Updated global and oceanic mercury budgets for the United Nations Global Mercury Assessment 2018

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The Supporting Information consists of one figure, Figure S1, and one table, Table S1

Figure S1. Two contrasting models of global anthropogenic Hg emissions to air through history, compared to Hg fluxes to lake sediments. (Panel a - combined anthropogenic Hg emissions after 1450 from Streets et al. [4] (red line; this is the "high emission scenario" in the text) and the same emission inventory but with Ag mining emissions reduced three-fold from Zhang et al. [5] ("low emission scenario"; green line). Units in tonnes per year (t/y). Panels b, c and d – relative pattern of Hg fluxes in lake sediments after 1800 from remote lakes, eastern USA, and eastern Asia, respectively (black circles show measured mean±S.D. flux values, normalized to average 1800-1850 values, with numbers of lakes (n) on upper right). Red and green lines in panels b, c and d indicate modelled Hg fluxes resulting from the corresponding low and high emissions scenarios in panel a. Emissions units recalculated from Mmol/yr, and figure redrawn from Zhang et al. [5]).

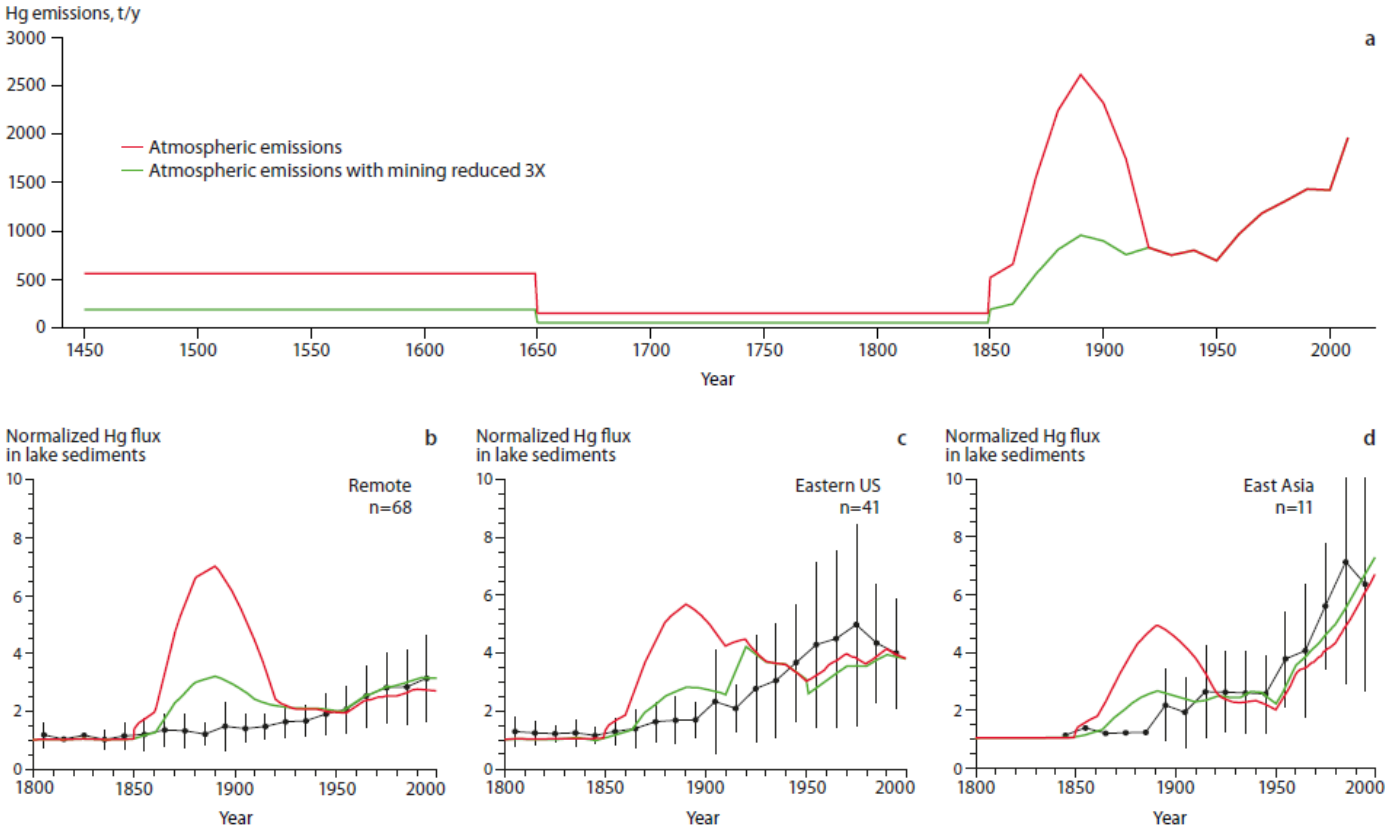

Table S1: Comparison of Hg fluxes to and from the terrestrial and ocean surfaces as estimated by various recent publications, all of which compiled their estimates from a more extensive literature. Fluxes are given in kilotonnes per year. A comparison of the magnitude of the Hg reservoir estimates is provided in text Table 1.

Flux estimate (kt/yr)	*Pacyna et al.* [46] *and Cohen et al.* [47]	*Amos et al.* [13]	*Zhang et al.* [5]	*Estimates used in this work*
Anthropogenic emissions	2.0	2.0	2.0	2.5
Biomass burning	0.6	0.41	--	0.6
Geogenic emissions	0.5	0.09	--	0.5
Total terrestrial emissions	2.4	2.1	--	2.1
Terrestrial deposition	2.0	3.0	--	3.6
Ocean deposition	4.3	3.9	4.0	3.8
Ocean evasion	2.7	3.0	3.6	3.4