Supplementary Material

Path2Green: Introducing 12 Green Extraction Principles and a Novel Metric for Assessing Sustainability in Biomass Valorization

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Table S1. List of articles evaluated considering the 12 principles assessesd in *Path2Green* metric and their respective carbon footprint (expressed in $g_{CO2}/g_{biomass}$)

Reference	Scenarios	Principle 1	Principle 2	Principle 3	Principle 4	Principle 5	Principle 6	Principle 7	Principle 8	Principle 9	Principle 10	Principle 11	Principle 12	*Path2Green*	g_{CO2}/g_{biomas}
1	Reusing the alternative solvent	1	0.8	-0.2	0	-1	0.5	-0.5	1	-0.5	0.83	1	0.7	0.33	243.00
1	Not reusing the alternative solvent	1	0.8	-0.2	0	-1	0.5	-0.5	1	-0.5	0.83	0.5	-0.4	0.16	486.00
1	Using volatile organic solvent	1	0.8	-0.2	0	-1	-1	-0.5	1	-0.5	0.83	-1	-1	-0.15	814.00
2	Reusing the alternative solvent	1	-0.1	-0.2	1	-1	0	-0.5	1	0.5	0.83	1	1	0.45	423.84
2	Not reusing the alternative solvent	1	-0.1	-0.2	1	-1	0	-0.5	1	0.5	0.83	0.5	0.4	0.33	461.24
2	Using volatile organic solvent	1	-0.1	-0.2	0	-1	-1	-0.5	1	0.5	0.83	-1	-1	-0.15	1028.00
2	Using a biobased solvent	1	-0.1	-0.2	1	-1	-1	-0.5	1	0.5	0.83	-1	-1	-0.04	824.91
3		0.5	1.0	-0.2	1	-1	1	-0.5	1	-0.5	1	1	0.9	0.47	122.00
4		1	1.0	-0.2	0	1	0	-0.5	1	-0.5	0.83	1	0.9	0.54	95.00
5		0	1.0	-0.2	1	-1	0	0.5	1	0.5	1	0.5	1	0.48	44.00
6		0.5	0.7	-0.2	1	-1	-0.5	0.5	1	0.5	0.83	0.5	0.9	0.45	31.40
7		0	0.9	-0.2	0	-1	0.5	-0.5	1	0.5	0.83	0.5	0.8	0.27	550.00
8		1	1.0	-0.2	0	-1	0	-0.5	1	-0.5	0.83	0.5	-1	0.09	599.77
8	Reusing all the raw materials and reagents	1	1.0	-0.2	0	-1	0	-0.5	1	-0.5	0.83	1	1	0.44	464.20
8	Reusing all the raw materials and reagents +	1	1.0	-0.2	0	-1	0	-0.5	1	-0.5	0.83	1	1	0.37	464.20

	alternative drying														
8	Reusing all the raw materials and reagents + conventional high-energy dependence drying	1	1.0	-0.2	0	-1	0	-0.5	1	-1	0.83	1	1	0.15	544.96
9		1	-0.4	-0.2	0	-1	0	1	1	0.5	1	1	1	0.44	87.20
10		1	1.0	-0.2	0	-1	-1	0	1	0.5	0.66	-1	1	0.20	500.00
11		1	1.0	-0.2	1	1	0	-0.5	1	-0.5	0.83	-1	1	0.44	430.00
12		1	0.9	-0.2	1	1	0	-0.5	1	-0.5	0.83	-1	0.3	0.35	312.00
13		1	1.0	-0.2	0	-1	0	-0.5	-0.5	-0.5	0.83	-1	-1	-0.14	827.90
14		-0.5	1.0	-0.2	0	-1	0.5	-0.5	1	-0.5	0.83	-1	-1	-0.22	1052.00
15		0.5	0.7	-0.7	0	0.5	-	-0.5	-0.5	-0.5	0.83	-1	-1	-0.12	789.00
16		0	1.0	1	0	0.5	-	-0.5	-	-0.5	0.83	-1	-1	-0.04	693.00
17		1	-	-0.7	0	0.5	0	-0.5	-	-0.5	0.83	-1	1	0.12	358.00

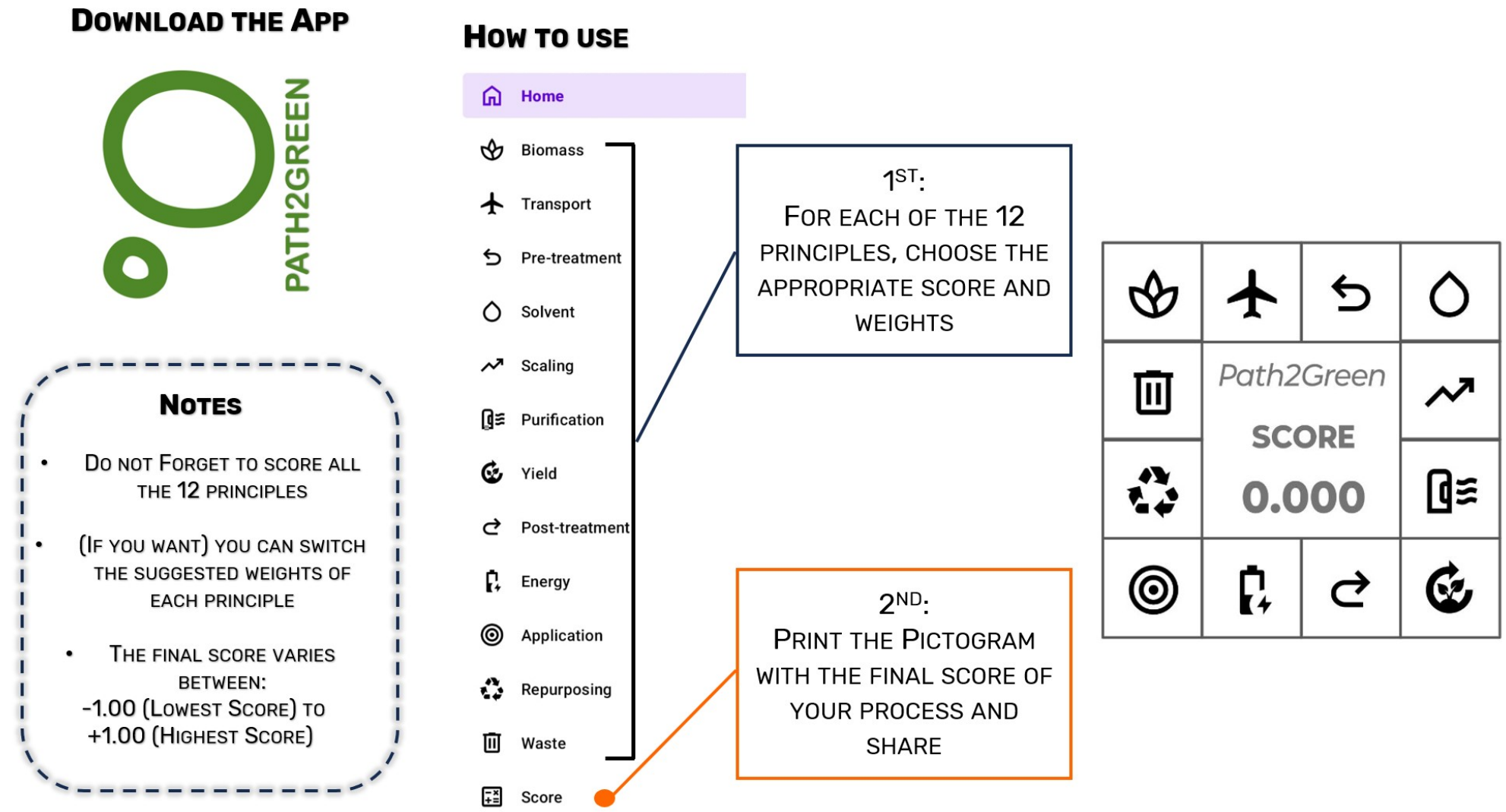

Figure S1. App *Path2Green* information and usage suggestions

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