THE JOURNEY FROM 16 IMPACT CATEGORIES TO ONE SINGLE SCORE

Impact Categories

16 environmental impact categories describe how humans harm the planet through production and construction.

1 Climate change
2 Particulate matter
3 Water use
4 Resource use fossils
5 Land use
6 Resource use minerals and metals
7 Ozone depletion
8 Acidification
9 Ionising radiation
10 Photochemical ozone formation
11 Eutrophication terrestrial
12 Eutrophication, marine
13 Eutrophication freshwater
14 Human toxicity, cancer
15 Ecotoxicity freshwater
16 Human toxicity, noncancer

Normalization

The impact categories are measured in different units. To be able to compare them to each other, results from each category are converted into a common reference unit. This process is called normalization. The common reference unit in PEF LCA is the environmental impacts of **an average global person over one year.**
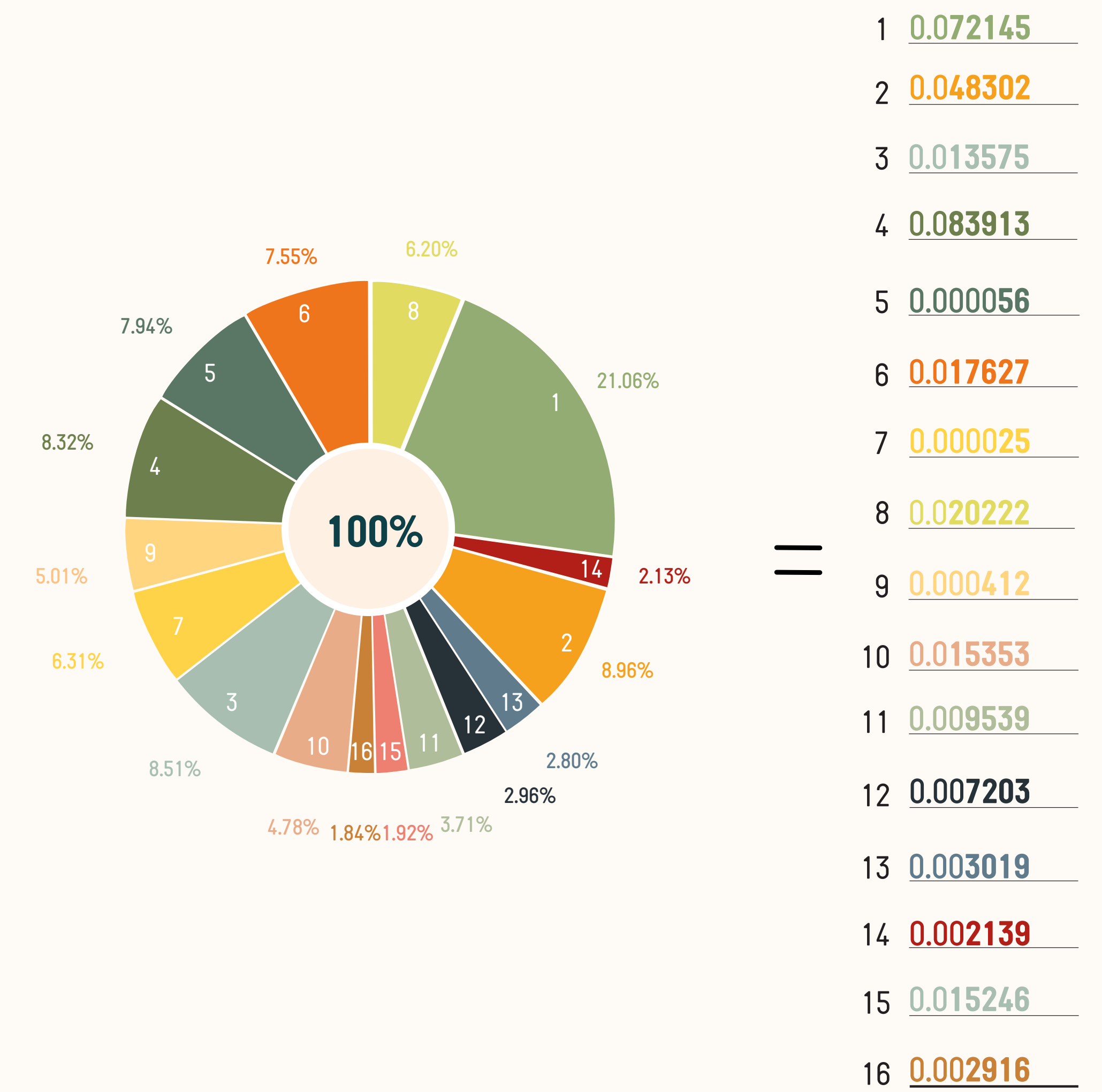
#	Value	Unit
1	2587.449781	kg CO_2eq
2	0.000321	Disease incidence
3	1829.474203	M^3 world eq
4	65561.667349	MJ
5	573.633041	Dimensionless
6	0.014854	kg Sb eq
7	0.000021	kg CFC-11 eq
8	18.124273	Mol H+eq
9	34.671085	Kbq U-235 eq
10	13.124030	kg NMVOC eq
11	45.446968	Mol N eq
12	4.756349	kg N eq
13	0.173241	kg P eq
14	0.000002	CTUh
15	45037.101032	CTUe
16	0.000020	CTUh

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#	Value
1	0.342569
2	0.539089
3	0.159519
4	1.008575
5	0.000700
6	0.233469
7	0.000394
8	0.326155
9	0.008216
10	0.321201
11	0.257118
12	0.243352
13	0.107814
14	0.100438
15	0.794073
16	0.158473

Weighting

Not all impact categories are considered equally important. To get the weighted results, the normalized results are multiplied by their weighting factor*.
Now, the product's impact on the environmental categories is comparable.

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Pie chart (100%):
1: 21.06%
2: 8.96%
3: 8.51%
4: 8.32%
5: 7.94%
6: 7.55%
7: 6.31%
8: 6.20%
9: 5.01%
10: 4.78%
11: 1.92%
12: 3.71%
13: 2.96%
14: 2.13%
15: 1.84%
16: 2.80%

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#	Value
1	0.072145
2	0.048302
3	0.013575
4	0.083913
5	0.000056
6	0.017627
7	0.000025
8	0.020222
9	0.000412
10	0.015353
11	0.009539
12	0.007203
13	0.003019
14	0.002139
15	0.015246
16	0.002916

0.311692 PEF single score

PEF single score = 0.311692

The single score reflects the overall environmental performance of a product.
The single score is obtained by adding up all the weighted results.

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