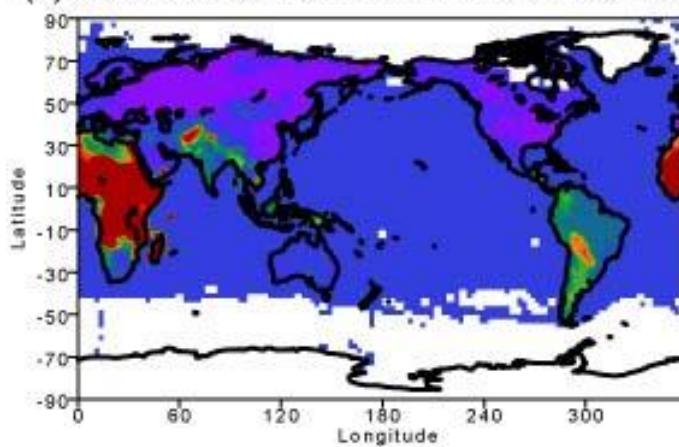
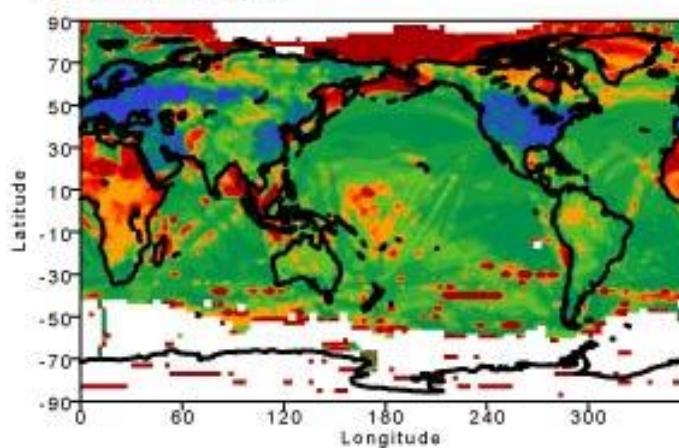


(a) SO<sub>2</sub> emission from fossil fuel combustion



(b) NO<sub>2</sub> emission



(c) NH<sub>3</sub> emission

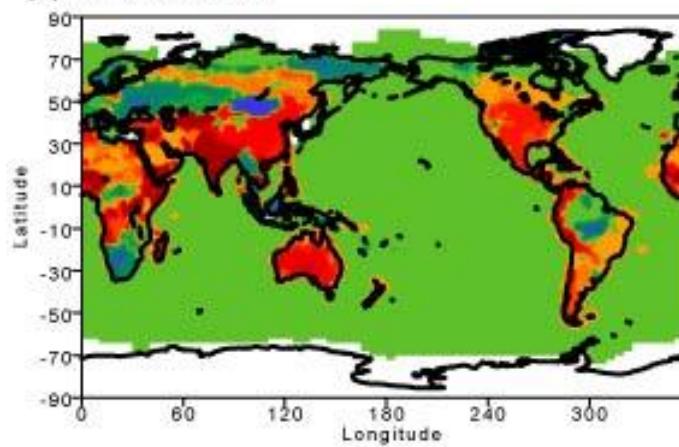


Figure S1. Ratios of (a) emission from fossil fuel combustion in 2100 to 2000 for SO<sub>2</sub>, (b) total emission in 2100 to 2000 for NO<sub>2</sub>, and (c) that for NH<sub>3</sub>.

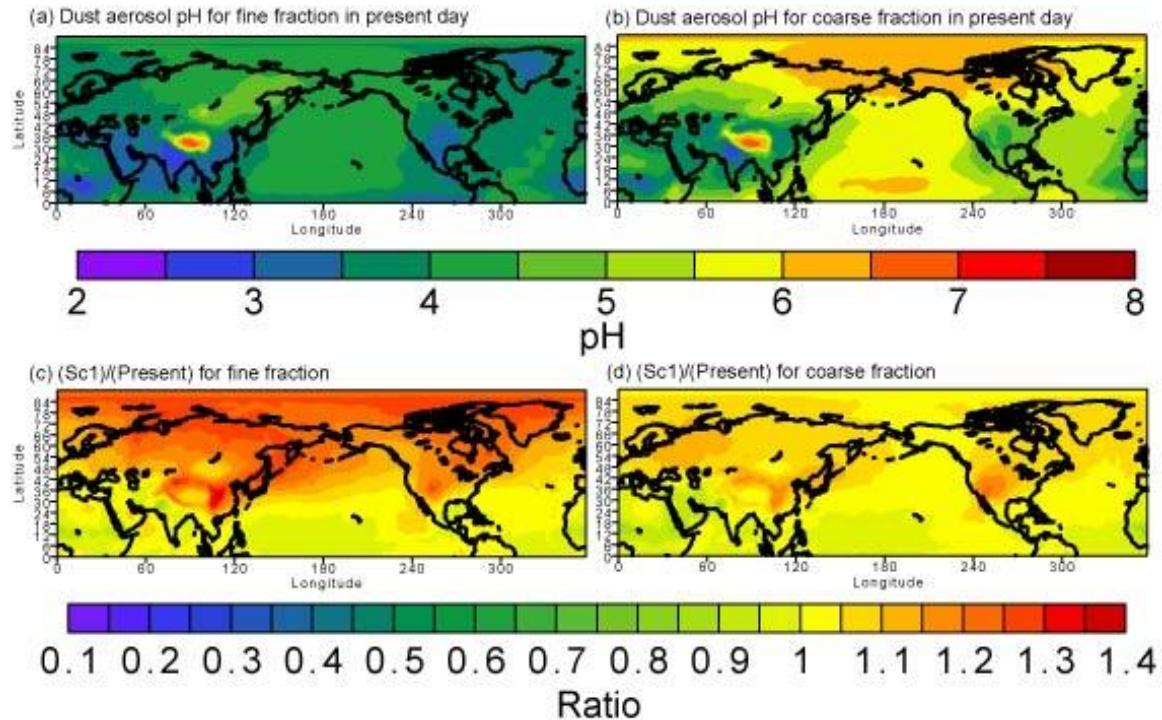


Figure S2. Spatial distribution of vertically and annually averaged dust pH for (a) fine (radius:  $<1.25\text{ }\mu\text{m}$ ) and (b) coarse fraction (radius:  $1.25\text{--}10\text{ }\mu\text{m}$ ) for the present day and the ratio of (Scenario 1)/(Present) for (c) fine and (d) coarse fraction.