Table S1. Classification of the 64 fuel sub-types included in the inventory. The fuels are classified into 5 fuel-categories and 6 sectors. They are also divided into 8 groups (as marked by the superscripts) depending on data sources and data processing methods. Percentages of fuel consumption data collected from the literature are listed in the parenthesis, while the consumption of the remaining fuels were not available and were calculated using the regression models listed in Table S4.

Sector	*Coal*	*Petroleum*	*Natural gas*	*Solid wastes*	*Biomass*
Energy production	■ Anthracite (100%) [3] ■ bituminous coal (97.3%) [3] ■ lignite (99.4%) [3] ■ coking coal (100%) [3] ■ peat (100%) [3]	■ gas/diesel (98.7%) [3] ■ residue fuel oil (96.7%) [3] ■ natural gas liquids (99.9%) [3]	■ dry natural gas (95.9%) [3] ■ natural gas flaring [4]	■ municipal waste (99.9%) [3] ■ industrial waste (99.3%) [3]	■ solid biomass (85.3%) [3] ■ biogas (100%) [3]
Industry	■ anthracite excluding aluminum production (98.1%) [8] ■ bituminous coal excluding coke and brick production (98.0%) [8] ■ lignite (99.4%) [8] ■ coking coal (100%) [8] ■ peat (100%) [8] ■ bituminous coal used in coke production (99.1%) [8] ■ bituminous coal used in brick production [8] ■ anthracite used in aluminum production [8]	■ gas/diesel (99.4%) [8] ■ residue fuel oil (95.7%) [8] ■ crude oil used in petroleum refinery (96.6%) [8] ■ natural gas liquids (98.6%) [8]	■ dry natural gas (88.5%) [8]	■ municipal waste (99.7%) [8] ■ industrial waste (99.5%) [8]	■ solid biomass (99.2%) [8] ■ biogas (100%) [8]
Transpor-tation		■ vehicles gasoline (98.0%) [8] ■ vehicles diesel (98.1%) [8] ■ aviation gasoline (99.6%) [2] ■ jet kerosene (99.5%) [2] ■ ocean tanker [2] ■ ocean container [2] ■ ocean bulk & combined carries [2] ■ general cargo vessels [2] ■ non-cargo vessels [2] ■ auxiliary engines [2] ■ military vessels [2]			■ liquid biofuels (100%) [8]
Residential & commercial	■ anthracite (94.4%) [8] ■ bituminous coal (97.3%) [8] ■ lignite (100%) [8] ■ coking coal (100%) [8] ■ peat (100%) [8]	■ kerosene (99.2%) [8] ■ liquid petroleum gas (94.9%) [8] ■ natural gas liquids (96.0%) [8]	■ dry natural gas (96.0%) [8]	■ non-organized waste incineration (86.2%) [6]	■ firewood (90.1%) [6] ■ straw (98.8%) [6] ■ dung cake [7] ■ biogas (100%) [8]
Agriculture		■ gas/diesel (99.9%) [8]		■ open burning of agriculture solid waste (98.5%) [5]	
Natural					■ forest fire [1] ■ deforestation fire [1] ■ woodland fire [1] ■ savanna fire [1] ■ peat fire [1]