

Supplementary information B: Individual journal data tables

	Number of studies reviewed	Uncertainty analysis performed/discussed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
International Journal of Life Cycle Assessment					
ALCA	397	119 (30%)	15 (4%)	144 (36%)	119 (30%)
CLCA	16	3 (19%)	0 (0%)	9 (56%)	4 (25%)
ALCA+CLCA	8	3 (38%)	0 (0%)	2 (25%)	3 (38%)
Not an LCA	310	44 (14%)	4 (1%)	149 (48%)	113 (36%)

Table S1. Types of LCA studies and reporting of uncertainty in the International Journal of Life Cycle Assessment from January 2014-August 2018. In the “Uncertainty analysis performed/discussed” column, “performed” refers to uncertainty analysis performed in an LCA case study, and “discussed” refers to non-LCA studies which discussed the use of a particular type of uncertainty analysis in general. See supplementary file A for complete list of citations.

	Number of studies reviewed	Uncertainty analysis performed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
Journal of Cleaner Production					
ALCA	1349	231 (17%)	20 (1%)	430 (32%)	667 (50%)
CLCA	60	8 (13%)	0 (0%)	29 (48%)	23 (38%)
ALCA+CLCA	17	3 (18%)	0 (0%)	1 (59%)	4 (24%)

Table S2. Types of LCA studies and reporting of uncertainty in Journal of Cleaner Production from January 2014-August 2018. See supplementary file A for complete list of citations.

	Number of studies reviewed	Uncertainty analysis performed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
Sustainability					
ALCA	140	9(6%)	1 (1%)	56 (40%)	74 (53%)
CLCA	6	0 (0%)	0 (0%)	5 (83%)	1 (17%)
ALCA+CLCA	1	0 (0%)	0 (0%)	1 (100%)	0 (0%)

Table S3. Types of LCA studies and reporting of uncertainty in Sustainability from January 2014-August 2018. See supplementary file A for complete list of citations.

	Number of studies reviewed	Uncertainty analysis performed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
Applied Energy					
ALCA	214	40 (19%)	5 (2%)	72 (34%)	97 (45%)
CLCA	17	4 (24%)	0 (0%)	9 (53%)	4 (24%)
ALCA+CLCA	0	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Table S4. Types of LCA studies and reporting of uncertainty in Applied Energy from January 2014-August 2018. See supplementary file A for complete list of citations.

	Number of studies reviewed	Uncertainty analysis performed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
Science of the Total Environment					
ALCA	162	20 (12%)	3 (2%)	74 (46%)	65 (40%)
CLCA	9	1 (11%)	0 (0%)	6 (67%)	2 (22%)
ALCA+CLCA	3	0 (0%)	0 (0%)	2 (67%)	1 (33%)

Table S5. Types of LCA studies and reporting of uncertainty in Science of the Total Environment from January 2014-August 2018. See supplementary file A for complete list of citations.

	Number of studies reviewed	Uncertainty analysis performed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
Resources, Conservation and Recycling					
ALCA	136	33 (24%)	6 (4%)	28 (21%)	69 (51%)
CLCA	10	3 (30%)	0 (0%)	5 (50%)	2 (20%)
ALCA+CLCA	2	0 (0%)	0 (0%)	0 (0%)	2 (100%)

Table S6. Types of LCA studies and reporting of uncertainty in Resources, Conservation and Recycling from January 2014-August 2018. See supplementary file A for complete list of citations.

	Number of studies reviewed	Uncertainty analysis performed	Uncertainty analysis reported as not performed	Uncertainty mentioned but not quantified	No mention of uncertainty
Journal of Industrial Ecology					
ALCA	121	23 (19%)	4 (3%)	66 (55%)	28 (23%)
CLCA	18	1 (6%)	2 (11%)	13 (72%)	2 (11%)
ALCA+CLCA	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)

Table S7. Types of LCA studies and reporting of uncertainty in Journal of Industrial Ecology from January 2014-August 2018. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
International Journal of Life Cycle Assessment			
2014	111	31	28%
2015	78	26	33%
2016	64	17	27%
2017	103	35	34%
2018 (Jan-Aug)	70	19	27%

Table S8. Reported uncertainty analysis in LCA case studies in the International Journal of Life Cycle Assessment from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
Journal of Cleaner Production			
2014	176	35	20%
2015	229	40	17%
2016	339	63	19%
2017	403	50	12%
2018 (Jan-Aug)	279	57	20%

Table S9. Reported uncertainty analysis in LCA case studies in Journal of Cleaner Production from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
Sustainability			
2014	8	0	0%
2015	21	0	0%
2016	36	4	11%
2017	40	4	10%
2018 (Jan-Aug)	42	1	2%

Table S10. Reported uncertainty analysis in LCA case studies in Sustainability from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
Applied Energy			
2014	47	6	13%
2015	55	9	16%
2016	57	14	25%
2017	47	9	19%
2018 (Jan-Aug)	25	6	24%

Table S11. Reported uncertainty analysis in LCA case studies in Applied Energy from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
Science of the Total Environment			
2014	31	3	10%
2015	16	2	13%
2016	35	5	14%
2017	38	6	16%
2018 (Jan-Aug)	54	5	9%

Table S12. Reported uncertainty analysis in LCA case studies in Science of the Total Environment from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
Resources, Conservation and Recycling			
2014	20	7	35%
2015	37	4	11%
2016	20	7	35%
2017	38	8	21%
2018 (Jan-Aug)	33	10	30%

Table S13. Reported uncertainty analysis in LCA case studies in Resources, Conservation and Recycling from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	Number of studies reviewed	Studies with uncertainty analysis	% of studies with uncertainty analysis
Journal of Industrial Ecology			
2014	14	2	14%
2015	18	3	17%
2016	36	2	6%
2017	35	6	17%
2018 (Jan-Aug)	37	12	32%

Table S14. Reported uncertainty analysis in LCA case studies in Journal of Industrial Ecology from 2014-2018. Note that 2018 only includes 8 months. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
International Journal of Life Cycle Assessment			
Monte Carlo-like approaches	65	1	1
Probabilistic (other than Monte Carlo)	4	0	0
Taylor Series	2	0	0
Scenario Analysis	11	1	1
Qualitative/pedigree	2	0	0
Sensitivity Analysis	24	1	0
Fuzzy Logic	0	0	0
Bayesian	0	0	0
Regression Analysis	0	0	0
Not Indicated/Other	15	0	1

Table S15. Types of uncertainty analysis performed in ALCA and CLCA studies in the International Journal of Life Cycle Assessment from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
Journal of Cleaner Production			
Monte Carlo-like approaches	144	6	1
Probabilistic (other than Monte Carlo)	4	1	0
Taylor Series	2	0	0
Scenario Analysis	9	0	0
Qualitative/pedigree	7	0	1
Sensitivity Analysis	53	1	1
Fuzzy Logic	3	0	0
Bayesian	0	0	0
Regression Analysis	1	0	0
Not Indicated/Other	11	0	0

Table S16. Types of uncertainty analysis performed in ALCA and CLCA studies in Journal of Cleaner Production from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
Sustainability			
Monte Carlo-like approaches	5	0	0
Probabilistic (other than Monte Carlo)	1	0	0
Taylor Series	0	0	0
Scenario Analysis	0	0	0
Qualitative/pedigree	2	0	0
Sensitivity Analysis	1	0	0
Fuzzy Logic	0	0	0
Bayesian	0	0	0
Regression Analysis	0	0	0
Not Indicated/Other	0	0	0

Table S17. Types of uncertainty analysis performed in ALCA and CLCA studies in Sustainability from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
Applied Energy			
Monte Carlo-like approaches	23	3	0
Probabilistic (other than Monte Carlo)	5	0	0
Taylor Series	0	0	0
Scenario Analysis	3	0	0
Qualitative/pedigree	0	0	0
Sensitivity Analysis	6	1	0
Fuzzy Logic	0	0	0
Bayesian	0	0	0
Regression Analysis	0	0	0
Not Indicated/Other	3	0	0

Table S18. Types of uncertainty analysis performed in ALCA and CLCA studies in Applied Energy from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
Science of the Total Environment			
Monte Carlo-like approaches	17	0	0
Probabilistic (other than Monte Carlo)	0	1	0
Taylor Series	0	0	0
Scenario Analysis	1	0	0
Qualitative/pedigree	0	0	0
Sensitivity Analysis	0	0	0
Fuzzy Logic	0	0	0
Bayesian	0	0	0
Regression Analysis	0	0	0
Not Indicated/Other	2	0	0

Table S19. Types of uncertainty analysis performed in ALCA and CLCA studies in Science of the Total Environment from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
Resources, Conservation and Recycling			
Monte Carlo-like approaches	17	1	0
Probabilistic (other than Monte Carlo)	1	0	0
Taylor Series	0	0	0
Scenario Analysis	5	1	0
Qualitative/pedigree	0	0	0
Sensitivity Analysis	6	1	0
Fuzzy Logic	1	0	0
Bayesian	0	0	0
Regression Analysis	0	0	0
Not Indicated/Other	3	0	0

Table S20. Types of uncertainty analysis performed in ALCA and CLCA studies in Resources, Conservation and Recycling from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

	ALCA	CLCA	ALCA+CLCA
Journal of Industrial Ecology			
Monte Carlo-like approaches	14	1	0
Probabilistic (other than Monte Carlo)	1	0	0
Taylor Series	0	0	0
Scenario Analysis	1	0	1
Qualitative/pedigree	2	0	0
Sensitivity Analysis	3	0	0
Fuzzy Logic	0	0	0
Bayesian	0	0	0
Regression Analysis	0	0	0
Not Indicated/Other	2	0	0

Table S21. Types of uncertainty analysis performed in ALCA and CLCA studies in Journal of Industrial Ecology from 2014-2018. Studies that employed a combination of uncertainty analysis methods are counted under each method. See supplementary file A for complete list of citations.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
International Journal of Life Cycle Assessment				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	29%	71%	289
	CLCA	29%	71%	14
Transport	ALCA	30%	70%	27
	CLCA	0%	0%	0
Infrastructure	ALCA	46%	54%	39
	CLCA	50%	50%	2
Primary energy carriers, metals, salts	ALCA	29%	71%	49
	CLCA	14%	86%	7

Table S22. Number of studies in the International Journal of Life Cycle Assessment that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
Journal of Cleaner Production				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	16%	84%	1014
	CLCA	16%	84%	43
Transport	ALCA	17%	83%	75
	CLCA	17%	83%	6
Infrastructure	ALCA	19%	81%	154
	CLCA	8%	92%	13
Primary energy carriers, metals, salts	ALCA	30%	70%	115
	CLCA	7%	93%	15

Table S23. Number of studies in Journal of Cleaner Production that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
Sustainability				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	8%	92%	100
	CLCA	0%	100%	4
Transport	ALCA	0%	100%	8
	CLCA	0%	0%	0
Infrastructure	ALCA	0%	100%	27
	CLCA	0%	100%	3
Primary energy carriers, metals, salts	ALCA	11%	89%	9
	CLCA	0%	100%	6

Table S24. Number of studies in Sustainability that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
Applied Energy				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	21%	79%	107
	CLCA	17%	83%	6
Transport	ALCA	19%	81%	26
	CLCA	50%	50%	2
Infrastructure	ALCA	10%	90%	10
	CLCA	0%	0%	0
Primary energy carriers, metals, salts	ALCA	20%	80%	82
	CLCA	11%	89%	9

Table S25. Number of studies in Applied Energy that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
Science of the Total Environment				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	11%	89%	138
	CLCA	0%	100%	7
Transport	ALCA	0%	100%	1
	CLCA	0%	0%	0
Infrastructure	ALCA	0%	100%	7
	CLCA	0%	0%	0
Primary energy carriers, metals, salts	ALCA	28%	72%	82
	CLCA	17%	83%	6

Table S26. Number of studies in Science of the Total Environment that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
Resources, Conservation and Recycling				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	21%	79%	104
	CLCA	30%	70%	10
Transport	ALCA	67%	33%	6
	CLCA	0%	0%	0
Infrastructure	ALCA	62%	38%	8
	CLCA	0%	0%	0
Primary energy carriers, metals, salts	ALCA	31%	69%	13
	CLCA	0%	100%	2

Table S27. Number of studies in Resources, Conservation and Recycling that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.

		Studies with uncertainty analysis	Studies with no uncertainty analysis	Total number of studies
Journal of Industrial Ecology				
Thermal energy, electricity, semi-finished products, working material, waste treatment services	ALCA	20%	80%	89
	CLCA	12%	88%	17
Transport	ALCA	21%	79%	14
	CLCA	50%	50%	2
Infrastructure	ALCA	18%	82%	11
	CLCA	0%	0%	0
Primary energy carriers, metals, salts	ALCA	33%	67%	6
	CLCA	0%	100%	3

Table S28. Number of studies in Journal of Industrial Ecology that either did or did not perform uncertainty analysis, categorized by the major industrial sectors with defined base uncertainty values (Frischknecht et al 2005). Percentages refer to how much of the total of each sector either performed or did not perform uncertainty analysis. Within each sector, papers are further subdivided by LCA type; CLCA in this case refers to all LCA studies that employed consequential modeling, including combination ALCA/CLCA studies.