

Supplementary Table A1. Values of the impact category indices in the life cycle analysis (LCA) of Muchamiel tomato production in screenhouse without additional shade from the ReCiPe 2016 midpoint (H) method and of the processes with the greatest contributions

No shading, NS	
Human toxicity: carcinogenic (kg 1,4-DCB-Eq)	0.259
Treatment of residue from Na-dichromate production, residual material landfill residue from Na-dichromate production Cutoff, U - RoW	0.102
Treatment of electric arc furnace slag, residual material landfill electric arc furnace slag Cutoff, U - RoW	0.077
Human toxicity: non-carcinogenic (kg 1,4-DCB-Eq)	0.715
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.156
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.050
Particulate matter formation (kg PM2.5-Eq)	0.00079
Electricity production, hard coal electricity, high voltage Cutoff, U - CL	0.00012
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.00007
Water use (m³)	0.0069
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.0019
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.0009
Climate change (kg CO₂-Eq)	0.432
Heat production, natural gas, at industrial furnace>100kW heat, district or industrial, natural gas Cutoff, U-Europe without Switzerland	0.028
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.024
Ozone depletion (kg CFC-11-Eq)	0.0000006
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0000005
Ionising radiation (kBq Co-60-Eq)	0.0228
Treatment of tailing, from uranium milling tailing, from uranium milling Cutoff, U - GLO	0.0211
Treatment of spent nuclear fuel, reprocessing spent nuclear fuel Cutoff, U - RoW	0.0004
Photochemical oxidant formation: human health (kg NO_x-Eq)	0.00102
Diesel, burned in building machine diesel, burned in building machine Cutoff, U - GLO	0.00007
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.00006
Photochemical oxidant formation: terrestrial ecosystems (kg NO_x-Eq)	0.00106
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.00009
Diesel, burned in building machine diesel, burned in building machine Cutoff, U - GLO	0.00006

Acidification: terrestrial (kg SO₂-Eq)	0.0020
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0003
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.0002
Ecotoxicity: freshwater (kg 1,4-DCB-Eq)	0.0380
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.005
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.004
Ecotoxicity: marine (kg 1,4-DCB-Eq)	0.050
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.007
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.005
Ecotoxicity: terrestrial (kg 1,4-DCB-Eq)	2.19
Treatment of brake wear emissions, lorry brake wear emissions, lorry Cutoff, U - RoW	0.64
Smelting of copper concentrate, sulfide ore copper, anode Cutoff, U - CN	0.18
Eutrophication: freshwater (kg P-Eq)	0.00011
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	0.00004
Treatment of spoil from lignite mining, in surface landfill spoil from lignite mining Cutoff, U - GLO	0.00003
Eutrophication: marine (kg N-Eq)	0.000018
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.000003
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	0.000002
Land use (m²*a crop-Eq)	0.215
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.196
Peat moss production, horticultural use peat moss Cutoff, U - RoW	0.004
Energy resources: non-renewable, fossil (kg oil-Eq)	0.115
Petroleum and gas production, onshore natural gas, high pressure Cutoff, U - RU	0.011
Hard coal mine operation and hard coal preparation hard coal Cutoff, U - CN	0.010
Material resources: metals/minerals (kg Cu-Eq)	0.037
Sodium nitrate production, unrefined from caliche ore mining sodium nitrate, unrefined Cutoff, U - CL	0.013
Rare earth element mine operation and beneficiation, bastnaesite and monazite ore rare earth oxide concentrate, 50% REO Cutoff, U-CN-NM	0.012

Supplementary Table A2. Values of the impact category indices in the life cycle analysis (LCA) of Muchamiel tomato production in low-density shaded screenhouses based on the ReCiPe 2016 midpoint (H) method and the processes with the greatest contributions

Low density shading, LS	
Human toxicity: carcinogenic (kg 1,4-DCB-Eq)	0.25
Treatment of residue from Na-dichromate production, residual material landfill residue from Na-dichromate production Cutoff, U - RoW	0.10
Treatment of electric arc furnace slag, residual material landfill electric arc furnace slag Cutoff, U - RoW	0.07
Human toxicity: non-carcinogenic (kg 1,4-DCB-Eq)	0.69
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.15
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.05
Particulate matter formation (kg PM2.5-Eq)	0.00076
Electricity production, hard coal electricity, high voltage Cutoff, U - CL	0.00012
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.00007
Water use (m³)	0.0066
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.0019
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.0008
Climate change (kg CO₂-Eq)	0.42
Heat production, natural gas, at industrial furnace>100kW heat, district or industrial, natural gas Cutoff, U-Europe without Switzerland	0.03
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.02
Ozone depletion (kg CFC-11-Eq)	0.0000006
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0000005
Ionising radiation (kBq Co-60-Eq)	0.02199
Treatment of tailing, from uranium milling tailing, from uranium milling Cutoff, U - GLO	0.02032
Treatment of spent nuclear fuel, reprocessing spent nuclear fuel Cutoff, U - RoW	0.0004
Photochemical oxidant formation: human health (kg NO_x-Eq)	0.00098
Diesel, burned in building machine diesel, burned in building machine Cutoff, U - GLO	0.00007
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.00005
Photochemical oxidant formation: terrestrial ecosystems (kg NO_x-Eq)	0.00103
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.00009
Diesel, burned in building machine diesel, burned in building machine Cutoff, U - GLO	0.00007

Acidification: terrestrial (kg SO₂-Eq)	0.0019
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0003
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.0002
Ecotoxicity: freshwater (kg 1,4-DCB-Eq)	0.037
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.005
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.004
Ecotoxicity: marine (kg 1,4-DCB-Eq)	0.048
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.006
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.005
Ecotoxicity: terrestrial (kg 1,4-DCB-Eq)	2.10
Treatment of brake wear emissions, lorry brake wear emissions, lorry Cutoff, U - RoW	0.62
Smelting of copper concentrate, sulfide ore copper, anode Cutoff, U - CN	0.18
Eutrophication: freshwater (kg P-Eq)	0.00011
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	0.00004
Treatment of spoil from lignite mining, in surface landfill spoil from lignite mining Cutoff, U - GLO	0.00003
Eutrophication: marine (kg N-Eq)	0.000017
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.000003
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	0.000002
Land use (m²*a crop-Eq)	0.206
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.188
Peat moss production, horticultural use peat moss Cutoff, U - RoW	0.004
Energy resources: non-renewable, fossil (kg oil-Eq)	0.112
Petroleum and gas production, onshore natural gas, high pressure Cutoff, U - RU	0.010
Hard coal mine operation and hard coal preparation hard coal Cutoff, U - CN	0.010
Material resources: metals/minerals (kg Cu-Eq)	0.035
Sodium nitrate production, unrefined from caliche ore mining sodium nitrate, unrefined Cutoff, U - CL	0.012
Rare earth element mine operation and beneficiation, bastnaesite and monazite ore rare earth oxide concentrate, 50% REO Cutoff, U-CN-NM	0.011

Supplementary Table A3. Values of the impact category indices in the life cycle assessment (LCA) of Muchamiel tomato production in screenhouse with high-density shade from the ReCiPe 2016 midpoint (H) method and of the processes with the greatest contributions

High density shading, HS	
Human toxicity: carcinogenic (kg 1,4-DCB-Eq)	0.25
Treatment of residue from Na-dichromate production, residual material landfill residue from Na-dichromate production Cutoff, U - RoW	0.10
Treatment of electric arc furnace slag, residual material landfill electric arc furnace slag Cutoff, U - RoW	0.07
Human toxicity: non-carcinogenic (kg 1,4-DCB-Eq)	0.69
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.15
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.05
Particulate matter formation (kg PM2.5-Eq)	0.00076
Electricity production, hard coal electricity, high voltage Cutoff, U - CL	0.00012
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.00007
Water use (m³)	0.0066
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.0019
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.0008
Climate change (kg CO₂-Eq)	0.42
Heat production, natural gas, at industrial furnace>100kW heat, district or industrial, natural gas Cutoff, U-Europe without Switzerland	0.03
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.02
Ozone depletion (kg CFC-11-Eq)	0.0000006
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0000005
Ionising radiation (kBq Co-60-Eq)	0.0220
Treatment of tailing, from uranium milling tailing, from uranium milling Cutoff, U - GLO	0.0203
Treatment of spent nuclear fuel, reprocessing spent nuclear fuel Cutoff, U - RoW	0.0004
Photochemical oxidant formation: human health (kg NO_x-Eq)	0.00098
Diesel, burned in building machine diesel, burned in building machine Cutoff, U - GLO	0.00007
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.00005
Photochemical oxidant formation: terrestrial ecosystems (kg NO_x-Eq)	0.00103
Natural gas venting from petroleum/natural gas production natural gas, vented Cutoff, U - GLO	0.00009
Diesel, burned in building machine diesel, burned in building machine Cutoff, U - GLO	0.00007

Acidification: terrestrial (kg SO₂-Eq)	0.0019
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0003
Sulfuric acid production sulfuric acid Cutoff, U - RER	0.0002
Ecotoxicity: freshwater (kg 1,4-DCB-Eq)	0.037
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.005
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.004
Ecotoxicity: marine (kg 1,4-DCB-Eq)	0.048
Treatment of sulfidic tailings, from copper mine operation, tailings impoundment sulfidic tailings, from copper mine operation Cutoff, U-CL	0.006
Treatment of sulfidic tailings, generic, tailings impoundment sulfidic tailings, generic Cutoff, U - GLO	0.005
Ecotoxicity: terrestrial (kg 1,4-DCB-Eq)	2.10
Treatment of brake wear emissions, lorry brake wear emissions, lorry Cutoff, U - RoW	0.62
Smelting of copper concentrate, sulfide ore copper, anode Cutoff, U - CN	0.18
Eutrophication: freshwater (kg P-Eq)	0.00011
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	0.00004
Treatment of spoil from lignite mining, in surface landfill spoil from lignite mining Cutoff, U - GLO	0.00003
Eutrophication: marine (kg N-Eq)	0.000017
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.000003
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	0.000002
Land use (m²*a crop-Eq)	0.206
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.188
Peat moss production, horticultural use peat moss Cutoff, U - RoW	0.004
Energy resources: non-renewable, fossil (kg oil-Eq)	0.11
Petroleum and gas production, onshore natural gas, high pressure Cutoff, U - RU	0.01
Hard coal mine operation and hard coal preparation hard coal Cutoff, U - CN	0.01
Material resources: metals/minerals (kg Cu-Eq)	0.035
Sodium nitrate production, unrefined from caliche ore mining sodium nitrate, unrefined Cutoff, U - CL	0.012
Rare earth element mine operation and beneficiation, bastnaesite and monazite ore rare earth oxide concentrate, 50% REO Cutoff, U-CN-NM	0.011

Supplementary Table A4. Values of the impact category indices in the life cycle analysis (LCA) of Muchamiel tomato production in screenhouse with fixed and discontinuous photovoltaic shading from the ReCiPe 2016 midpoint method (H) and of the processes with the highest and lowest contribution

Fixed photovoltaic shading, FS	
Human toxicity: carcinogenic (kg 1,4-DCB-Eq)	0.49
Treatment of electric arc furnace slag, residual material landfill electric arc furnace slag Cutoff, U - RoW	0.21
Treatment of hard coal ash, residual material landfill hard coal ash Cutoff, U - ES	-0.01
Human toxicity: non-carcinogenic (kg 1,4-DCB-Eq)	0.82
Treatment of hard coal ash, residual material landfill hard coal ash Cutoff, U - RoW	0.36
Treatment of uranium tailing, non-radioactive emission uranium tailing, non-radioactive emission Cutoff, U - GLO	-0.17
Particulate matter formation (kg PM2.5-Eq)	0.0013
Electricity production, lignite electricity, high voltage Cutoff, U - ID	0.0002
Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.0005
Water use (m³)	0.037
Silicon production, electronics grade silicon, electronics grade Cutoff, U - DE	0.010
Electricity production, nuclear, pressure water reactor electricity, high voltage Cutoff, U - ES	-0.006
Climate change (kg CO₂-Eq)	-0.87
Electricity production, hard coal electricity, high voltage Cutoff, U - CN-NM	0.04
Electricity production, natural gas, combined cycle power plant electricity, high voltage Cutoff, U - ES	-1.06
Ozone depletion (kg CFC-11-Eq)	0.0000002
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0000005
Electricity, high voltage, residual mix electricity, high voltage Cutoff, U - ES	-0.0000004
Ionising radiation (kBq Co-60-Eq)	-1.63
Uranium mine operation, underground uranium ore, as U Cutoff, U - RoW	-0.02
Treatment of tailing, from uranium milling tailing, from uranium milling Cutoff, U - GLO	-1.51
Photochemical oxidant formation: human health (kg NO_x-Eq)	-0.00030
Electricity production, hard coal electricity, high voltage Cutoff, U - CN-NM	0.00014
Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.00062
Photochemical oxidant formation: terrestrial ecosystems (kg NO_x-Eq)	-0.00035
Photovoltaic cell production, single-Si wafer photovoltaic cell, single-Si wafer Cutoff, U - RoW	0.00022

Electricity production, hard coal electricity, high voltage Cutoff, U - ES	0.00007
Acidification: terrestrial (kg SO₂-Eq)	0.0008
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0004
Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.0005
Ecotoxicity: freshwater (kg 1,4-DCB-Eq)	-0.06
Treatment of sulfidic tailings, from silver mine operation, tailings impoundment sulfidic tailings, from silver mine operation Cutoff, U - RoW	0.02
Treatment of bottom ash, MSWI, waste copper, slag compartment bottom ash, MSWI, waste copper Cutoff, U - RoW	-0.05
Ecotoxicity: marine (kg 1,4-DCB-Eq)	-0.05
Treatment of sulfidic tailings, from silver mine operation, tailings impoundment sulfidic tailings, from silver mine operation Cutoff, U - RoW	0.03
Treatment of bottom ash, MSWI, waste copper, slag compartment bottom ash, MSWI, waste copper Cutoff, U - RoW	-0.06
Ecotoxicity: terrestrial (kg 1,4-DCB-Eq)	24.2
Photovoltaic cell production, single-Si wafer photovoltaic cell, single-Si wafer Cutoff, U - RoW	20.4
Treatment of uranium tailing, non-radioactive emission uranium tailing, non-radioactive emission Cutoff, U - GLO	-0.6
Eutrophication: freshwater (kg P-Eq)	0.00017
Treatment of spoil from lignite mining, in surface landfill spoil from lignite mining Cutoff, U - GLO	0.00027
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	-0.00016
Eutrophication: marine (kg N-Eq)	0.00006
Market for wastewater from PV cell production wastewater from PV cell production Cutoff, U - RoW	0.00003
Uranium production, in yellowcake, in-situ leaching uranium, in yellowcake Cutoff, U - GLO	-0.00003
Land use (m²*a crop-Eq)	0.237
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.206
Peat moss production, horticultural use peat moss Cutoff, U - RoW	0.004
Energy resources: non-renewable, fossil (kg oil-Eq)	-0.38
Hard coal mine operation and hard coal preparation hard coal Cutoff, U - CN	0.09
Petroleum and gas production, onshore natural gas, high pressure Cutoff, U - DZ	-0.15
Material resources: metals/minerals (kg Cu-Eq)	0.054
Rare earth element mine operation and beneficiation, bastnaesite and monazite ore rare earth oxide concentrate, 50% REO Cutoff, U-CN-NM	0.021
Rare earth element mine operation and beneficiation, bastnaesite ore rare earth oxide concentrate, 70% REO Cutoff, U - CN-SC	-0.002

Supplementary Table A5. Values of the impact category indices in the life cycle analysis (LCA) of Muchamiel tomato production in screenhouse with mobile and continuous photovoltaic shading from the ReCiPe 2016 midpoint method (H) and of the processes with the highest and lowest contribution

Mobile photovoltaic shading, MS	
Human toxicity: carcinogenic (kg 1,4-DCB-Eq)	1.33
Treatment of electric arc furnace slag, residual material landfill electric arc furnace slag Cutoff, U - RoW	0.61
Treatment of hard coal ash, residual material landfill hard coal ash Cutoff, U - ES	-0.03
Human toxicity: non-carcinogenic (kg 1,4-DCB-Eq)	3.08
Treatment of sulfidic tailings, from silver mine operation, tailings impoundment sulfidic tailings, from silver mine operation Cutoff, U-RoW	1.28
Treatment of uranium tailing, non-radioactive emission uranium tailing, non-radioactive emission Cutoff, U - GLO	-0.52
Particulate matter formation (kg PM2.5-Eq)	0.0041
Electricity production, lignite electricity, high voltage Cutoff, U - ID	0.0009
Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.0016
Water use (m³)	0.129
Silicon production, electronics grade silicon, electronics grade Cutoff, U - DE	0.035
Electricity production, nuclear, pressure water reactor electricity, high voltage Cutoff, U - ES	-0.017
Climate change (kg CO₂-Eq)	-2.61
Electricity production, hard coal electricity, high voltage Cutoff, U - CN-NM	0.15
Electricity production, natural gas, combined cycle power plant electricity, high voltage Cutoff, U - ES	-3.31
Ozone depletion (kg CFC-11-Eq)	-0.000000005
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.000001
Electricity, high voltage, residual mix electricity, high voltage Cutoff, U - ES	-0.000001
Ionising radiation (kBq Co-60-Eq)	-5.04
Uranium mine operation, underground uranium ore, as U Cutoff, U - RoW	-0.05
Treatment of tailing, from uranium milling tailing, from uranium milling Cutoff, U - GLO	-4.66
Photochemical oxidant formation: human health (kg NO_x-Eq)	-0.0006
Photovoltaic cell production, single-Si wafer photovoltaic cell, single-Si wafer Cutoff, U - RoW	0.0005
Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.0020
Photochemical oxidant formation: terrestrial ecosystems (kg NO_x-Eq)	-0.0007
Photovoltaic cell production, single-Si wafer photovoltaic cell, single-Si wafer Cutoff, U - RoW	0.0008

Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.0020
Acidification: terrestrial (kg SO₂-Eq)	0.0022
Nitric acid production, product in 50% solution state nitric acid, without water, in 50% solution state Cutoff, U - Europe without Russia	0.0006
Electricity production, hard coal electricity, high voltage Cutoff, U - ES	-0.0046
Ecotoxicity: freshwater (kg 1,4-DCB-Eq)	-0.18
Treatment of sulfidic tailings, from silver mine operation, tailings impoundment sulfidic tailings, from silver mine operation Cutoff, U-RoW	0.08
Treatment of bottom ash, MSWI, waste copper, slag compartment bottom ash, MSWI, waste copper Cutoff, U - RoW	-0.17
Ecotoxicity: marine (kg 1,4-DCB-Eq)	-0.13
Treatment of sulfidic tailings, from silver mine operation, tailings impoundment sulfidic tailings, from silver mine operation Cutoff, U-RoW	0.11
Treatment of bottom ash, MSWI, waste copper, slag compartment bottom ash, MSWI, waste copper Cutoff, U - RoW	-0.20
Ecotoxicity: terrestrial (kg 1,4-DCB-Eq)	87.0
Photovoltaic cell production, single-Si wafer photovoltaic cell, single-Si wafer Cutoff, U - RoW	74.7
Treatment of uranium tailing, non-radioactive emission uranium tailing, non-radioactive emission Cutoff, U - GLO	-1.8
Eutrophication: freshwater (kg P-Eq)	0.00071
Treatment of spoil from lignite mining, in surface landfill spoil from lignite mining Cutoff, U - GLO	0.00097
Treatment of spoil from hard coal mining, in surface landfill spoil from hard coal mining Cutoff, U - GLO	-0.00045
Eutrophication: marine (kg N-Eq)	0.00022
Market for wastewater from PV cell production wastewater from PV cell production Cutoff, U - RoW	0.00008
Uranium production, in yellowcake, in-situ leaching uranium, in yellowcake Cutoff, U - GLO	-0.00008
Land use (m²*a crop-Eq)	0.463
Potassium chloride production, from salar brine potassium chloride, industrial grade Cutoff, U - CL	0.378
Road construction road Cutoff, U - RoW	0.005
Energy resources: non-renewable, fossil (kg oil-Eq)	-1.14
Hard coal mine operation and hard coal preparation hard coal Cutoff, U - CN	0.31
Petroleum and gas production, onshore natural gas, high pressure Cutoff, U - DZ	-0.47
Material resources: metals/minerals (kg Cu-Eq)	0.137
Rare earth element mine operation and beneficiation, bastnaesite and monazite ore rare earth oxide concentrate, 50% REO Cutoff, U-CN-NM	0.055
Rare earth element mine operation and beneficiation, bastnaesite ore rare earth oxide concentrate, 70% REO Cutoff, U - CN-SC	-0.007