|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Fossil fuel (coal)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** | Extrapolated from USA | | | | | | | | | | | | |
| **USA** | 27 | Logistic | -1.46 | -1.97 | -1.46 | -0.96 |  | Logistic | -0.1 | -0.24 | -0.1 | 0.03 | ([Biswas et al., 2008](#_ENREF_1); [Lefticariu et al., 2011](#_ENREF_11); [Sun et al., 2014a](#_ENREF_17)) |
| **Central America** | Extrapolated from USA | | | | | | | | | | | | |
| **South America** | Extrapolated from USA | | | | | | | | | | | | |
| **Northern Africa** | Extrapolated from South Africa | | | | | | | | | | | | |
| **Western Africa** | Extrapolated from South Africa | | | | | | | | | | | | |
| **Eastern Africa** | Extrapolated from South Africa | | | | | | | | | | | | |
| **Southern Africa** | 10 | Normal | -0.9 | -1.38 | -0.91 | -0.4 |  | Normal | -0.28 | -0.35 | -0.29 | -0.21 | South Africa ([Sun et al., 2014a](#_ENREF_17)) |
| **OECD Europe** | 3 | Triangle | -1.23 | -1.41 | -1.23 | -1.05 |  | Triangle | -0.23 | -0.36 | -0.23 | -0.09 | Germany and France ([Sun et al., 2014a](#_ENREF_17)) |
| **Eastern Europe** | 11 | Normal | -1.33 | -1.83 | -1.33 | -0.84 |  | Normal | -0.4 | -0.46 | -0.39 | -0.33 | Romania ([Sun et al., 2014](#_ENREF_39)) |
| **Former USSR** | 27 | Normal | -1.75 | -3.05 | -1.73 | -0.48 |  | Normal | -0.2 | -0.46 | -0.19 | 0.06 | Russia, Kazakhstan, Ukraine ([Sun et al., 2014a](#_ENREF_17)) |
| **Middle East** | Extrapolated from World | | | | | | | | | | | | |
| **South Asia** | 12 | Normal | -1.87 | -2.49 | -1.87 | -1.26 |  | Normal | 0.03 | 0 | 0.03 | 0.08 | India ([Sun et al., 2014a](#_ENREF_17)) |
| **East Asia** | 110 | Weibull | -0.96 | -1.82 | -0.91 | -0.19 |  | Logistic | -0.03 | -0.14 | -0.03 | 0.09 | China ([Biswas et al., 2008](#_ENREF_1); [Sun et al., 2014a](#_ENREF_17); [Yin et al., 2014](#_ENREF_20)) |
| **Southeast Asia** | 8 | Normal | -0.6 | -1.07 | -0.59 | -0.15 |  | Normal | -0.21 | -0.35 | -0.21 | -0.09 | Indonesia ([Sun et al., 2014a](#_ENREF_17)) |
| **Oceania** |  | Extrapolated from World | | | | | | | | | | | |
| **Japan** |  | Extrapolated from World | | | | | | | | | | | |
| **World** | 210 | Weibull | -1.15 | -2.19 | -1.07 | -0.23 |  | Weibull | -0.1 | -0.35 | -0.09 | 0.12 |  |
|  | **Fossil fuel (oil)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** | 5 | Normal | -1.45 | -1.61 | -1.45 | -1.29 |  | Normal | -0.19 | -0.33 | -0.19 | -0.06 | Oil sand from Canada ([Blum et al., 2012](#_ENREF_3)) |
| **USA** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Central America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Northern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Western Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **OECD Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Former USSR** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Middle East** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **East Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southeast Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Oceania** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Japan** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **World** | 5 | Normal | -1.45 | -1.61 | -1.45 | -1.29 |  | Normal | -0.19 | -0.33 | -0.19 | -0.06 | Oil sand from Canada ([Blum et al., 2012](#_ENREF_3)) |
|  | **Non-ferrous metals (Zn/Pb/Cu)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** | 10 | Normal | -0.16 | -0.81 | -0.45 | -0.13 | 9 | Normal | 0.02 | -0.07 | 0.03 | 0.1 | Canada and USA |
| **USA** |
| **Central America** | Extrapolated from North America | | | | | | | | | | | | |
| **South America** | Extrapolated from North America | | | | | | | | | | | | |
| **Northern Africa** | 8 | Normal | -0.51 | -1.09 | -0.48 | 0.03 | 7 | Normal | -0.14 | -0.15 | -0.14 | -0.1 | Congo and South Africa ([Smith, 2010](#_ENREF_12); [Sonke et al., 2010](#_ENREF_14)) |
| **Western Africa** |
| **Eastern Africa** |
| **Southern Africa** |
| **OECD Europe** | Extrapolated from World | | | | | | | | | | | | |
| **Eastern Europe** | Extrapolated from World | | | | | | | | | | | | |
| **Former USSR** | Extrapolated from World | | | | | | | | | | | | |
| **Middle East** | Extrapolated from World | | | | | | | | | | | | |
| **South Asia** | Extrapolated from World | | | | | | | | | | | | |
|  | Extrapolated from World | | | | | | | | | | | | |
|  | Extrapolated from World | | | | | | | | | | | | |
| **East Asia** | 102 | Logistic | -0.48 | -1.03 | -0.48 | 0.06 | 102 | Logistic | 0.02 | -0.05 | 0.02 | 0.09 | China (Yin et al., 2016) |
| **Southeast Asia** | Extrapolated from World | | | | | | | | | | | | |
| **Oceania** | 3 | Normal | -0.41 | -1.05 | -0.42 | 0.23 | 3 | Normal | -0.1 | -0.16 | -0.09 | -0.03 | Australia ([Sonke et al., 2010](#_ENREF_14)) |
| **Japan** | Extrapolated from World | | | | | | | | | | | | |
| **World** | 124 | Logistic | -0.48 | -1.04 | -0.47 | 0.08 | 122 | Minimum extreme | 0.01 | -0.09 | -0.02 | 0.10 |  |
|  | **Non-ferrous metals (Au)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **USA** | 9 | Normal | -1.01 | -1.42 | -0.99 | -0.54 | 9 | Normal | 0.04 | 0.02 | 0.05 | 0.09 | USA ([Smith, 2010](#_ENREF_12)) |
| **Central America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Northern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Western Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **OECD Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Former USSR** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Middle East** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **East Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southeast Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Oceania** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Japan** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **World** | 9 | Normal | -1.01 | -1.42 | -0.99 | -0.54 | 9 | Normal | 0.04 | 0.02 | 0.05 | 0.09 | USA ([Smith, 2010](#_ENREF_12)) |
|  | **Non-ferrous metals (Hg)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** | Extrapolated from USA | | | | | | | | | | | | |
| **USA** | 129 | Weibull | -0.67 | -1.72 | -0.55 | 0.2 | 125 | Maximum Extreme | 0.06 | -0.03 | 0.05 | 0.16 | ([Gehrke et al., 2011](#_ENREF_8); [Hintelmann and Lu, 2003](#_ENREF_9); [Stetson et al., 2009](#_ENREF_16); [Wiederhold et al., 2013](#_ENREF_19)) |
| **Central America** | 30 | Weibull | -0.56 | -1.45 | -0.49 | 0.24 | 30 | Lognormal | 0.01 | -0.11 | -0.01 | 0.15 | Peru, Bolvia, Honduras, Colombia and Chile ([Cooke et al., 2013](#_ENREF_4); [Hintelmann and Lu, 2003](#_ENREF_9)) |
| **South America** |
| **Northern Africa** | Extrapolated from World | | | | | | | | | | | | |
| **Western Africa** | Extrapolated from World | | | | | | | | | | | | |
| **Eastern Africa** | Extrapolated from World | | | | | | | | | | | | |
| **Southern Africa** | Extrapolated from World | | | | | | | | | | | | |
| **OECD Europe** | 34 | Weibull | -0.59 | -1.17 | -0.55 | -0.09 | 34 | Beta | -0.05 | -0.15 | -0.04 | 0.05 | Spain, Romania, Ukraine, Serbia, Czech, Hungary, Germany and Solvania ([Foucher et al., 2009](#_ENREF_7); [Hintelmann and Lu, 2003](#_ENREF_9)) |
| **Eastern Europe** |
| **Former USSR** | Extrapolated from Europe | | | | | | | | | | | | |
| **Middle East** | Extrapolated from World | | | | | | | | | | | | |
| **South Asia** | Extrapolated from World | | | | | | | | | | | | |
| **East Asia** | 17 | Minimum Extreme | -0.77 | -0.94 | -0.76 | -0.63 | 17 | Weibull | 0 | -0.04 | 0.01 | 0.04 | China ([Feng et al., 2010](#_ENREF_6); [Hintelmann and Lu, 2003](#_ENREF_9); [Yin et al., 2013](#_ENREF_21)) |
| **Southeast Asia** | Extrapolated from World | | | | | | | | | | | | |
| **Oceania** | Extrapolated from World | | | | | | | | | | | | |
| **Japan** | Extrapolated from World | | | | | | | | | | | | |
| **World** | 210 | Logistic | -0.59 | -1.42 | -0.61 | 0.16 | 206 | Logistic | 0.03 | -0.08 | 0.03 | 0.13 |  |
|  | **Ferrous metals (Fe/Steel)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **USA** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Central America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Northern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Western Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **OECD Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Former USSR** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Middle East** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **East Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southeast Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Oceania** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Japan** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **World** |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Cement (Limestone)** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **USA** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Central America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Northern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Western Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **OECD Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Former USSR** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Middle East** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **East Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southeast Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Oceania** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Japan** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **World** | 12 | Normal | -1.64 | -2.17 | -1.57 | -0.89 | 12 | Normal | -0.01 | -0.07 | 0 | 0.07 | China (This study) |
|  | **Commercial Liquid Hg** | | | | | | | | | | | | |
|  | **δ202Hg** | | | | | | **Δ199Hg** | | | | | |  |
| **Regions** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **n** | **Distribution function** | **Mean** | **P10** | **P50** | **P90** | **Comment/references** |
| **Canada** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **USA** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Central America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South America** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Northern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Western Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southern Africa** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **OECD Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Eastern Europe** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Former USSR** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Middle East** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **South Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **East Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Southeast Asia** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Oceania** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Japan** |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **World** | 11 | Normal | -0.40 | -0.82 | -0.43 | -0.09 | 11 | Normal | -0.02 | -0.04 | -0.02 | 0.01 | ([Blum and Bergquist, 2007](#_ENREF_2); [Estrade et al., 2009](#_ENREF_5); [Foucher et al., 2009](#_ENREF_7); [Laffont et al., 2011](#_ENREF_10); [Sonke et al., 2008](#_ENREF_15)) |