2008 Carbon Dioxide (CO₂) Budget



Vegetation, soil, plankton and ocean water **REMOVES 6-7 BILLION TONS** of CO₂ a YEAR:

Human activities and deforestation **ADDS 10 BILLION TONS** of CO₂ a YEAR



The imbalance of 3 to 4 BILLION TONS of CO₂ a year accumulates in the atmosphere. This is the fundamental imbalance that causes climate change.

1 US Ton = 2,000 pounds = 907 kilograms

1 African male Elephant = 15,000 pounds = 6.8 US tons 1 US yellow school bus = 20,000 pounds = 10 US tons = 40 feet long.

> 1 marble = 100 million 40 marbles = 4 billion 60 marbles = 6 billion 70 marbles = 7 billion



Nine zeros in a billion.

One thousand million = one billion

1 mile = 5,280 feet
Earth is 24,901 miles circumference at the equator
Moon is on average 240,000 miles away
Mars is on average 35 million miles away



1 billion tons of $CO_2 = 147,058,823$ African Elephants 4 billion tons of $CO_2 = 588,235,294$ African Elephants 6 billion tons of $CO_2 = 882,352,938$ African Elephants 7 billion tons of $CO_2 = 1,029,411,764$ African Elephants 10 billion tons of $CO_2 = 1,470,588,230$ African Elephants

1 billion tons of $CO_2 = 100,000,000$ school buses = 757,575 miles of school busses 4 billion tons of $CO_2 = 400,000,000$ school buses = 3,030,300 miles of school busses 6 billion tons of $CO_2 = 600,000,000$ school buses = 4,545,450 miles of school busses 7 billion tons of $CO_2 = 700,000,000$ school buses = 5,303,025 miles of school busses 10 billion tons of $CO_2 = 100,0000,000$ school buses = 7,575,750 miles of school busses

In 2008, humans added the same amount of CO_2 (by weight) to the atmosphere as line of school busses (by weight) that go to the moon and back 31 $\frac{1}{2}$ times