	No	Medium	Quantitative	No	No
133	QS; Ma, Q	2022	Study in China	http://dx.doi.org/10.1021/acssuschemeng.1c05450	fertilizer	Manufacturing	products	grave	1 ton fertilizer	Brief	No	Reduce	No	statement	Quantitative	Comprehensive	No
	Liu, W; Chen, C; Wu, HJ; Guo, CH;		Environmental life cycle assessment and techNo-ecoNomic analysis of			Electricity, gas, steam and air	Electricity, gas, steam and air		energy requirements for using DHW per person, per year, supplied by the DHW system in a typical								
134	Chen, YD; Liu, WQ; Cui, ZJ	2019	domestic hot water systems in China	http://dx.doi.org/10.1016/j.enconman.2019.111943	domestic hot water system	conditioning supply	conditioning supply	cradle-to- grave	three-person Chinese household	Brief	Basic	Reduce, Recycle	No	Medium	No	Comprehensive	No
135	Liu, WQ; Liu, H; Liu, W; Cui, ZJ	2021	Life cycle assessment of power batteries used in electric bicycles in China	http://dx.doi.org/10.1016/j.rser.2020.110596	power batteries for electric bicycles	Manufacturing	Manufacture of electrical equipment	cradle-to- grave	100-km driving distance of a typical EB driven by a group of batteries (4 × 12 V, 20 Ah)	Brief	Basic	Reduce, Reuse, Repair, Recycle	No	High	Quantitative	Brief	No
126	Liu, Y; Guo, HB; Sun, C; Chang, WS	2016	Assessing Cross Laminated Timber (CLT) as an Alternative Material for Mid-Rise Residential Buildings in Cold Regions in China-A Life-	1 ((1 (10.0000), 0.101017				Out of	065	055	Out of	0.4.69	Out of	Out of			
136	Lo-Iacono- Ferreira, VG; Vinoles-Cebolla, R; Bastante-Ceca, MJ; Capuz-Rizo,		Cycle Assessment Approach Carbon Footprint Comparative Analysis of Cardboard and Plastic Containers Used for the International Transport of Spanish	http://dx.doi.org/10.3390/su8101047	Out of scope		Manufacture of rubber and plastics	cradle-to-	Out of Scope store and transport 1000 t of product from the market of origin to the	Out of Scope	Scope	Out of Scope Reduce, Reuse, Recycle,	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
137	Loiseau, E; Colin, M; Alaphilippe, A; Coste, G; Roux, P	2021	Tomatoes To what extent are short food supply chains (SFSCs) environmentally friendly? Application to French apple distribution using Life Cycle Assessment	http://dx.doi.org/10.3390/su13052552 http://dx.doi.org/10.1016/j.jclepro.2020.124166	food containers apples	Agriculture, forestry and fishing	products Crop and animal production, hunting and related service activities	Out of scope	purchase of 1 kg of apples from a retail location	Brief Out of Scope	Out of Scope	Recover Out of Scope	Out of Scope	Medium Out of Scope	Quantitative Out of Scope	Brief Out of Scope	Out of Scope
	Ludin, NA; Affandi, NAA; Purvis-Roberts, K; Ahmad, A; Ibrahim, MA; Sopian, K; Jusoh,		Environmental Impact and Levelised Cost of Energy Analysis of Solar Photovoltaic Systems in Selected Asia Pacific Region: A			Electricity, gas, steam and air conditioning	Electricity, gas, steam and air conditioning	cradle-to-						No			
139	Luo, DQ; Xu, G; Luo, J; Cui, X;	2021	Cradle-to-Grave Approach Integrated Carbon Footprint and EcoNomic Performance of Five	http://dx.doi.org/10.3390/su13010396	photovoltaic systems	Agriculture,	crop and animal production, hunting and	grave	1 kWh, 1m^2 PV	No	No	Repair	No	statement	No	No	No
140	Shang, SP; Qian, HY	2022	Types of Dominant Cropping Systems in China's Semiarid Zone	http://dx.doi.org/10.3390/su14105844	cropping systems	forestry and fishing	related service activities	cradle-to- gate	1 ha unit area, 1 t product	No	No	No	No	No statement	No	No	No
	Luo, XJ; Oyedele, LO; Owolabi, HA; Bilal, M; Ajayi,		Life cycle assessment approach for renewable multi-energy system: A			Electricity, gas, steam and air conditioning	Electricity, gas, steam and air conditioning	cradle-to-						No			
141	AO; Akinade, OO	2020	comprehensive analysis Life cycle assessment of greenhouse	http://dx.doi.org/10.1016/j.enconman.2020.113354	multi-energy system	supply	supply	grave	not clear	No	No	Recycle	No	statement	Quantitative	No	No
142	Ma, F; Dong, WH; Fu, Z; Wang, R; Huang, Y; Liu, J	2021	gas emissions from asphalt pavement maintenance: A case study in China The electrochemical model coupled	http://dx.doi.org/10.1016/j.jclepro.2020.125595	pavement maintenance	Construction	Civil engineering	cradle-to- grave	22,5m^2 section of a highway pavement	No	Basic	Remanufacture, Recycle	No	High	Quantitative	Brief	No
143	Ma, RF; Deng, YL	2022	parameterized life cycle assessment for the optimized design of EV battery pack Prospective life cycle assessment of	http://dx.doi.org/10.1007/s11367-022-02026-z	EV battery pack	Manufacturing	Manufacture of electrical equipment	cradle-to- grave	single battery pack of the EV	Brief	Basic	Recycle	No	No statement	No	No	No
144	Manda, BMK; Worrell, E; Patel, MK	2015	an antibacterial T-shirt and supporting business decisions to create value	http://dx.doi.org/10.1016/j.resconrec.2015.07.010	antibacterial T-Shirt	Manufacturing Water supply;	Manufacture of textiles Waste	cradle-to- grave	1 T-Shirt being worn for 100 days	Brief	Basic	Reuse	No	High	Quantitative	Brief	No
145	Martinez, NM; Basallote, MD; Meyer, A; Canovas, CR; Macias, F; Schneider, P	2019	Life cycle assessment of a passive remediation system for acid mine drainage: Towards more sustainable mining activity	http://dx.doi.org/10.1016/j.jclepro.2018.11.224	dispersed alkaline substrate treatment plant	water supply; sewerage, waste management and remediation activities	collection, treatment and disposal activities; materials recovery	cradle-to-	1 m^3 of AMD treated water	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
146	Martinez-Alonso, C; Berdasco, L	2015	Carbon footprint of sawn timber products of Castanea sativa Mill. in the North of Spain	http://dx.doi.org/10.1016/j.jclepro.2015.05.004	sawn timber	Agriculture, forestry and fishing	Forestry and logging	cradle-to- gate	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
147	Martinez-Camara, E; Santamaria, J; Sanz-Adan, F; Arancon, D	2021	Digital Eco-Design and Life Cycle Assessment-Key Elements in a Circular EcoNomy: A Case Study of a Conventional Desk	http://dx.doi.org/10.3390/app112110439	desk	Manufacturing	Manufacture of furniture	cradle-to- grave	n.d.	Brief	No	Recycle	No	Medium	No	Brief	No

									combined solar (thermal								
									and PV) system that is able to cover all the energy requirements								
			Life Cycle Assessment of solar				Manufacture		(heating, cooling and electricity) of the pre-								
148	Martinopoulos, G	2018	energy conversion systems in energetic retrofitted buildings	http://dx.doi.org/10.1016/j.jobe.2018.07.027	solar conversion system	Manufacturing	of electrical equipment	cradle-to- grave	existing building for their life time	No	No	Recycle	No	No statement	No	No	No
	McAlister, S;					Human health			collection and analysis within a Victorian public hospital of a single urine								
149	Grant, T; McGain,	2021	An LCA of hospital pathology testing	http://dx.doi.org/10.1007/s11367-021-01959-1	pathology test	and social work activities	Human health activities	cradle-to- grave	sample (urinalysis), or a single blood test	Brief	No	Recycle	No	No statement	No	No	No
140	McAlister, S; Ou,	2021	coung	http://www.doi.org/10.1007/311307-021-01737-1	pathology test	work activities	Manufacture of	grave	single blood test	Bilei	110	Recycle	110	statement	110	110	110
	YJ; Neff, E; Hapgood, K;		The Environmental footprint of morphine: a life cycle assessment				pharmaceutical products and										
150	Story, D; Mealey, P; McGain, F	2016	from opium poppy farming to the packaged drug	http://dx.doi.org/10.1136/bmjopen-2016-013302	morphine	Manufacturing	pharmaceutical preparations	cradle-to- grave	100 mL of intraveNous morphine	No	No	Reduce, Reuse	No	No statement	No	No	Yes
							Crop and animal production,										
	McCarthy, D; Matopoulos, A;		Life cycle assessment in the food			Agriculture, forestry and	hunting and related service	cradle-to-	1000kg of chicken delivered,consumed,					No			
151	Davies, P	2015	supply chain: a case study The impact on life cycle carbon	http://dx.doi.org/10.1080/13675567.2014.997197	supply of poultry	fishing	activities	grave	disposed	No	No	Recycle	No	statement	No	No	Yes
			footprint of converting from disposable to reusable sharps				Manufacture										
	McPherson, B; Sharip, M;		containers in a large US hospital geographically distant from manufacturing and processing		supply of sharps		of rubber and	cradle-to-	supply of each system								
152	Grimmond, T Medeiros, DL;	2019	facilities	http://dx.doi.org/10.7717/peerj.6204	containers	Manufacturing	products	grave	for one year	Brief	Basic	Reuse, Recycle	No	High	Qualitative	Brief	Yes
	Tavares, AOD; Raposo,		Life cycle assessment in the						one office cabinet								
153	ALQRES; Kiperstok, A	2017	furniture industry: the case study of an office cabinet	http://dx.doi.org/10.1007/s11367-017-1370-3	office cabinet	Manufacturing	Manufacture of furniture	cradle-to- grave	(900mm x 1600mm x 480mm)	Brief	Basic	Reduce, Recycle	No	Low	Quantitative	Brief	Yes
	Mendecka, B;		Life Cycle Assessment of a stand- alone solar-based polygeneration			Electricity, gas, steam and air	Electricity, gas, steam and air		fulfilling the annual								
154	Tribioli, L; Cozzolino, R	2020	power plant for a commercial building in different climate zones	http://dx.doi.org/10.1016/j.renene.2020.03.063	stand-alone solar- based power plant	conditioning supply	conditioning supply	cradle-to- grave	electric demand of the reference building	No	No	Reduce	No	No statement	No	No	No
	Mendoza, JMF; D'Aponte, F;		Disposable baby diapers: Life cycle				Manufacture										
155	Gualtieri, D; Azapagic, A Meneses, M;	2019	costs, eco-efficiency and circular ecoNomy Sensitivity analysis in a life cycle	http://dx.doi.org/10.1016/j.jclepro.2018.11.146	baby diapers	Manufacturing	of wearing apparel	cradle-to- grave	manufacture and use of 1000 baby diapers	Brief	Basic	Reuse, Recycle	No	High	No	Brief	No
156	Torres, CM; Castells, F	2016	assessment of an aged red wine production from Catalonia, Spain	http://dx.doi.org/10.1016/j.scitotenv.2016.04.083	red wine	Manufacturing	Manufacture of beverages	cradle-to- grave	75 cl of red wine Crianca 2005	Brief	Advanced	Reuse, Recycle	No	High	Quantitative	Comprehensive	Yes
			Analyzing the environmental impacts of laptop enclosures using				Manufacture of computer,									•	
157	Meyer, DE; Katz, JP	2016	screening-level life cycle assessment to support sustainable	http://dx.doi.org/10.1016/j.jclepro.2015.05.143	lanton analogura	Manufacturing	electronic and optical products	cradle-to-	laptop enclosure with a 17,3-inch display	Comprehensive	Advanced	Reuse, Recycle,	Yes	High	Quantitative	Comprehensive	No
137	Mistry, M; Koffler, C; Wong,	2010	consumer electronics LCA and LCC of the world's longest pier: a case study on nickel-	http://ux.uoi.org/10.1010/j.jciepio.2013.03.143	laptop enclosure	Manufacturing	Civil	grave cradle-to-	17,5-men display	Comprehensive	Advanced	Reduce	Tes	No	Qualititative	Comprehensive	140
158	S Montalvo, FF;	2016	containing stainless steel rebar	http://dx.doi.org/10.1007/s11367-016-1080-2	pier	Construction	engineering	grave	not clear	No	Basic	Recycle	No	statement	No	No	No
	Garcia-Alcaraz, JL; Camara, EM;																
159	Jimenez-Macias, E; Blanco- Fernandez, J	2021	Environmental impact of wine fermentation in steel and concrete tanks	http://dx.doi.org/10.1016/j.jclepro.2020.123602	wine fermentation	Manufacturing	Manufacture of beverages	cradle-to- grave	20.000 L wine fermentation tank	Brief	Basic	Recycle	No	Low	No	No	No
137	Moore, AD;	2021	taliks	http://ux.uoi.org/10.1010/j.jeiepi0.2020.125002	tank	Electricity, gas, steam and	Electricity, gas, steam and	grave	Termentation tank	Bilei	Dasic	Recycle	110	Low	NO	140	140
	Urmee, T; Bahri, PA; Rezvani, S;		Life cycle assessment of domestic			air conditioning	air conditioning	cradle-to-	annual hot water load of					No			
160	Baverstock, GF	2017	hot water systems in Australia Uncertainties related to the	http://dx.doi.org/10.1016/j.renene.2016.09.062	hot water system	supply	supply	grave	34,4 MJ/d	No	No	No	No	statement	No	No	No
	Morales, MFD; Reguly, N; Kirchheim, AP;		replacement stage in LCA of buildings: A case study of a structural masonry clay hollow				Construction	cradle-to-						No			
161	Passuello, A Morales-Mora,	2020	brick wall Life cycle assessment of a Novel	http://dx.doi.org/10.1016/j.jclepro.2019.119649	brick wall	Construction	of buildings	grave	one sqaure meter of wall	No	Basic	Recycle	No	statement	No	No	No
	MA; Pijpers, JJH; Antonio, AC;		bipolar electrodialysis-based flow battery concept and its potential use				Manufacture		1 MWL		0 6		0	0: 6			
162	Soto, JD; Calderon, AMA	2021	to mitigate the intermittency of renewable energy generation	http://dx.doi.org/10.1016/j.est.2021.102339	energy storage	Manufacturing	of electrical equipment	cradle-to- gate	1 MWh module having a 20-year lifetime	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
			Life cycle assessment of stainless- steel reusable speculums versus disposable acrylic speculums in a														
163	Morris, MIR; Hicks, A	2022	university clinic setting: a case study	http://dx.doi.org/10.1088/2515-7620/ac4a3d	speculums	Manufacturing	Other manufacturing	cradle-to- grave	conducting 5.000 pelvic exams	Brief	No	Reuse, Recycle	Yes	Low	Qualitative	Brief	No
							Manufacture of wood and of										
							products of wood and cork, except		1m³: 16-mm-thick								
							furniture; manufacture of		wood-based boards with an exposedsurface area								
	Nakano, K; Ando,		Life cycle assessment of wood- based boards produced in Japan and				articles of straw and	cradle-to- gate;	of 7.0 m2 and a service life of 40 years960Int J								
164	K; Takigawa, M; Hattori, N	2018	impact of formaldehyde emissions during the use stage	http://dx.doi.org/10.1007/s11367-017-1343-6	wood boards	Manufacturing	plaiting materials	cradle-to- grave	Life Cycle Assess (2018) 23:957–969	Brief	No	Recycle	No	No statement	No	No	No

	Napolano, L;																
	Menna, C;		Life cycle environmental impact of				Specialized										
165	Asprone, D; Prota, A; Manfredi, G	2015	different replacement options for a typical old flat roof	http://dx.doi.org/10.1007/s11367-014-0807-1	replacement options for a roof	Construction	construction activities	cradle-to- grave	25m^2 roof replacement	Brief	Advanced	Reuse, Recycle	No	Low	Qualitative	No	No
	,		71						1 m2 of masonry wall in								
	Napolano, L;								the case of LRDM andGRM, 1 m of crack								
	Menna, C; Asprone, D; Prota,		LCA-based study on structural retrofit options for masonry		retrofit for masonry		Specialized construction	cradle-to-	in the case of MI, and 1 m of steel chain inthe								
166	A; Manfredi, G	2015	buildings	http://dx.doi.org/10.1007/s11367-015-0852-4	buildings	Construction	activities	grave	case of SCI	Comprehensive	Basic	Recycle	Yes	Low	No	No	No
	Naranjo, GPS; Bolonio, D;						Manufacture of motor										
	Ortega, MF;		Comparative life cycle assessment				vehicles,										
167	Garcia-Martinez, MJ	2021	of conventional, electric and hybrid passenger vehicles in Spain	http://dx.doi.org/10.1016/j.jclepro.2021.125883	car-based mobility	Manufacturing	trailers and semi-trailers	cradle-to- grave	1km travelled by a passenger in a vehicle	Brief	Basic	Recycle	No	Low	No	Brief	No
107		2021	Combining Eco-Efficiency and Eco-	inchination of the state of the	our sused mostility	- Manual actual mg	John Haners	grave		Bilei	Duste	neeyere	110	20.11	110	Bilei	110
	Niero, M; Hauschild, MZ;		Effectiveness for Continuous Loop Beverage Packaging Systems						1 hectoliter (hl) of beer (where 1 hectoliter =								
	Hoffmeyer, SB;		Lessons from the Carlsberg Circular				Manufacture	cradle-to-	100 liters); assessed in		Out of		Out of	Out of			
168	Olsen, SI Niero, M;	2017	Community	http://dx.doi.org/10.1111/jiec.12554	beer	Manufacturing	of beverages	grave	study 169	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
	Negrelli, AJ;		Closing the loop for aluminum														
	Hoffmeyer, SB; Olsen, SI;		cans: Life Cycle Assessment of progression in Cradle-to-Cradle				Manufacture	cradle-to-				Recycle,					
169	Birkved, M	2016	certification levels	http://dx.doi.org/10.1016/j.jclepro.2016.02.122	storage of drinks	Manufacturing	of beverages	cradle	containment of 1hl beer	Comprehensive	No	Recover	No	High	Quantitative	Brief	No
	Noya, LI; Vasilaki, V;																
	Stojceska, V; Gonzalez-Garcia,						Manufacture										
	S; Kleynhans, C;		An environmental evaluation of				of grain mill										
	Tassou, S; Moreira, MT;		food supply chain using life cycle assessment: A case study on gluten				products, starches and	cradle-to-	1kg of product at factory								
170	Katsou, E	2018	free biscuit products	http://dx.doi.org/10.1016/j.jclepro.2017.08.226	gluten free biscuit	Manufacturing	starch products	grave	gate	No	Basic	Reuse, Recycle	No	High	Quantitative	Brief	No
	Oquendo-Di Cosola, V;					Administrative	Services to										
	Olivieri, F; Ruiz-					and support	buildings and							l.,			
171	Garcia, L; Bacenetti, J	2020	An environmental Life Cycle Assessment of Living Wall Systems	http://dx.doi.org/10.1016/j.jenvman.2019.109743	living wall system	service activities	landscape activities	cradle-to- gate	1m^2 of LWS	No	No	No	No	No statement	No	No	No
	Oreto, C; Russo,		Tife Cools Assessment of														
	F; Veropalumbo, R; Viscione, N;		Life Cycle Assessment of Sustainable Asphalt Pavement														
172	Biancardo, SA; Dell'Acqua, G	2021	Solutions Involving Recycled Aggregates and Polymers	http://dv.doi.org/10/2200/mo14142967	acehalt mayamant	Construction	Civil engineering	cradle-to-	1-km section of a single- carriageway road	Brief	Basic	Reuse, Recycle	Yes	Low	No	Brief	No
1/2	Dell Acqua, G	2021	Aggregates and Polymers	http://dx.doi.org/10.3390/ma14143867	asphalt pavement	Construction	engineering	grave	60 years for the modern	bliei	Dasic	Reuse, Recycle	Tes	Low	NO	Bilei	INO
									school and 140 years for the historic one; three-								
									story buildings with								
			Comparative Life Cycle Assessment						semi-basement, elevated ground floor and1st								
			of a Historic and a Modern School						floor, while the type and								
173	Pachta, V; Giourou, V	2022	Building, Located in the City of Naoussa, Greece	http://dx.doi.org/10.3390/su14074216	school building	Construction	Construction of buildings	cradle-to- cradle	dimensions of their plans are similar	No	No	Recycle	No	No statement	No	No	No
	Pang, MY; Zhang,		Environmental life cycle assessment				8										
174	LX; Wang, CB; Liu, GY	2015	of a small hydropower plant in China	http://dx.doi.org/10.1007/s11367-015-0878-7	hydropower plant	Construction	Civil engineering	cradle-to- grave	1 MWh of net electricity by the plant	No	Basic	Recycle	No	No statement	No	No	No
	D D		Cradle to grave environmental				Processing and										
	Parajuli, R; Matlock, MD;		impact evaluation of the consumption of potato and tomato		potato and tomato		preserving of fruit and	cradle-to-	1kg product eaten at the								
175	Thoma, G Peceno, B; Leiva,	2021	products	http://dx.doi.org/10.1016/j.scitotenv.2020.143662	products	Manufacturing	vegetables	grave	consumer stage	No	Basic	Recycle	No	High	No	No	No
	C; Alonso-		Is Recycling Always the Best														
	Farinas, B; Gallego-Schmid,		Option? Environmental Assessment of Recycling of Seashell as		Noise barriers of		Specialized construction	cradle-to-									
176	A	2020	Aggregates in Noise Barriers	http://dx.doi.org/10.3390/pr8070776	recycled sheashell	Construction	activities	grave	1m^2 of Noise barrier	Comprehensive	Advanced	Recycle	Yes	High	Quantitative	Brief	No
	Pedneault, J; Desjardins, V;																
	Margni, M;		EcoNomic and environmental life														
	Conciatori, D; Fafard, M; Sorelli,		cycle assessment of a short-span aluminium composite bridge deck		aluminium compsite		Specialized construction	cradle-to-	traffic on two lanes over			Recycle,					
177	L	2021	in Canada	http://dx.doi.org/10.1016/j.jclepro.2021.127405	bridge	Construction	activities	gate	20m for 75 years	Brief	No	Repair	Yes	High	No	Brief	No
	Perez-Martinez, MM; Noguerol, R;		Evaluation of environmental impact of two ready-to-eat canned meat				Processing and										
178	Casales, BI; Lois, R; Soto, B	2018	products using Life Cycle Assessment	http://dv.doi.org/10.1016/j.ifoode=- 2019.05.021	most mes dust-	Manufacturing	preserving of meat	cradle-to-	unit of canned food	Brief	Advanced	Recycle	Yes	Low	No	Brief	No
1/0	A, 5010, D	2018	ASSESSMENT	http://dx.doi.org/10.1016/j.jfoodeng.2018.05.031	meat products	ivianuracturing	Manufacture	grave	unit of callied 100d	DHCI	Advanced	Recycle	1 08	LOW	INU	DHEI	INU
	Petrauskiene, K;		Comparative environmental life				of motor vehicles,										
	Skvarnaviciute,		cycle assessment of electric and				trailers and	cradle-to-									
179	M; Dvarioniene, J Petrescu, L;	2020	conventional vehicles in Lithuania	http://dx.doi.org/10.1016/j.jclepro.2019.119042	vehicle	Manufacturing Electricity,	semi-trailers Electricity,	grave	1 km driving distance	Brief	No	Recycle	Yes	Low	No	No	No
	Bonalumi, D;		Life Cycle Assessment for			gas, steam and	gas, steam and										
	Valenti, G; Cormos, AM;		supercritical pulverized coal power plants with post-combustion carbon			air conditioning	air conditioning	cradle-to-	1 MWh of net power					No			
180	Cormos, CC	2017	capture and storage	http://dx.doi.org/10.1016/j.jclepro.2017.03.225	electricity	supply	supply	grave	produced	Brief	No	Recycle	No	statement	No	No	No
	Piasecka, I;		Eco-Energetical Life Cycle			Electricity, gas, steam and	Electricity, gas, steam and										
	Baldowska-Witos,		Assessment of Materials and			air	air	ano 11 - 1	1000 MW C - 1								
181	P; Piotrowska, K; Tomporowski, A	2020	Components of Photovoltaic Power Plant	http://dx.doi.org/10.3390/en13061385	electricity	conditioning supply	conditioning supply	cradle-to- grave	1000 MWh of electric power	Brief	No	Reuse, Recycle	Yes	High	Quantitative	Comprehensive	No
			Life cycle assessment of residual				Manufacture of coke and										
	Pierobon, F;		ligNocellulosic biomass-based jet				refined										
182	Eastin, IL; Ganguly, I	2018	fuel with activated carbon and ligNosulfonate as co-products	http://dx.doi.org/10.1186/s13068-018-1141-9	biobased jet fuel	Manufacturing	petroleum products	cradle-to- grave	1 Gj of energy	No	No	Recover	No	No statement	No	No	No
104	Janguly, 1	2010	ngriosumonate as co-products	nup.//ux.uui.urg/10.1100/815000-010-1141-7	Diobascu jet fuel	ivianuiacturing	products	grave	1 Of or clicity	110	110	RECOVE	110	statement	110	110	110

March Control Contro		n · n																
Part of the Content		Pommier, R;						Manufacture										
100 March 101 March 102 March				Comparative environmental life									Reuse,					
Proc. 2 dates Proc. 2 date				- 3														
May 1 May	183	Sonnemann, G	2016	wooden boat ecodesign	http://dx.doi.org/10.1007/s11367-015-1009-1	wooden boat	Manufacturing		grave	passengers and 20 bikes	No	Basic	Repair	Yes	High	Quantitative	Brief	No
10 No. 10 10 10 10 10 10 10 10																		
Proceedings								1										
10 Processor 10								1										
10 10 10 10 10 10 10 10																		
	104		2020		hu-// 1-:/10 1016/: -: 2020 106444		Manustantina		1		Deine	D		V	T	N.	Duine	N-
10 10 10 10 10 10 10 10	184	repes, v	2020		nttp://dx.doi.org/10.1016/j.eiar.2020.106444	raii tracks	Manufacturing	equipment	grave	track	Впеі	Basic	Repair	res	Low	No	Впеі	NO
March Marc		Pourzahedi, L:						Other	cradle-to-	single-use naNosilver-								
10 10 10 10 10 10 10 10	185		2015		http://dx.doi.org/10.1021/es504655y	bandages	Manufacturing				Brief	Basic	Recycle	No	Low	No	Brief	No
Part 1. 1. 2.																		
The Content of the																		
Company Comp	186		2022		http://dv.doi.org/10.1016/j.scitoteny.2022.153105	hatteries	Manufacturing	1		1 kWh hattery pack	Comprehensive	Advanced		Ves	High	No	Brief	No
Control Cont	100	WZ, EI, GW	2022	different recycling technologies	http://dx.doi.org/10.1010/j.senotenv.2022.133103	batteries	ivianuracturing		grave	1 K W II battery pack	Comprehensive	Advanced	Керип	103	Tingii	140	Blici	140
13 15 15 15 15 15 15 15				Evaluating environmental impacts														
Control Cont									cradle-to-									
A statistical content of the conte	187		2021		http://dx.doi.org/10.1177/1475090221989195	oil tanker	Manufacturing	equipment	grave	25-year lifetime	No	Basic	Recycle	No	Low	No	No	No
10 10 10 10 10 10 10 10								C1:4										
19									cradle-to-						No			
December 1997 Control	188		2018		http://dx.doi.org/10.1016/j.iclepro.2018.03.042	building material	Construction		1	1m^2 of material	Brief	No	Recycle	No		No	No	No
Registric Content of		, ,			2													
Bay Sept Column							gas, steam and	gas, steam and										
18 AC 261 M. Control (1998) M. Contr		D.1. DO 51					air											
Part Column Col	190		2021		http://dv.doi.org/10.1016/j.cpc.2021.01.005	hot water eveters					No	Racia	Pacyala	No	Low	No	No	No
Process Proc	189	AC	2021	me cycle assessment perspective	http://dx.doi.org/10.1016/j.spc.2021.01.005	not water system			grave	service	INO	Dasic	Recycle	NO	LOW	INO	INO	INO
Part										providing 42.8L heated			1	1				
10 10 10 10 10 10 10 10				Life cycle assessment of a domestic									1					
March Marc			_						1			_	l _		1_			
Description Companies Co	190		2020	fuel used and its origin	http://dx.doi.org/10.1016/j.jenvman.2019.109786	hot water system	supply	supply	grave	service	No	Basic	Recycle	Yes	Low	No	No	No
Prince P				Life evals assessment of high														
Product No. 1900								Manufacture										
200 Section									cradle-to-									
Decreasy, 1	191		2021		http://dx.doi.org/10.1016/j.solmat.2021.111288	solar cells	Manufacturing			1 kWh	No	Basic	Reuse, Recycle	No	Low	No	Brief	No
According to compare problems of processing and p								Electricity,										
Part Continue Co													1					
192		Pachadi A.				photovoltoio			oradla to				1	1	No			
March Marc	192		2020		http://dx.doi.org/10/1007/s11356-020-09194-1				1	1 kWh	Brief	No	Reuse Recycle	Yes		No	No	No
Marrier Marr	171	zximimili, 1	2020		1007// unidonoig/10/100///011050*020*07174*1	teem totogies		эцррту ———————————————————————————————————	Siuve	A K 11 II	Diloi	110	rease, recycle	100	Statement	110	110	210
Part																		
Life yelp assessment of All Mark P 2016 And P 2016 And are profit document of the profit of the prof							waste											
103 Modular 204 Modula																		
Model P. According Company		Datham VIV.													N.			
Life Scok assessment of an approaches as the second of the process of the second of	193		2018		http://dx.doi.org/10.1016/j.iclepro.2018.01.176	water treatment					No	No	No	No		No	No	No
Regret, M. Korena, N. Swell, N. S. No. Swell, N. S. No. Swell, N.	175	Wolldar, 1	2010		http://dx.doi.org/10.1010/j.jeiep10.2010.01.170	water treatment			grave	1,511g/L	110	110	110	110	Statement	110	110	110
Britans MA; District Distri				ecological living module equipped														
194 Dyson, A 2021 Polisson Air, Section Dyson, A 2021 Poli																		
Rage; M. Morry, D. Warfiel, P. Dockli, C. Morry, D. Morry, D. Warfiel, P. Warfiel, P. Dockli, C. Morry, D. Morry, D. Warfiel, P. Warfiel, P. Dockli, C. Morry, D. Morry, D. Warfiel, P. Warfiel, P. Dockli, C. Morry, D. Morry, D. Warfiel, P. Warfiel, P. Dockli, C. Morry, D. Morry, D. Warfiel, P. Warfiel, P. Dockli, C. Dockli, C. Morry, D. Morry, D. Morry, D. Warfiel, P. Dockli, C. Morry, D. Morry, D. Morry, D. Warfiel, P. Dockli, C. Morry, D. Mo	104	, , , , , , , , , , , , , , , , , , ,	2021		1 //1 1: //0.1111/:: 12120	1 . 1			1			ъ.	D D .		1	.,		
Raugel, M. Morry, D. 195 Royant, F. 196 Royant, F. 197 Royant, F. 198 Royant, F. 199 Royant, D.	194	Dyson, A	2021	photovoltaics	http://dx.doi.org/10.1111/jiec.13129	pnotovoltaic systems	supply		gate	50 years	No	Basic	Reuse, Recycle	No	statement	No	No	No
Morrey, D. Hutchisson, A. 195 Mynifeld, P. Recault, F. Robinson to the Authority of Proteon to the Fall Recycle Pr		Raugei. M:																
Hurchinson, A; 2				A coherent life cycle assessment of														
Recantal, F. Marvegip, D. Dotells, G		Hutchinson, A;		a range of lightweighting strategies				trailers and										
Marveggio, D: Marveg	195		2015		http://dx.doi.org/10.1016/j.jclepro.2015.05.100	vehicle	Manufacturing		cradle	car	Brief	Basic	Recycle	Yes	High	Qualitative	Brief	No
Docalit. G Docalit. G Docalit. G Part Docalit. G Rindis. S.									aradla t-				1	1	No			
Rinaldi, S: Bonamente, E: Senuce, P: Merico, MC: Asdrubali, F: and Application to a Case Study Mater and Curbon Footprint of Water and Curbon Footprint of Park and Par	196		2018		http://dx.doi.org/10.1016/i.scitoteny.2017.09.187	chocolate	Manufacturing		1	1kg of dark chocolate	No	Basic	Recycle	No.		No	No	No
Bonamente, E. Scruce, I. F. Scruce, I. Scruce, I	170	,	2010	спосовие зарргу спаш	http://dx.doi.org/10.1010/j.schotchv.2017.07.18/	CHOCOIALC	ivianuiactuinig	products	SIEVE	ing of dark chocolate	110	Dusic	Recycle	110	Statement	110	110	110
Scrucca, F: Merico, MC; Asdrubali, F; Ocanal, P 2016 Ros, FC: Grau, D; Comparison of different building Water and Carbon of Organization Ristant, D: Ristant, D																		
Asdrubali, F; Univ. Mine: Methodology Review and July July July July July July July July		Scrucca, F;																
397 Cotana, F 2016 Application to a Case Study http://dx.doi.org/10.3390/su8070621 wine Manufacturing Specialized Construction Specialized Specialized Construction Specialized Sp																		
Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Reusing exterior wall framing systems. A cradle-to-cradle construction activities Remanufacture. No High Qualitative Comprehensive No	107		2016		http://dv.doi.org/10.2200/0070521		Monufact			0.75 1 min - 1 - 11	No	A 2	Dagy-1-	No		No	No	No
Reusing exterior wall framing systems: A candle-to-cradle systems: A candle-to-cradle construction activities Rixrath, D; 199 Wartha, C 2016 Rizan, C; Brophy, T; Lillywhite, R; Reed, M; Bhutta, MF 2020 Rodrigoe-Bravo, A; Cuenca-Romero, LA; Culderon, V; Rodriguez, A; Guiterez- Reusing exterior wall framing system Reusing exterior wall framing systems: A candle-to-cradle construction building systems: A candle-to-cradle construction activities Reusing exterior wall framing systems: A candle-to-cradle construction building systems: A candle-to-cradle construction building shell for single-family houses over its lifetime (thermal resistance R-15) Comprehensive No Reexycle No High Qualitative Comprehensive No Accomprehensive No Remains Reuse, Repair, Reuse, Recycle No High Quantitative Comprehensive No Rodriguez, A; Guiterez- Reuse, family houses over its lifetime (thermal resistance R-15) Comprehensive No Recycle No Low No	197	Cotana, F	2016	Application to a Case Study	ппр://dx.doi.org/10.5590/su80/0621	wine	Manufacturing	or beverages	grave		NO	Advanced	Kecycle	NO	statement	NO	INO	100
Risarth, D: Wartha, C 2019 Rizar, C, Brophy, T, Eliflywhite, R. Reed, M.; Bhuta, DO MF Rodrigo-Bravo, A; Cuenca-Romero, L.A; Calderon, V; Rodriguez, A: Guirerez- Comparative Life Cycle Assessment Right (L.A) between standard gypsum Construction Right (L.A) between standard gypsum Construction Rizard, D: Rodriguez, A: Guirerez- Comparative Life Cycle Assessment Construction A construction activities Construction building shell for single-family houses is comparative donor-to-in-decomposity Active decomposity Active de				Reusing exterior wall framing				Specialized					Reuse					
198 Chong. WK 2019 comparative life cycle assessment http://dx.doi.org/10.1016/j.wasman.2019.05.040 wall framing system Construction activities cradle resistance R-15) Comprehensive No Recycle No High Qualitative Comprehensive No No No No No No No N		Rios, FC; Grau, D;		systems: A cradle-to-cradle					cradle-to-					1				
Rixrath, D; Wartha, C 2016 Specialized construction building shell for single-family houses is compared with Z different wood construction activities Rizan, C; Brophy, T; Lillywhite, R; Reed, M; Bhutta, 2002 MF 2004 Rodrigo-Favo, A; Cuenca-Romero, LA; Calderon, V; Rodriguez, A; Guiterez- Guitere	198		2019		http://dx.doi.org/10.1016/j.wasman.2019.05.040	wall framing system	Construction		1		Comprehensive	No		No	High	Qualitative	Comprehensive	No
Rixrath, D; Wartha, C 2016 Recycle assessment Recycle Assessment and life cycle cost of repairing surgical scissors Repair, Reuse, No Http://dx.doi.org/10.1007/s11367-022-02064-7 Surgical scissors Manufacturing Manufacturing Manufacturing Manufacture of other non-metallic Guierrez- Guierrez- Comparative Life Cycle Assessment (LCA) between standard gypsum ceiling tile and polyurethane No No No No No No No No No N																		
Rixrath, D; Wartha, C 2016 Shells - life cycle assessment willing shells - life cycle assessment and life cycle cost of repairing surgical scissors will construct the construction activities and polymethane colling tile and polymethane construction activities and construction activities of an activities of construction activities are constructed as a construction activities are constructed as a construction activities are constructed and constructed activiti																		
Rixrath, D; Wartha, C 2016 Comparison of different building shells - life cycle assessment http://dx.doi.org/10.1002/ieam.1760 building shell Construction activities grave wood constructions activities grave wood constructions building shells - life cycle assessment and life cycle cost of repairing surgical scissors where the construction activities grave wood construction activities grave wood constructions activities grave wood constructions building shell Construction activities grave wood constructions activities grave wood constructions wood constructions wood constructions activities grave wood constructions wood constructions activities grave wood constructions wood constructions wood constructions activities grave wood constructions wood construction activities grave wood constructions wood constructions wood constructions activities grave wood constructions wood constructions wood constructions wood constructions activities grave wood constructions wood const								Specialized										
199 Wartha, C 2016 shells - life cycle assessment http://dx.doi.org/10.1002/ieam.1760 building shell Construction activities grave wood constructions Brief Basic Recycle No Low No No No No No No No		Rixrath, D:		Comparison of different building					cradle-to-									
Rizan, C; Brophy, T; Lillywhite, R; Reed, M; Bhutta, MF 2022 Rodrigo-Bravo, A; Cuenca-Romero, LA; Calderon, V; Rodriguez, A; Gutierrez- Gutierrez- Gutierrez- Gutierrez- Rizan, C; Brophy, T; Lillywhite, R; Reed, M; Bhutta, T; Lillywhite, R; Repair, Reuse, Repair, Reuse, Repair, Reuse, Repair, Reuse, Repair, Reuse, Recycle No High Quantitative Comprehensive No Manufacture of other non- metallic mineral cradle-to- I m^2 of gypsum tile of No No	199		2016		http://dx.doi.org/10.1002/ieam.1760	building shell	Construction				Brief	Basic	Recycle	No	Low	No	No	No
Reed, M; Bhutta, MF 2022 Congression and life cycle cost of repairing surgical scissors Rodrigo-Bravo, A; Cuenca-Romero, LA; Calderon, V; Rodriguez, A; Gutierrez- ceiling tile and polyurethane Reed, M; Bhutta, MF 2022 Congression and life cycle cost of repairing surgical scissors Rodriguez, A; Gutierrez- ceiling tile and polyurethane Comprehensive No High Quantitative Comprehensive No High Quantitative Comprehensive No High Quantitative Comprehensive No No High Quantitative Repair, Reuse, Recycle No High Quantitative Comprehensive No No High Quantitative Comprehensive No		Rizan, C; Brophy,																
200 MF 2022 cost of repairing surgical scissors http://dx.doi.org/10.1007/s11367-022-02064-7 surgical scissors Manufacturing grave surgical scissor Comprehensive Advanced Recycle No High Quantitative Comprehensive No Comprehensive No High Quantitative Comprehensive No High Quantitative Comprehensive No Grave Surgical scissor Comprehensive No High Quantitative Comprehensive No Comprehensive No High Quantitative Comprehensive No High Quantitative Comprehensive No No High Quantitative Comprehensive No High Quantitative Comprehensive No No High Quantitative Comprehensive No No High Quantitative Comprehensive No		T; Lillywhite, R;												1				
Rodrigo-Bravo, A; Cuenca-Romero, LA; Calderon, V; Rodriguez, A; Gutierrez- Ceiling tile and polyurethane Manufacture of other non- metallic mineral cradle-to- 1 m^2 of gypsum tile of No	200		2022		http://dv.doi.org/10.1007/s11267.022.02064.7	curaical agiacara	Manufacturin		1		Comprehensive	Advorced		No	High	Quantitativa	Comprehensive	No
Cuenca-Romero, LA; Calderon, V; Rodriguez, A; Gutierrez- Ceiling tile and polyurethane Manufacture of other non- metallic mineral Cradle-to- I m^2 of gypsum tile of No	200		2022	cost of repairing surgical scissors	ппр.//ux.uoi.org/10.100//S1130/-U22-U2U04-/	surgical scissors	ivianuracturing	manuracturing	grave	surgicai scissor	Comprenensive	Advanced	Recycle	INO	riign	Quantitative	Comprenensive	INO
LA; Calderon, V; Comparative Life Cycle Assessment (LCA) between standard gypsum (LCA) between standard gypsum ceiling tile and polyurethane of other non-metallic mineral cradle-to- 1 m^2 of gypsum tile of No								Manufacture										
Rodriguez, A; (LCA) between standard gypsum ceiling tile and polyurethane metallic mineral cradle-to- 1 m^2 of gypsum tile of No								of other non-										
		Rodriguez, A;		(LCA) between standard gypsum														
201 Gonzaiez, S 2022 gypsum ceiting tile http://dx.doi.org/10.1016/j.enbuild.2022.11186/ gypsum tile Manufacturing products grave a 15 mm thickness Brief Basic Recycle No statement No Brief No	201		2022		hum.//dm dm:/10.1016/2. 1. 21.2022.11105		Man 6				Dire	D	D 1	N.		N-	D.:f	N
	201	Gonzalez, S	2022	gypsum ceiling tile	nup://dx.doi.org/10.1016/j.enbuild.2022.111867	gypsum tile	Manufacturing	products	grave	a 15 mm thickness	Brief	Basic	Kecycle	N0	statement	N0	Briei	N0

					T	T	T	I		Luc			T		T	1	1	
Part				Uncertainty Quantification in Life Cycle Assessments Interindividual			Electricity, gas, steam and	Electricity, gas, steam and		lifetime of a 2,5 kW rated inverter air-								
15 15 15 15 15 15 15 15		D G4 G1 1		Variability and Sensitivity Analysis			air	air	,,,				P 1		.,			
March Marc	202	Ross, SA; Cheah, L	2017		http://dx.doi.org/10.1111/ijec.12505	air conditioning			1		Brief	Basic		No	1	No	No	Yes
March Column Co	-				The state of the s	8	117		5									
No. 1. 1. 1. 1. 1. 1. 1.				Environmental impact analysis				Manufacture										
No. 1						solar pasteurization			cradle-to-									
Part	203	Sinicropi, A	2019	·	http://dx.doi.org/10.1016/j.jclepro.2018.12.020	system	Manufacturing		grave	1 1 of treated water	Brief	Basic	Recycle	No	Low	No	No	No
Marche No. 1		Rupp, M:																
Mathematical Math		Handschuh, N;		environmental impact of battery				vehicles,										
Part Comment	204		2019		http://dy.doi.org/10.1016/j.apenergy.2019.01.059	hue	Manufacturing		1		Out of Scope		Out of Scope			Out of Scope	Out of Scope	Out of Scope
Proceedings Procedings Proceedings Proceedings Proceedings Proceedings Procedings Procedings Proceedings Procedings Proceedings Procedings Procedi	204		2019	ciecuie buses in Germany	http://dx.doi.org/10.1010/j.apenergy.2019.01.039	bus	Wanuracturing	sciii-trancis	operation	distance of 1 km [pkm]	Out of Scope	Зсорс	Out of Scope	Зсорс	Зсорс	Out of Scope	Out of Scope	Out of Scope
March Marc																		
March Co.																		
19		Pattara, C;																
Note	205		2016		http://dv.doi.org/10.30638/eemi.2016.218						Out of Scope		Out of Scope			Out of Scope	Out of Scope	Out of Scope
Second Second Process Second Second Process Second S	203	Tuomisto, TiE	2010	SECTOR. STATE OF THE ART	http://dx.doi.org/10.30030/cent/1.2010.210			Manufacture			Out of Scope	Бсорс	Out of Scope	Беоре	Беоре	Out of Scope	Out of Scope	Out of Scope
Second Record Second Record Second Record Rec								1										
March Marc								1										
No.								cork, except										
Second Column Col																		
March Control Contro								1										
1966 1967 1971 1972				Y:0 1											.,			
Section Company Comp	206		2021		http://dx.doi.org/10.1007/s11367-021-01937-7	redwood lumber	Manufacturing		1	1m^3 redwood lumber	Brief	Basic	Recover	No	1	No	No	No
Part		Sahoo, K;							Ĭ									
Process Communication of the least section Communication Control C				Life-cycle assessment and techNo				Manufacture										
200 200																		
Marcher Marc	207		2021		hum.//dm.d-:/10.1007/-11267.020.01920.0	1.11	M				Out of Course		Out of Same			O-4 -6 C	O-4 -6 G	Out of Cours
March State Stat	207	Bilek, E	2021		http://dx.doi.org/10.100//s11367-020-01830-9	biochar	Manufacturing	_	grave	consumer	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
Secondary 1976 19				the waste management of				of rubber and										
Scale Scal	208	, ,	2017		http://dv.doi.org/10.1016/j.jolopro.2017.05.006	garbaga bag	Manufacturing		1	1 box of 20 v 40 cm	Out of Soons	1	Out of Soons			Out of Soons	Out of Soons	Out of Scope
Section Control Cont	200	Suwaiiiianee, U	2017		http://dx.doi.org/10.1016/j.jciepi0.2017.05.000	garbage bag	Wanuracturing	products	grave	1 bag of 20 x 40 cm	Out of Scope	Scope	Out of Scope	Scope	Зсоре	Out of Scope	Out of Scope	Out of Scope
199 199		01 00 11 1												0	0 . 6			
Salpada, PA, Salp	209		2019		http://dx.doi.org/10.1016/j.iclepro.2019.118050						Out of Scope		Out of Scope			Out of Scope	Out of Scope	Out of Scope
Salpao, R.A. Life yole assessment of seismine retroit allowards to predict allowards to p												i i		i i i i i i i i i i i i i i i i i i i	,		1	
18 Siglatio, RA 20 Contract of continued Siglation RA 20 Contract of continued Siglation RA 20 Contract of this state Signature																		
Sigho, N. A. Solido, N. A.										1								
200 April D. Glance Supple Supp		a																
Solve INN Sepan Met Sepa	210		2020		http://dx.doi.org/10.1016/j.jobe.2019.101064		Construction	1	1		Out of Scope		Out of Scope	I	1	Out of Scope	Out of Scope	Out of Scope
Material Manuschier Manusch		Salwa, HN;		Life Cycle Assessment of Sugar		i i i i i i i i i i i i i i i i i i i		Manufacture	Brand	- Compact providence	0.0000000000000000000000000000000000000	22012		22372	213/1		0.000	
201 Santy No.						hiocomposite takeout						Out of		Out of	Out of			
Concinence Experiment Continue Conti	211		2020		http://dx.doi.org/10.3390/app10227951		Manufacturing			1 parcel containing 1 kg	Out of Scope		Out of Scope			Out of Scope	Out of Scope	Out of Scope
Scharco-Civares, K. Marting, E. K. Scharco, E. Comparative file cycle assessment for a grid-connected unit-cycle and photovoltars system of 3 kWp A and photovoltar system of 3 kWp A and photovoltars system of 3 kWp A and photovoltar system of 3 kWp A and photovoltars system of 3 kWp A and photovoltar system of 3 kWp A and photovoltars system of 3 kWp A and photovoltars system of 3 kWp A and photovoltar system of a kWp A and photovoltar system of 3 kWp A and photovoltar system																		
K. Martinez, E. Garcia, E. D. Garcia, E. Garcia, E. D. G				Life cycle assessment for a grid-														
Schington, S. Schington, S		K; Martinez, E;		connected multi-crystalline silicon			air	air										
Schabours, S. Sandruc, S. D'Assandro, F. D	212		2021		http://dv.doi.org/10.1016/i.iclapro.2021.128314					1 1/W/b	No	No	No	No	1	No	Brief	Vac
Rotifi, A: D'Alessando, F. Fantauzzi, F. 2017 lighting and life cycle assessment of from end of life containers. Energy lighting and life cycle assessment of bio-based insulation materials: Environmental and ecoNomic performmental life cycle assessment of bio-based insulation materials: Environmental and ecoNomic performmental life cycle assessment of bio-based insulation materials: Environmental and ecoNomic performmental life cycle assessment of bio-based insulation materials: Environmental and ecoNomic performmental and ecoNomic performances of a suspension of bio-based insulation materials: Environmental and ecoNomic performances of bio-based insulation materials: Environmental life cycle assessment of bio-based insulation materials: Environmental life cycle assessment of bio-based insulation materials: Environmental lafe cycle assessment of bio-based insulation ma	212		2021	case study for Mexico	http://dx.doi.org/10.1010/j.jeiepi0.2021.120314	photovortale system	зирргу	зирргу	grave	1 KWII	110	110	110	110	Statement	110	Brief	103
D'Alessandro, F. 2 forme and of life containers: Energy, lighting and life evel assessment for section of the containers of a containers of				A n7FR housing structure desired				Specialized										
Schulte, M: Hammur, T: Schedall, J: Scholze, M: Levandowski, I: Pude, R: Wagner, Pude, R: W						end-of-life shipping			cradle-to-						No			
Hammar, T; Sendal, J; Sechog, M; accessment including biogenic carbon and substitution effects Levandowski, I; Pude, K. Wagner, M. Wagner, M. Schulte, M. Schulte	213		2017	lighting and life cycle assessment	http://dx.doi.org/10.1007/s12273-016-0329-9	containers	Construction	activities	grave	14 m^2 of floor area	Brief	Basic	Reuse, Recycle	No	statement	No	No	No
Stendahl, J. Schopg, M; Schopg, M				Time dynamic climate impacts of a								1						
214 Hansson,PA 2021 carbon and substitution effects Hansson,PA 2021 Carbon and substitution effects http://dx.doi.org/10.1111/gcbb.12894 carton Manufacturing of beverages souther, M; Lewandowski, I; Pude, R; Wagner, Pude, R; Wagner, Pude, R; Wagner, Succession Souther, M; Wagn	1	Stendahl, J;		eucalyptus pulp product: Life cycle							1							
Schulte, M; Lewandowski, I; Pude, R; Wagner, Sen, B; Onat, NC; Kucukvar, M; Kucukvar, M; Tatari, O 2019 Environmental file cycle assessment of bio-based insulation materials: Environmental and ecoNomic preformances http://dx.doi.org/10.1111/gebb.12825 insulation Construction of buildings real- of buildings of	214		2021		http://dv.doi.org/10.1111/aahh.13904		Manufacturin				Out of Saar	1	Out of Carre	II .	1	Out of Sacre	Out of Socre	Out of Soon
Schulte, M; Lewandowski, I; Pude, R; Wagner, 2021 Policy Rivage, No Sen, B; Onat, NC; Kucukvar, M; Latify On the performances Lewandowski, I; Pude, R; Wagner, Sen, B; Onat, NC; Kucukvar, M; Sen, B; Onat, NC; Sen, B; Onat, NC; Kucukvar, M; Sen, B; Onat, NC; Kucukvar, M; Sen, B; Onat, NC; Sen,	214	riansson, PA	2021	carbon and substitution effects	nup.//ux.uoi.org/10.1111/gcob.12894	carton	ivianuracturing	or neverages		insulating 1m^2 of	Out of Scope	scope	Out of Scope	Scope	scope	Out of Scope	Out of Scope	Out of Scope
Schulte, M: Levandowski, I; Pude, R; Wagner, 2021 Sen, B; Onat, NC; Kucukvar, M: 216 Tatari, O 2021 Shafique, M; Luo, XW 2022 Shafique, M; Luo, Raibley, LA; Shafique, M; Luo, Raibley, LA; Shafique, M; Luo, Raibley, LA; Shafigue, M; Luo, Raibley, LA; Schafigue, M; Luo, Raibley, LA; Shafigue, M; Luo, Raib										external wall of a								
Lewandowski, I; Pude, R; Wagner, Wagner, Wagner, Wagner, Material footprint of electric vehicles: A multiregional life cycle assessment of Shafique, M; Luo, Shafique, M; Luo, Shafique, M; Right, M; Right, M; Reycle, Right, M; Reycle, Right, M; Reycle, Shafique, M; Right, M; Reycle, Right, M; Reycle, Right, M; Reycle, Shafique, M; Luo, Shafique, M; Right, M; Reycle, Right, Reycle, Right, M; Reycle, Right, Reycle, Right, Reycle, Right, Reycle, Right, Reycle, Right, Reycle, Right, Reycle, Reycle, No		Schulte M:		Comparative life cycle assessment														
215 M 2021 performances http://dx.doi.org/10.1111/gcbb.12825 insulation Construction of buildings grave safety standards No No Recover No statement No Brief No Manufacture of motor vehicles, Kucukvar, M; Eucukvar, M; Shafique, M; Luo, Shafique, M		Lewandowski, I;		of bio-based insulation materials:						years, fulfilling legal fire								
Sen, B; Onat, NC; Kucukvar, M; 216 Tatari, O 2019 assessment of battery electric vehicles from the current and future energy mix perspective No 2022 Dispersion of Scope Scope Note of Scope Note of Scope Scope Note of Scope Not	215		2021		http://dv.doi.org/10.1111/gobb.12925	inculation	Construction				No	No		No		No	Brief	No
Sen, B; Onat, NC; Kucukvar, M; Tatari, O 2019 assessment of battery electric vehicles from the current and future energy mix XW 2022 Perspective Neman, JD; Raibley, LA; Comparing Reusable and Single- Amultiregional life cycle assessment of battery electric vehicles from the current and future energy mix Raibley, LA; Comparing Reusable and Single- Amultiregional life cycle assessment of battery electric vehicles from the current and future energy mix Reusable and Single- Amultiregional life cycle assessment or formout vehicles and three perspective assessment of battery electric vehicles from the current and future energy mix Perspective assessment and Costing Methods for Device Procurement: Comparing Reusable and Single- Amultiregional life cycle assessment on the current and future energy mix Perspective assessment and Costing Methods for Device Procurement: Comparing Reusable and Single- Amultiregional life cycle assessment and Costing Methods for Device Procurement: Comparing Reusable and Single- Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment and Costing Methods for Device Procurement: Amultiregional life cycle assessment a	213	141	2021	performances	map.//dx.doi.org/10.1111/gc00.12823	Ilisuladoli	Construction		grave	saicty stalluarus	140	110	Recover	110	Statement	INU	DIKI	INU
Kucukvar, M; Tatari, O Z019 Environmental life cycle assessment Shafique, M; Luo, XW Z022 Shafique, M; Luo, Author Current and future energy mix perspective http://dx.doi.org/10.1016/j.jenyman.2021.114050 Kucukvar, M; Tatari, O Z019 Environmental life cycle assessment of battery electric vehicles from the current and future energy mix perspective http://dx.doi.org/10.1016/j.jenyman.2021.114050 Kucukvar, M; Tatari, O Z019 Environmental life cycle assessment of battery electric vehicles from the current and future energy mix perspective http://dx.doi.org/10.1016/j.jenyman.2021.114050 Life Cycle Assessment and Costing Methods for Device Procurement: Raibley, LA; Comparing Reusable and Single- laryngoscope handle laryngoscope handle Other Cradle-to- a single patient Trailers and cradle-to- grave 300,000 km driven Brief Basic Recycle No Low No No No No Out of Out of Out of Scope								of motor			1							
Tatari, O 2019 assessment http://dx.doi.org/10.1016/j.jclepro.2018.10.309 passenger vehicle Manufacturing semi-trailers grave 300,000 km driven Brief Basic Recycle No Low No									cradle-to-		1							
Shafique, M; Luo, XW 2022 Perspective current and future energy mix perspective perspective procurement: Sherman, JD; Raibley, LA; Comparing Reusable and Single- Comparing Reusable and Single- Environmental life cycle assessment of battery electric vehicles from the current and future energy mix perspective http://dx.doi.org/10.1016/j.jenvman.2021.114050 Cout of Scope Out of S	216	, ,	2019	assessment	http://dx.doi.org/10.1016/j.jclepro.2018.10.309	passenger vehicle	Manufacturing	1	1	300,000 km driven	Brief	Basic	Recycle	No	Low	No	No	No
Shafique, M; Luo, XW 2022 current and future energy mix perspective http://dx.doi.org/10.1016/j.jenvman.2021.114050																		
217 XW 2022 perspective http://dx.doi.org/10.1016/j.jenvman.2021.114050		Shafique, M: Luo.										Out of		Out of	Out of			
Sherman, JD; Methods for Device Procurement: Raibley, LA; Comparing Reusable and Single- laryngoscope handle Other cradle-to- a single patient Reuse, Refurbish,	217		2022	perspective	http://dx.doi.org/10.1016/j.jenvman.2021.114050						Out of Scope		Out of Scope			Out of Scope	Out of Scope	Out of Scope
Raibley, LA; Comparing Reusable and Single- laryngoscope handle Other cradle-to- a single patient Refurbish,		Sherman ID:								1 handle and 1 blade for	1		Reuse					
218 Eckelman, MJ 2018 Use Disposable Laryngoscopes http://dx.doi.org/10.1213/ANE.000000000000000000000000000000000000		Raibley, LA;		Comparing Reusable and Single-					cradle-to-	a single patient	1		Refurbish,					
	218	Eckelman, MJ	2018	Use Disposable Laryngoscopes	http://dx.doi.org/10.1213/ANE.00000000000002683	and tongue blades	Manufacturing	manufacturing	grave	encounter	Brief	Basic	Recycle	No	Low	Quantitative	Brief	No

	Shi, JL; Li, T;																
	Peng, ST; Liu,		Comparative Life Cycle Assessment														
219	ZC; Zhang, HC; Jiang, QH	2015	of remanufactured liquefied natural	http://dv.doi.org/10.1016/j.joloppo.2015.02.090						Out of Soons	Out of	Out of Soons	Out of	Out of	Out of Soons	Out of Sagna	Out of Soons
219	Jiang, QH	2015	gas and diesel engines in China Energy consummation and	http://dx.doi.org/10.1016/j.jclepro.2015.03.080						Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
	Shi, JL; Li, T;		environmental emissions														
	Zhang, HC; Peng, ST; Liu, ZC;		assessment of a refrigeration compressor based on life cycle		refrigeration compressor for AC		Manufacture of electrical	cradle-to-	a C-SB5HP R22 refrigeration compressor			Reduce, Reuse, Remanufacture.					
220	Jiang, QH	2015	assessment methodology	http://dx.doi.org/10.1007/s11367-015-0896-5	systems	Manufacturing	equipment	grave	used for five years	Brief	Basic	Recycle	No	Low	No	Brief	Yes
	Shi, SN; Zhang,		A life-cycle assessment of battery														
	HR; Yang, W; Zhang, QR;		electric and internal combustion engine vehicles: A case in Hebei								Out of		Out of	Out of			
221	Wang, XJ	2019	Province, China	http://dx.doi.org/10.1016/j.jclepro.2019.04.301						Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
	Shu, X; Guo, YF;		Life-cycle assessment of the environmental impact of the				Manufacture										
	Yang, WX; Wei,		batteries used in pure electric				of electrical	cradle-to-	battery with capacity of					No			
222	KX; Zhu, GH	2021	passenger cars	http://dx.doi.org/10.1016/j.egyr.2021.04.038	battery	Manufacturing	equipment	grave	28 kWh	Brief	No	Recycle	No	statement	No	No	Yes
	Siegert, MW;						Manufacture										
	Saling, P; Mielke,						pharmaceutical		treatment of an adult								
	P; Czechmann, C;		Cradle-to-grave life cycle		Forderdin Posters		products and		patient in Germany with			D 1 .		No			
223	Emara, Y; Finkbeiner, M	2020	assessment of an ibuprofen analgesic	http://dx.doi.org/10.1016/j.scp.2020.100329	Eudorlin Extra (iboprofen)	Manufacturing	pharmaceutical preparations	cradle-to- grave	the purpose of pain relief for 4 days	No	No	Recycle, Recover	No	statement	No	Brief	No
	Í								Seal the combustion								
	Silva, DAL; de Oliveira, JA;						Manufacture		chambers and control the release of flue-gases in a								
	Filleti, RAP; de		Life Cycle Assessment in				of motor		four-cylinder gasoline								
	Oliveira, JFG; da		automotive sector: A case study for				vehicles,		engine of a passenger								
224	Silva, EJ; Ometto, AR	2018	engine valves towards cleaner production	http://dx.doi.org/10.1016/j.jclepro.2018.02.252	exhaust valves for automotive use	Manufacturing	trailers and semi-trailers	cradle-to- grave	vehicle during 300,000 km of drive	Comprehensive	Basic	Reduce, Recycle	No	High	Quantitative	No	No
	Silva, DAL;	2010	•				uniters	8		2 3 3 7 5 1 5 1 7 5		1111,010			Ç	1	
	Firmino, AS;		Life cycle assessment of a hot-				Manufacture		use of a wardrobe model								
	Ferro, FS; Christoforo, AL;		pressing machine to manufacture particleboards: hotspots,				of machinery		made of particleboard, with storage capacity of								
	Leite, FR; Lahr,		environmental indicators, and				and equipment	cradle-to-	40 kg (or 3.7 m ³) of								
225	FAR; Kellens, K Silvestre, JD;	2020	solutions Insulation Cork Boards-	http://dx.doi.org/10.1007/s11367-020-01755-3	particleboard	Manufacturing	n.e.c.	grave	goods for 5 years	Comprehensive	Basic	Reduce	Yes	High	Quantitative	No	No
	Pargana, N; de		Environmental Life Cycle														
	Brito, J; Pinheiro,		Assessment of an Organic		insulation cork		Construction	cradle-to-	area of application of the		Out of		Out of	Out of			
226	MD; Durao, V	2016	Construction Material	http://dx.doi.org/10.3390/ma9050394	boards	Construction	of buildings Manufacture	cradle	insulation (m^2)	Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
			The life cycle assessment of energy				of rubber and										
			and carbon emissions on wool and				plastics	cradle-to-	0.09m^2 of wool carpet			Remanufacture,					
227	Sim, J; Prabhu, V Singh, JKD;	2018	nylon carpets in the United States	http://dx.doi.org/10.1016/j.jclepro.2017.09.203	carpet	Manufacturing Electricity,	products Electricity,	grave	tile	Comprehensive	Advanced	Recycle	No	High	No	No	No
	Molinari, G; Bui,					gas, steam and	gas, steam and										
	J; Soltani, B;		Life Cycle Assessment of Disposed			air	air										
228	Rajarathnam, GP; Abbas, A	2021	and Recycled End-of-Life Photovoltaic Panels in Australia	http://dx.doi.org/10.3390/su131911025	Photovoltaic system	conditioning supply	conditioning supply	cradle-to- grave	1 kWh	Comprehensive	Advanced	Recycle	No	Low	No	Comprehensive	No
			Environmental and ecoNomic					Brand									
			assessment of hard apple cider using an integrated LCA-LCC								Out of		Out of	Out of			
229	Smith, M; Lal, P	2022	approach	http://dx.doi.org/10.1016/j.spc.2022.04.026						Out of Scope	Scope	Out of Scope	Scope	Scope	Out of Scope	Out of Scope	Out of Scope
	Soulions, M;					Electricity,	Electricity,										
	Panaras, G; Fokaides, PA;																
	Papaefthimiou, S;		Solar water heating for social			gas, steam and	gas, steam and										
230	Kalogirou, SA		Solar water heating for social housing: Energy analysis and Life		water heating	gas, steam and air conditioning	gas, steam and air conditioning	cradle-to-			Out of		Out of	Out of			
		2018	housing: Energy analysis and Life Cycle Assessment	http://dx.doi.org/10.1016/j.enbuild.2018.03.048	water heating systems	gas, steam and air	gas, steam and air	cradle-to- grave	1 system	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
	,	2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle	http://dx.doi.org/10.1016/j.enbuild.2018.03.048		gas, steam and air conditioning	gas, steam and air conditioning		1 system	Out of Scope		Out of Scope			Out of Scope	Out of Scope	Out of Scope
	Soust-Verdaguer, B; Llatas, C;		housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family		systems	gas, steam and air conditioning supply	gas, steam and air conditioning supply	grave cradle-to-	,		Scope		Scope	Scope			•
231	Soust-Verdaguer,	2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber	http://dx.doi.org/10.1016/j.enbuild.2018.03.048 http://dx.doi.org/10.1016/j.jclepro.2020.121958		gas, steam and air conditioning supply	gas, steam and air conditioning supply Construction of buildings	grave	1 m^2 of heating area	Out of Scope Brief		Out of Scope Repair			Out of Scope	Out of Scope Brief	Out of Scope Yes
231	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD;		housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the		systems	gas, steam and air conditioning supply	gas, steam and air conditioning supply	grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting		Scope		Scope	Scope			•
231	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF;		housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden		systems	gas, steam and air conditioning supply Construction Electricity, gas, steam and air	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air	grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power		Scope		Scope	Scope			•
231	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO;		housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the	http://dx.doi.org/10.1016/j.jclepro.2020.121958	house	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning	grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a		Scope	Repair	Scope	Scope			•
	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF;	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime		systems	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity,	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity,	grave cradle-to- grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting medium voltage power	Brief	Scope		Scope No	Scope	No	Brief	Yes
	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO;	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a	http://dx.doi.org/10.1016/j.jclepro.2020.121958	house utility pole	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air as the supply conditioning supply conditioning supply conditioning supply gas, steam and	grave cradle-to- grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a	Brief	Scope	Repair	Scope No	Scope	No	Brief	Yes
	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime	http://dx.doi.org/10.1016/j.jclepro.2020.121958	house house utility pole Organic Rakine	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity,	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity,	grave cradle-to- grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a	Brief	Scope	Repair	Scope No	Scope	No	Brief	Yes
	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO;	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic	http://dx.doi.org/10.1016/j.jclepro.2020.121958	house utility pole	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air as upply conditioning supply supply gas, steam and air	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years	Brief	Scope	Repair	Scope No	Low High	No	Brief	Yes
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z	house utility pole Organic Rakine Cycle turbogenerators	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply conditioning supply electricity, gas, steam and air conditioning	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture	grave cradle-to- grave cradle-to- grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity	Brief Brief	No Basic	Repair Reuse, Recycle	No No	Low High	No Quantitative	Brief Brief	Yes
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z	house utility pole Organic Rakine Cycle	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply conditioning supply electricity, gas, steam and air conditioning	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	grave cradle-to- grave cradle-to- grave cradle-to-	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production	Brief Brief	No Basic	Repair Reuse, Recycle	No No	Low High	No Quantitative	Brief Brief	Yes
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M; Ferriz, AM; Mori,	2020 2017 2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835	house tility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical	grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced	Brief Brief	No Basic No	Repair Reuse, Recycle	No No	Low High No statement	No Quantitative	Brief Brief	Yes No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M;	2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply conditioning supply electricity, gas, steam and air conditioning	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products	grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production	Brief Brief	No Basic	Repair Reuse, Recycle	No No	Low High	No Quantitative	Brief Brief	Yes No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M; Ferriz, AM; Mori, M	2020 2017 2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor	grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of	Brief Brief	No Basic No	Repair Reuse, Recycle	No No	Low High No statement	No Quantitative	Brief Brief	Yes No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavenik, M; Ferriz, AM; Mori, M	2020 2017 2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835	house tility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles,	grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a	Brief Brief	No Basic No	Reuse, Recycle No Reuse, Recycle	No No	Low High No statement	No Quantitative	Brief Brief	Yes No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M; Ferriz, AM; Mori, M	2020 2017 2020	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and	grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of	Brief Brief	No Basic No	Repair Reuse, Recycle	No No	Low High No statement	No Quantitative	Brief Brief	Yes No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu,	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its	Brief Brief No Comprehensive	No Basic No Advanced	Reuse, Recycle No Reuse, Recycle Reuse, Recycle	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu, AH; Trinh, LTK;	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design A comparative life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture of chemicals	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its lifetime of 150,000 km	Brief Brief No Comprehensive	No Basic No Advanced	Reuse, Recycle No Reuse, Recycle Reuse, Recycle	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No
232	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavcnik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu,	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its	Brief Brief No Comprehensive	No Basic No Advanced	Reuse, Recycle No Reuse, Recycle Reuse, Recycle	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No
232 233 234 235	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavenik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu, AH; Trinh, LTK; Kuo, CH; Huang,	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design A comparative life cycle assessment of toothpaste cream versus toothpaste tablets Environmental life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201 http://dx.doi.org/10.1007/s11367-016-1254-y	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine hood	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture of chemicals and chemical	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its lifetime of 150,000 km	Brief Brief No Comprehensive Brief	No Basic No Advanced Basic	Reuse, Recycle No Reuse, Recycle Recycle, Recover	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No No
232 233 234 235	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavenik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu, AH; Trinh, LTK; Kuo, CH; Huang,	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design A comparative life cycle assessment of toothpaste cream versus toothpaste tablets Environmental life cycle assessment of production, processing,	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201 http://dx.doi.org/10.1007/s11367-016-1254-y	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine hood	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture of chemicals and chemical products	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its lifetime of 150,000 km	Brief Brief No Comprehensive Brief	No Basic No Advanced Basic	Reuse, Recycle No Reuse, Recycle Recycle, Recover	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No No
232 233 234 235	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavenik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu, AH; Trinh, LTK; Kuo, CH; Huang,	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design A comparative life cycle assessment of toothpaste cream versus toothpaste tablets Environmental life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201 http://dx.doi.org/10.1007/s11367-016-1254-y	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine hood	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture of chemicals and chemical	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its lifetime of 150,000 km	Brief Brief No Comprehensive Brief	No Basic No Advanced Basic	Reuse, Recycle No Reuse, Recycle Recycle, Recover	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No No
232 233 234 235	Soust-Verdaguer, B; Llatas, C; Moya, L Souza, HHD; Lima, AMF; Esquerre, KO; Kiperstok, A Stoppato, A; Benato, A Stropnik, R; Sekavenik, M; Ferriz, AM; Mori, M Sun, X; Liu, JR; Lu, B; Zhang, P; Zhao, MN Suppipat, S; Hu, AH; Trinh, LTK; Kuo, CH; Huang,	2020 2017 2020 2018	housing: Energy analysis and Life Cycle Assessment Comparative BIM-based Life Cycle Assessment of Uruguayan timber and concrete-masonry single-family houses in design stage Life cycle assessment of the environmental influence of wooden and concrete utility poles based on service lifetime Life Cycle Assessment of a Commercially Available Organic Rankine Cycle Unit Coupled with a Biomass Boiler Reducing environmental impacts of the ups system based on PEM fuel cell with circular ecoNomy Life cycle assessment-based selection of a sustainable lightweight automotive engine hood design A comparative life cycle assessment of toothpaste tablets Environmental life cycle assessment of production, processing, distribution and consumption of	http://dx.doi.org/10.1016/j.jclepro.2020.121958 http://dx.doi.org/10.1007/s11367-017-1293-z http://dx.doi.org/10.3390/en13071835 http://dx.doi.org/10.1016/j.energy.2018.09.201 http://dx.doi.org/10.1007/s11367-016-1254-y	house utility pole Organic Rakine Cycle turbogenerators uninterruptible power supply system with polymer membrane fuel cell lightweight automotive engine hood	gas, steam and air conditioning supply Construction Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacturing Manufacturing	gas, steam and air conditioning supply Construction of buildings Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Manufacture of computer, electronic and optical products Manufacture of motor vehicles, trailers and semi-trailers Manufacture of chemicals and chemical products Processing and	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave	1 m^2 of heating area 1 km of distribution network supporting medium voltage power distribution for a period of 50 years 1 kWh of electricity production 1 kWh of produced electric energy transportation service of an engine hood used in a passenger car over its lifetime of 150,000 km	Brief Brief No Comprehensive Brief	No Basic No Advanced Basic	Reuse, Recycle No Reuse, Recycle Recycle, Recover	No No No	Low High No statement High	No Quantitative No Quantitative	Brief Brief No Comprehensive	Yes No No No

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			Effects of Packaging and Food Waste Prevention by Consumers on														
	Svanes, E;		the Environmental Impact of				Manufacture		1 kg of bread produced,								
	Oestergaard, S;		Production and Consumption of				of food	cradle-to-	distributed and					_			
238	Hanssen, OJ Tagliaferri, C;	2019	Bread in Norway	http://dx.doi.org/10.3390/su11010043	bread	Manufacturing	products	grave	consumed in Norway	Brief	Basic	Reuse	No	Low	No	Brief	No
	Evangelisti, S;						Manufacture										
	Acconcia, F;		Life cycle assessment of future				of motor										
	Domenech, T; Ekins, P; Barletta,		electric and hybrid vehicles: A cradle-to-grave systems engineering		battery electric		vehicles, trailers and	cradle-to-	1 km driven by one								
239	D; Lettieri, P	2016	approach	http://dx.doi.org/10.1016/j.cherd.2016.07.003	vehicle	Manufacturing	semi-trailers	grave	vehicle (car)	Comprehensive	Advanced	Recycle	No	Low	Quantitative	No	No
	Tamburini, E;		Plastic (PET) vs bioplastic (PLA) or														
	Costa, S; Summa, D; Battistella, L;		refillable aluminium bottles - What is the most sustainable choice for						containing beverage for			Reuse,					
	Fano, EA;		drinking water? A life-cycle (LCA)		bottles for drinking		Manufacture	cradle-to-	consumption is "one			Recycle,					
240	Castaldelli, G	2021	analysis	http://dx.doi.org/10.1016/j.envres.2021.110974	water	Manufacturing	of beverages	grave	year of use"	Brief	Basic	Recover	No	Low	No	No	No
	Tan, QY; Song,		The environmental performance of fluorescent lamps in China,				Manufacture of electrical	cradle-to-	operating time of FLs in								
241	QB; Li, JH	2015	assessed with the LCA method	http://dx.doi.org/10.1007/s11367-015-0870-2	fluorescent lamps	Manufacturing	equipment	grave	the use stage	Brief	No	Recycle	No	Low	No	No	No
	m 6		Comparative cradle-to-grave life														
	Tannous, S; Manneh, R;		cycle assessment of traditional grid connected and solar stand-alone				Specialized		light up the rural areas								
	Harajli, H; El		street light systems: A case study		street lightning		construction	cradle-to-	for 12 h per day over 20								
242	Zakhem, H	2018	for rural areas in LebaNon	http://dx.doi.org/10.1016/j.jclepro.2018.03.155	system	Construction	activities	grave	years	Comprehensive	Advanced	Recycle	No	Low	Quantitative	No	No
	Teffera, B;					Electricity, gas, steam and	Electricity, gas, steam and										
	Assefa, B;					air	air										
242	Bjorklund, A;	2021	Life cycle assessment of wind farms	hundle dei and 10 1007/11077 000 01004 5	16	conditioning	conditioning	cradle-to-	1 kWh of average	Deine		D 1	N	T .	0	N-	N.
243	Assefa, G	2021	in Ethiopia Cradle-to-grave environmental	http://dx.doi.org/10.1007/s11367-020-01834-5	wind farm	supply	supply	grave	electricity 145 g silver enabled PES	Brief	Advanced	Recycle	No	Low	Quantitative	No	No
			impact assessment of silver enabled						textile (indicates men's	1							
	Tamizal Cal		t-shirts: Do naNo-specific impacts				Manufacture	aradia t-	t-shirt with a large size) during its lifetime of 100	1				No			
244	Temizel-Sekeryan, S; Hicks, AL	2021	exceed Non naNo-specific emissions?	http://dx.doi.org/10.1016/j.impact.2021.100319	silver enabled t-shirts	Manufacturing	of textiles	cradle-to- grave	laundering cycles	No	No	No	No	No statement	No	No	No
							Manufacture		6.7								
	Thirametoakkhara, C; Lerkkasemsan,		Life cycle assessment of diuron				of chemicals and chemical	oradlo to						No			
245	N N	2019	from cradle to grave: case study in agave farm	http://dx.doi.org/10.1016/j.jclepro.2019.117712	diuron	Manufacturing	products	cradle-to- grave	1 metric ton of diuron	No	No	No	No	statement	No	No	No
	Thomson, RC;			2		-	Manufacture										
246	Chick, JP; Harrison, GP	2019	An LCA of the Pelamis wave energy converter	http://dx.doi.org/10.1007/s11367-018-1504-2	Pelamis wave energy converter	Manufacturing	of electrical equipment	cradle-to- grave	1 kWh of output electrical power	Brief	Basic	Recycle	No	Low	No	Brief	No
240	riamson, GP	2019	energy converter	http://dx.doi.org/10.1007/811367-016-1304-2	Converter	Electricity,	Electricity,	grave	electrical power	Dilei	Dasic	Recycle	NO	Low	NO	Dilei	NO
						gas, steam and	gas, steam and										
	Tian, XY; Stranks,		Life cycle assessment of recycling strategies for perovskite		1 kWh of output	air conditioning	air conditioning	cradle-to-	1m^2 of envisioned								
247	SD; You, FQ	2021	photovoltaic modules	http://dx.doi.org/10.1038/s41893-021-00737-z	electrical power	supply	supply	grave	perovskite PV module	Comprehensive	No	Recycle	No	High	Quantitative	No	No
			•			Electricity,	Electricity,										
	Ticha, M: Zilka,		Life cycle assessment comparison		photocatalytic	gas, steam and air	gas, steam and air		purification of 100 cubic meters of air in an								
	M; Stieberova, B;		of photocatalytic coating and air		coating and air	conditioning	conditioning	cradle-to-	enclosed space over a					No			
248	Freiberg, F	2016	purifier	http://dx.doi.org/10.1002/ieam.1786	purifier	supply	supply	grave	period of one year	Brief	No	Recycle	No	statement	No	No	No
			Life-cycle assessment of cradle-to- grave opportunities and			Electricity, gas, steam and	Electricity, gas, steam and		an average kWh of								
	Tsang, MP;		environmental impacts of organic			air	air		electricity generation								
249	Sonnemann, GW; Bassani, DM	2016	photovoltaic solar panels compared to conventional techNologies	http://dx.doi.org/10.1016/i.solmat.2016.04.024	organic photovoltaic	conditioning	conditioning supply	cradle-to-	over 25 years using a	Brief	Basic	Dagrada	No	Low	No	Brief	No
249	Tsoy, N; Prado, V;	2016	to conventional technologies	http://dx.doi.org/10.1016/j.sonnat.2016.04.024	solar panels	supply	supply	grave	solar rooftop array Production of 1692.30	Dilei	Dasic	Recycle	INO	Low	NO	Dilei	NO
	Wypkema, A;		Anticipatory Life Cycle Assessment				Specialized		kg of tomatoes in								
250	Quist, J; Mourad, M	2019	of sol-gel derived anti-reflective coating for greenhouse glass	http://dx.doi.org/10.1016/j.jclepro.2019.02.246	Coating of greenhouse glass	Construction	construction activities	cradle-to-	greenhouses during 30	Commonhonoisso	Advonced	Dagrada	No	Low	No	No	No
250	Uctug, FG;	2019	Environmental life cycle assessment	http://dx.doi.org/10.1016/j.jciepio.2019.02.246	greeiliouse grass	Construction	Manufacture	grave	years.	Comprehensive	Advanced	Recycle	NO	Low	NO	INO	NO
	Atlugkoyun, AI;		of yoghurt supply to consumer in				of dairy	cradle-to-				Reduce,					
251	Inaltekin, M	2019	Turkey	http://dx.doi.org/10.1016/j.jclepro.2019.01.127	Yoghurt	Manufacturing Electricity,	products Electricity,	grave	1 ton of yoghurt.	Brief	Advanced	Recover	No	Low	No	No	No
						gas, steam and	gas, steam and			1							
						air	air			1		Reuse,					
252	Uihlein, A	2016	Life cycle assessment of ocean energy techNologies	http://dx.doi.org/10.1007/s11367-016-1120-y	Ocean energy devices	conditioning supply	conditioning supply	cradle-to- grave	1 kWh of electricity delivered to the grid.	Brief	Basic	Recycle, Recover	No	Low	No	No	No
202		2010	Lightweighting and electrification		40.1000	Барріј		5,0		5	Duois	1005701	1,0		1.0	1,0	1.0
	Unodh1		strategies for improving				Manufacture		Total life time J								
	Upadhyayula, VKK; Parvatker,		environmental performante of passenger cars in India by 2030: A				of motor vehicles,		Total life time driving distance of 150,000 kms								
	AG; Baroth, A;		critical perspective based on life				trailers and	cradle-to-	over 15 years is			Recycle,					
253	Shanmugam, K	2019	cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2018.11.153	Passenger car	Manufacturing	semi-trailers	grave	considered.	Brief	No	Recover	No	Low	No	No	No
	Usva, K; Sinkko, T; Silvenius, F;		Carbon and water footprint of				Manufacture			1							
	Riipi, I; Heusala,		coffee consumed in Finland-life				of food	cradle-to-		1				No			
254	H Vinyae E: Asin	2020	cycle assessment	http://dx.doi.org/10.1007/s11367-020-01799-5	Coffee	Manufacturing	products	grave	11 of consumed coffee.	Brief	Basic	Recover	No	statement	No	No	No
	Vinyes, E; Asin, L; Alegre, S;		Life Cycle Assessment of apple and				Processing and										
	Munoz, P;		peach production, distribution and				preserving of										
255	Boschmonart, J; Gasol, CM	2017	consumption in Mediterranean fruit sector	http://dx.doi.org/10.1016/j.jclepro.2017.02.102	Apple and peach	Manufacturing	fruit and vegetables	cradle-to- grave	production of one kg of fruit.	Brief	Basic	No	No	Low	No	Brief	No
200	Cuoci, Ciri	2017			rappie und peden		Manufacture	5,0	1 kWh of energy	1	Duoic	1.0	1.0	2011	1.0	D	1.0
	Violante, AC;		Comparative life cycle assessment				of machinery		supplied for the air	1				,,			
256	Donato, F; Guidi, G; Proposito, M	2022	of the ground source heat pump vs air source heat pump	http://dx.doi.org/10.1016/j.renene.2022.02.075	Heat pump	Manufacturing	and equipment n.e.c.	cradle-to- grave	conditioning of a single office.	Brief	No	Reuse	No	No statement	No	No	No
200	Vitali, A; Grossi,	2022	source near pump	The state of the s	Trom pump			5		D	1,5	Ticase	1.0	Junionfont	1.0	1,0	1.0
	G; Martino, G;		Conhon foots into foots in f				Decorreis .										
	Bernabucci, U; Nardone, A;		Carbon footprint of organic beef meat from farm to fork: a case study				Processing and preserving of	cradle-to-						No			
	Nardone, A:								1 161116	Deine	Basic	D1.	27			NY	No
257	Lacetera, N	2018	of short supply chain	http://dx.doi.org/10.1002/jsfa.9098	Organic beef meat	Manufacturing	meat	grave	1 kg of cooked beef.	Brief	Dasic	Recycle	No	statement	No	No	NO

			I a	1	1		1		T	ı		1	1	1		1	
	Vytisk, J; Honus,		Comparative study by life cycle assessment of an air ejector and														
	S; Koc, V; Pagac,		orifice plate for experimental				Manufacture										
	M; Hajnys, J; Vujanovic, M;		measuring stand manufactured by conventional manufacturing and				of machinery and equipment	cradle-to-	Production of an air								
258	Vrtek, M	2022	additive manufacturing	http://dx.doi.org/10.1016/j.susmat.2022.e00431	Air ejector	Manufacturing	n.e.c.	grave	ejector.	Brief	Advanced	Recycle	No	Low	Quantitative	No	No
	Wang, LK; Wang,					Electricity,	Electricity,										
	Y; Du, HB; Zuo, J; Li, RYM; Zhou,		A comparative life-cycle assessment			gas, steam and	gas, steam and air					Reduce,					
	ZH; Bi, FF;		of hydro-, nuclear and wind power:		Hydro-, nuclear and	conditioning	conditioning	cradle-to-	1 kWh of electricity			Recycle,					
259	Garvlehn, MP	2019	A China study	http://dx.doi.org/10.1016/j.apenergy.2019.04.099	wind power	supply	supply	grave	generation.	Brief	Basic	Recover	No	High	Quantitative	Brief	No
	Wang, YX; Tang, BJ; Shen, M; Wu,		Environmental impact assessment				Manufacture										
	YZ; Qu, S; Hu,		of second life and recycling for		LiFePO4 power		of electrical	cradle-to-	1 kWh of stored and								
260	YJ; Feng, Y	2022	LiFePO4 power batteries in China	http://dx.doi.org/10.1016/j.jenvman.2022.115083	batteries	Manufacturing	equipment	grave	delivered energy.	Comprehensive	Advanced	Reuse, Recycle	No	High	Quantitative	Comprehensive	No
									Provision of 1 MWh of								
									electricity by the battery over the 20 year lifetime								
	Weber, S; Peters,						Manufacture		of a hypothetical								
261	JF; Baumann, M;	2018	Life Cycle Assessment of a	http://do.doi.org/10.1021/pagent-01.02072	Vanadium Redox	Manufacturina	of electrical	cradle-to-	renewables support	C	A d	Recycle,	N.	TT: -1.	0	D.:.e	NI-
261	Weil, M	2018	Vanadium Redox Flow Battery	http://dx.doi.org/10.1021/acs.est.8b02073	Flow Battery	Manufacturing	equipment	grave	application. Complete life cycle of a	Comprehensive	Advanced	Recover	No	High	Quantitative	Brief	No
	Wen, B; Jin, Q;						Manufacture		1,785,055 kg QC made								
	Huang, H;						of machinery		in China, exported to			l					
262	Tandon, P; Zhu, YH	2017	Life cycle assessment of Quayside Crane: A case study in China	http://dx.doi.org/10.1016/j.jclepro.2017.01.146	Quayside Crane	Manufacturing	and equipment n.e.c.	cradle-to- grave	Dubai and used for 20 years.	Brief	Basic	Recycle, Recover	No	High	Ouantitative	Comprehensive	No
202	Weththasinghe,	2017	Crane. A case study in china	http://dx.doi.org/10.1010/j.jetepi0.2017.01.140	Quayside Ciane	Wandracturing	n.c.c.	grave	years.	Brici	Dasic	Recover	110	Iligii	Quantitative	Comprehensive	110
	KK; Akash, A;						Manufacture					_					
	Harding, T; Subhani, M;		Carbon footprint of wood and plastic as packaging materials - An				of rubber and plastics	cradle-to-	Completing 100 trips using the MDWD pallet,			Reuse, Recycle,					
263	Wijayasundara, M	2022	Australian case of pallets	http://dx.doi.org/10.1016/j.jclepro.2022.132446	Pallets	Manufacturing	products	grave	carrying the same load.	Comprehensive	Advanced	Recover	No	High	Quantitative	Comprehensive	No
	, , , , , , , , , , , , , , , , , , , ,		Reducing the Environmental														
	Wiedemann, SG;		Impacts of Garments through				Manufacture		One garment over its lifetime, with impacts								
	Biggs, L; Clarke,		Industrially Scalable Closed-Loop Recycling: Life Cycle Assessment				of wearing	cradle-to-	reported per wear			Recycle,					
264	SJ; Russell, SJ	2022	of a Recycled Wool Blend Sweater	http://dx.doi.org/10.3390/su14031081	Garments	Manufacturing	apparel	grave	event in Europe.	Comprehensive	Advanced	Recover	Yes	High	Quantitative	Comprehensive	No
						Electricity,	Electricity,		O 1-W11								
	Wolfram, P;					gas, steam and	gas, steam and		One kWh and total annual final demand of								
	Wiedmann, T;		Carbon footprint scenarios for		Electricity generation	conditioning	conditioning	cradle-to-	electricity consumed in					No			
265	Diesendorf, M	2016	renewable electricity in Australia	http://dx.doi.org/10.1016/j.jclepro.2016.02.080	techNologies	supply	supply	grave	Australia.	No	No	No	No	statement	No	No	No
			Sustainable consumption and production: Modelling product														
	Wong, EYC; Ho,		carbon footprint of beverage														
	DCK; So, S; Poo,		merchandise using a supply chain				Manufacture	cradle-to-	A carbonated drink in an		L .	l	l	No		1	
266	MCP	2022	input-process-output approach	http://dx.doi.org/10.1002/csr.2193	Carbonated drink	Manufacturing	of beverages	grave	aluminium can. The complete life cycle	Brief	Basic	Recycle	No	statement	No	No	No
									of a 61 kg direct-cooling								
									double-door refrigerator								
									double-door refrigerator made in China, used for								
	Xiao, RF; Zhang,						Manufacture		double-door refrigerator								
	Y; Liu, X; Yuan,		A life-cycle assessment of		Household		of electrical	cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art								
267		2015	A life-cycle assessment of household refrigerators in China	http://dx.doi.org/10.1016/j.jclepro.2015.02.031	Household refrigerators	Manufacturing	of electrical equipment	cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China	Brief	Advanced	Recycle	No	Low	Quantitative	Comprehensive	No
267	Y; Liu, X; Yuan,	2015		http://dx.doi.org/10.1016/j.jclepro.2015.02.031		Electricity,	of electrical equipment Electricity,		double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art	Brief	Advanced	Recycle	No	Low	Quantitative	Comprehensive	No
267	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX;	2015	household refrigerators in China	http://dx.doi.org/10.1016/j.jclepro.2015.02.031		Electricity, gas, steam and air	of electrical equipment Electricity, gas, steam and air	grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system.	Brief	Advanced		No		Quantitative	Comprehensive	No
	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang,		household refrigerators in China Assessments of carbon footprint and		refrigerators	Electricity, gas, steam and air conditioning	of electrical equipment Electricity, gas, steam and air conditioning	grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system.			Recycle,		No			
267	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX;	2015	household refrigerators in China	http://dx.doi.org/10.1016/j.jclepro.2015.02.031 http://dx.doi.org/10.1016/j.jclepro.2020.120159		Electricity, gas, steam and air conditioning supply	of electrical equipment Electricity, gas, steam and air conditioning supply	grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system.	Brief Brief	Advanced		No No		Quantitative	Comprehensive	No No
	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY;		household refrigerators in China Assessments of carbon footprint and		refrigerators	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and	grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation.			Recycle,		No			
	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX;		Assessments of carbon footprint and energy analysis of three wind farms		refrigerators Wind farm	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air	grave cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided			Recycle, Recover		No			
	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY;		household refrigerators in China Assessments of carbon footprint and		refrigerators	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and	grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation.			Recycle,		No			
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR;	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore	http://dx.doi.org/10.1016/j.jclepro.2020.120159	Wind farm Onshore wind power	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and	grave cradle-to- grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units	Brief	No	Recycle, Recover	No	No statement	No	No	No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR;	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China	http://dx.doi.org/10.1016/j.jclepro.2020.120159	Wind farm Onshore wind power	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal	grave cradle-to- grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry	Brief	No	Recycle, Recover	No	No statement	No	No	No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary	http://dx.doi.org/10.1016/j.jclepro.2020.120159	Wind farm Onshore wind power	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and	grave cradle-to- grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to	Brief	No	Recycle, Recover	No	No statement	No	No	No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, XL; Wang,	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014	Wind farm Onshore wind power	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service	grave cradle-to- grave cradle-to-	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry	Brief Comprehensive	No Advanced	Recycle, Recover	No No	No statement Low	No No	No No	No No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL;	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in	http://dx.doi.org/10.1016/j.jclepro.2020.120159	Wind farm Onshore wind power	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture,	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities	grave cradle-to- grave cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1	Brief	No	Recycle, Recover	No	No statement Low	No	No	No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, XL; Wang,	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014	Wind farm Onshore wind power system	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and	cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave.	Brief Comprehensive	No Advanced	Recycle, Recover	No No	No statement Low	No No	No No	No No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, XL; Wang,	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014	Wind farm Onshore wind power system	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities	cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to	Brief Comprehensive	No Advanced	Recycle, Recover	No No	No statement Low	No No	No No	No No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, MT	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014	Wind farm Onshore wind power system	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture,	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and numal production, hunting and	cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15	Brief Comprehensive	No Advanced	Recycle, Recover	No No	No statement Low	No No	No No	No No
268 269 270	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A;	2020 2018	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136	Wind farm Onshore wind power system Organic tea	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service	cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life	Brief Comprehensive Brief	No Advanced Basic	Recycle, Recover Recycle, Recover	No No	No statement Low No statement	No No	No No	No No
268	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, MT	2020	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014	Wind farm Onshore wind power system	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture,	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and numal production, hunting and	cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15	Brief Comprehensive	No Advanced	Recycle, Recover	No No	No statement Low	No No	No No	No No
268 269 270	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B;	2020 2018 2019	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394	Vind farm Onshore wind power system Organic tea Pet Dog	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Secialized construction	cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with	Brief Comprehensive Brief Comprehensive	No Advanced Basic Advanced	Recycle, Recover Recycle, Recover	No No	No statement Low No statement Low No	No No Quantitative	No No Comprehensive	No No
268 269 270	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, XL; Wang, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E;	2020 2018	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136	Wind farm Onshore wind power system Organic tea	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized	cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years.	Brief Comprehensive Brief	No Advanced Basic	Recycle, Recover Recycle, Recover	No No	No statement Low No statement	No No	No No	No No
268 269 270	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B;	2020 2018 2019	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394	Vind farm Onshore wind power system Organic tea Pet Dog	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Secialized construction	cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1 m² sandwich panel with insulation. A single horizontal-axis	Brief Comprehensive Brief Comprehensive	No Advanced Basic Advanced	Recycle, Recover Recycle, Recover	No No	No statement Low No statement Low No	No No Quantitative	No No Comprehensive	No No
268 269 270 271 272	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, XL; Wang, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B	2020 2018 2019 2020 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394 http://dx.doi.org/10.1016/j.jobe.2022.104234	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- cradle-to- grave cradle-to- cradle-to- cradle-to- cradle-to- disposal	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in	Brief Comprehensive Brief Comprehensive	No Advanced Basic Advanced Basic	Recycle, Recover Recycle, Recover Recycle Recover	No No No No	No statement Low No statement Low No statement	No No Ouantitative No	No No Comprehensive	No No No No
268 269 270	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, XL; Wang, XL; Wang, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X	2020 2018 2019	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394	Vind farm Onshore wind power system Organic tea Pet Dog	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Secialized construction activities Manufacture of electrical equipment	cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during	Brief Comprehensive Brief Comprehensive	No Advanced Basic Advanced	Recycle, Recover Recycle, Recover	No No	No statement Low No statement Low No	No No Quantitative	No No Comprehensive	No No
268 269 270 271 272	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, ZL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R;	2020 2018 2019 2020 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394 http://dx.doi.org/10.1016/j.jobe.2022.104234	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment Manufacture	cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in	Brief Comprehensive Brief Comprehensive	No Advanced Basic Advanced Basic	Recycle, Recover Recycle, Recover Recover Recover	No No No No	No statement Low No statement Low No statement	No No Ouantitative No	No No Comprehensive	No No No No
268 269 270 271 272	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F	2020 2018 2019 2020 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394 http://dx.doi.org/10.1016/j.jobe.2022.104234	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Secialized construction activities Manufacture of electrical equipment	cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- grave cradle-to- cradle-to- grave cradle-to- cradle-to- cradle-to- cradle-to- disposal	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in	Brief Comprehensive Brief Comprehensive	No Advanced Basic Advanced Basic	Recycle, Recover Recycle, Recover Recycle Recover	No No No No	No statement Low No statement Low No statement	No No Ouantitative No	No No Comprehensive	No No No No
268 269 270 271 272 273	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XI; Wang, XI; Wang, XI; Wang, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F Zackrisson, M;	2020 2018 2019 2020 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment of lithium-ion and lead-acid	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394 http://dx.doi.org/10.1016/j.jobe.2022.104234 http://dx.doi.org/10.1007/s11367-015-0993-5	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels Washing machine	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction Manufacturing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment Manufacture of electrical	cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in China.	Brief Comprehensive Brief Comprehensive Comprehensive	No Advanced Basic Advanced Advanced	Recycle, Recover Recycle, Recover Recycle Recover Recover Recover	No No No No	No statement Low No statement Low Low Low Low	No No Ouantitative No Quantitative	No No Comprehensive No Brief	No No No No No
268 269 270 271 272 273	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F Zackrisson, M; Fransson, K;	2020 2018 2019 2020 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment of lithium-ion and lead-acid	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394 http://dx.doi.org/10.1016/j.jobe.2022.104234 http://dx.doi.org/10.1007/s11367-015-0993-5	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels Washing machine	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction Manufacturing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment Manufacture of electrical equipment	cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in China.	Brief Comprehensive Brief Comprehensive Comprehensive	No Advanced Basic Advanced Advanced	Recycle, Recover Recycle, Recover Recycle Recover Recover Recover	No No No No	No statement Low No statement Low Low Low Low	No No Ouantitative No Quantitative	No No Comprehensive No Brief	No No No No No
268 269 270 271 272 273 274	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F Zackrisson, M; Fransson, K; Hildenbrand, J; Lampic, G;	2020 2018 2019 2020 2022 2016 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment of lithium-ion and lead-acid	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.jclepro.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.1016/j.jobe.2022.104234 http://dx.doi.org/10.1007/s11367-015-0993-5 http://dx.doi.org/10.1016/j.jclepro.2022.131999	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels Washing machine Batteries	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction Manufacturing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment Manufacture of electrical	cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1 m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in China.	Brief Comprehensive Brief Comprehensive Brief	No Advanced Basic Advanced Basic	Recycle, Recover Recycle, Recover Recycle Recover Recover Recover	No No No No No	No statement Low No statement Low Low Low Low	No No No Quantitative No Quantitative Qualitative	No No Comprehensive No Brief	No No No No No No No
268 269 270 271 272 273	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F Zackrisson, M; Fransson, K; Hildenbrand, J; Lampic, G; O'Dwyer, C	2020 2018 2019 2020 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment of lithium-ion and lead-acid batteries for grid energy storage	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.resconrec.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.3390/su12083394 http://dx.doi.org/10.1016/j.jobe.2022.104234 http://dx.doi.org/10.1007/s11367-015-0993-5	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels Washing machine	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction Manufacturing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment Manufacture of electrical equipment	cradle-to-grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in China.	Brief Comprehensive Brief Comprehensive Comprehensive	No Advanced Basic Advanced Advanced	Recycle, Recover Recycle, Recover Recover Recover Recover Recover	No No No No	No statement Low No statement Low Low Low Low	No No Ouantitative No Quantitative	No No Comprehensive No Brief	No No No No No
268 269 270 271 272 273 274	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, XL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F Zackrisson, M; Fransson, K; Hildenbrand, J; Lampic, G; O'Dwyer, C Zafeiridou, M;	2020 2018 2019 2020 2022 2016 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment of lithium-ion and lead-acid batteries for grid energy storage Life cycle assessment of lithium-air battery cells	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.jclepro.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.1016/j.jobe.2022.104234 http://dx.doi.org/10.1007/s11367-015-0993-5 http://dx.doi.org/10.1016/j.jclepro.2022.131999	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels Washing machine Batteries	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction Manufacturing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment	cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average weight of 15 kg and an average life expectancy of 13 years. 1m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in China. 1 kWh energy delivered.	Brief Comprehensive Brief Comprehensive Brief	No Advanced Basic Advanced Basic	Recycle, Recover Recycle, Recover Recycle Recover Recover Recover Recover Recover	No No No No No	No statement Low No statement Low Low Low Low	No No No Quantitative No Quantitative Qualitative	No No Comprehensive No Brief	No No No No No No No
268 269 270 271 272 273 274	Y; Liu, X; Yuan, ZW Xie, JB; Fu, JX; Liu, SY; Hwang, WS Xu, L; Pang, MY; Zhang, LX; Poganietz, WR; Marathe, SD Xu, Q; Hu, KL; Wang, DH; Knudsen, MT Yavor, KM; Lehmann, A; Finkbeiner, M Yilmaz, E; Aykanat, B; Comak, B Yuan, ZW; Zhang, Y; Liu, X Yudhistira, R; Khatiwada, D; Sanchez, F Zackrisson, M; Fransson, K; Hildenbrand, J; Lampic, G; O'Dwyer, C	2020 2018 2019 2020 2022 2016 2022	Assessments of carbon footprint and energy analysis of three wind farms Life cycle assessment of onshore wind power systems in China Carbon footprint and primary energy demand of organic tea in China using a life cycle assessment approach Environmental Impacts of a Pet Dog: An LCA Case Study Environmental life cycle assessment of rockwool filled aluminum sandwich facade panels in Turkey Life cycle assessment of horizontal-axis washing machines in China A comparative life cycle assessment of lithium-ion and lead-acid batteries for grid energy storage	http://dx.doi.org/10.1016/j.jclepro.2020.120159 http://dx.doi.org/10.1016/j.jclepro.2017.06.014 http://dx.doi.org/10.1016/j.jclepro.2019.06.136 http://dx.doi.org/10.1016/j.jobe.2022.104234 http://dx.doi.org/10.1007/s11367-015-0993-5 http://dx.doi.org/10.1016/j.jclepro.2022.131999	Vind farm Onshore wind power system Organic tea Pet Dog Facade pannels Washing machine Batteries	Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Agriculture, forestry and fishing Agriculture, forestry and fishing Construction Manufacturing	of electrical equipment Electricity, gas, steam and air conditioning supply Electricity, gas, steam and air conditioning supply Crop and animal production, hunting and related service activities Crop and animal production, hunting and related service activities Specialized construction activities Manufacture of electrical equipment Manufacture of electrical equipment	cradle-to- grave cradle-to- grave	double-door refrigerator made in China, used for 10 years (24 h/day), and disposed of in China through a state-of the-art recycling system. 1 kWh of electricity generation. 1 kWh electricity generation. 1 kWh electricity generation provided by the 220 kV step-up transformer. Two functional units were chosen: 1 kg of dry tea for cradle to supermarket gate and 1 cup of tea for cradle to grave. One average dog: life of an average dog assuming an average weight of 15 kg and an average life expectancy of 13 years. 1 m² sandwich panel with insulation. A single horizontal-axis washing machine during its 10-year service life in China.	Brief Comprehensive Brief Comprehensive Brief	No Advanced Basic Advanced Basic	Recycle, Recover Recycle, Recover Recycle Recover Recover Recover Recover Recover	No No No No No	No statement Low No statement Low Low Low Low	No No No Quantitative No Quantitative Qualitative	No No Comprehensive No Brief	No No No No No No No

			Footprint Across Its Entire Supply						equivalent to 1 million								
			Chain						cigarette sticks.								
277	Zanghelini, GM; Cherubini, E; Dias, R; Kabe, YHO; Delgado, JJS	2020	Comparative life cycle assessment of drinking straws in Brazil	http://dx.doi.org/10.1016/j.jclepro.2020.123070	Drinking straws	Manufacturing	Manufacture of paper and paper products	cradle-to- grave	to drink 300 ml of a generic liquid from a regular glass	Brief	Basic	Reuse, Recycle	No	Low	Quantitative	Brief	No
278	Zhai, YJ; Zhang, TZ; Tan, XF; Wang, GL; Duan, LC; Shi, QP; Ji, CX; Bai, YY; Shen, XX; Meng, J: Hong, JL	2022	Environmental impact assessment of ground source heat pump system for heating and cooling: a case study in China	http://dx.doi.org/10.1007/s11367-022-02034-z	Heat pump	Manufacturing	Manufacture of machinery and equipment	cradle-to-	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope	Out of Scope
270	J, Hong, JL	2022	Assessment of carbon footprint of	http://dx.doi.org/10.100//811307-022-02034-2	Ticat pullip	ivianuracturing	Manufacture	gaic	1 kg of food product and	Out of Scope	Зсорс	Out of Scope	Всорс	Зсорс	Out of Scope	Out of Scope	Out of Scope
279	Zhang, BY; Tong, YF; Singh, S; Cai, H; Huang, JY	2019	naNo-packaging considering potential food waste reduction due to shelf life extension	http://dx.doi.org/10.1016/j.resconrec.2019.05.030	Packaging	Manufacturing	of rubber and plastics products	cradle-to- grave	the required amount of naNo-packaging materials.	Brief	Basic	Reduce	No	No statement	No	No	No
	11, 1144115, 31	201)	to shell the extension	intp://dx.doi.org/10.1010/jirescomee.2017.03.030	ruckuging	Manufacturing	Manufacture	grave	mucruis.	Brief	Dusic	Reduce	110	Statement	110	110	110
280	Zhang, JY; Yuan, HY; Deng, YL; Abu-Reesh, IM; He, Z; Yuan, C	2019	Life cycle assessment of osmotic microbial fuel cells for simultaneous wastewater treatment and resource recovery	http://dx.doi.org/10.1007/s11367-019-01626-6	Fuel cells	Manufacturing	of computer, electronic and optical products	cradle-to- grave	1 unit of wastewater treatment.	Brief	Basic	Recycle, Recover	No	Low	Quantitative	Brief	No
281	Zhang, JY; Yuan, HY; Deng, YL; Zha, YC; Abu- Reesh, IM; He, Z; Yuan, C	2018	Life cycle assessment of a microbial desalination cell for sustainable wastewater treatment and saline water desalination	http://dx.doi.org/10.1016/j.jclepro.2018.07.197	Wastewater treatment and desalination	Water supply; sewerage, waste management and remediation activities	Water collection, treatment and supply	cradle-to- grave	1 L of water being treated.	Brief	Basic	Recycle, Recover	No	Low	Quantitative	Brief	No
	ĺ .		Life cycle assessment of Novel heat				Manufacture										
282	Zhang, LG; Spatari, S; Sun, Y	2020	exchanger for dry cooling of power plants based on encapsulated phase change materials	http://dx.doi.org/10.1016/j.apenergy.2020.115227	Heat exchanger	Manufacturing	of machinery and equipment n.e.c.	cradle-to- grave	1 kWh of electricity produced.	Brief	Basic	Reuse, Recycle	No	No statement	No	No	No
202	J; Kripka, M;	2021	Using Bayesian Networks and	http://doi.org/10.2200/com.11114016	D.: I.	Commission	Civil	cradle-to-		Dist	N-	Danaia	N	Y	N-	N-	N.
283	Zhou, ZW; Alcala,	2021	Bridge Carbon Emissions and Driving Factors Based on a Life- Cycle Assessment Case Study: Cable-Staved Bridge over Hun He	nup://ax.aoi.org/10.5590/app11114916	ьпаде	Construction	Civil	grave	n.d.	впеі	No	керан	INO	Low	NO	NO	INO
284	J; Yepes, V	2020	River in Liaoning, China	http://dx.doi.org/10.3390/ijerph17165953	Bridge	Construction	engineering	grave	n.d.	Brief	Basic	Repair	No	Low	No	No	No
283	Yepes, V Zhou, ZW; Alcala,	2021	Fuzzy Mathematics Bridge Carbon Emissions and Driving Factors Based on a Life- Cycle Assessment Case Study: Cable-Stayed Bridge over Hun He	http://dx.doi.org/10.3390/app11114916 http://dx.doi.org/10.3390/ijerph17165953	Bridge Bridge	Construction	engineering Civil	grave cradle-to-	n.d.	Brief Brief	No Basic	Repair	No No	Low	No No	No No	No No