

“No Day After Tomorrow”

Biospheric Despoiling and Climate
Change

Piling Up!

- Mounds of garbage, much hazardous, continues to pile up aimlessly across the globe
- The OECD generated 4 billion tons of waste in 2001
- In 2001 signatory states to the Basel Convention generated 108 million tons of hazardous waste
- China produced 155 million tons of municipal solid waste in 2005; the US, 254 tons of it in 2007. China, in total, generates 1.3 billion tons of industrial waste
- What is dubbed “e-waste” is currently the fastest growing source of hazardous materials. It factors into a rising component of global trade in waste. China, of course plays a major role in this, given its growing need for industrial raw materials
- In 2004 the US exported \$3.1 billion in scrap to China, making scrap the US’s then biggest dollar value export to China, outstripping airplane parts and electronics

We Have Everything but Breathable Air

- Disarticulation production systems across the globe magnified the emission of solid particulate matter (SPM), including sulfur dioxide and nitrogen oxide, lead, copper and so on, into the atmosphere
- MNC production and distribution of food is also a major contributor here. It was discovered, for example, that a basket of 20 fresh foods offered by large UK retailers had travelled 100,943 miles to get on the shelves
- Mapping of SPM which shows concentrations over global shipping lanes. Ships use the most polluting form of oil, so-called “bunker fuel”, and their giant diesel engines emit levels of CO₂ equivalent to that of a medium sized coal power station, making them a more significant environmental threat than air transport. An estimated 60,000 deaths per year are caused by global shipping

The Climate Change Message

- Atmospheric concentration of carbon dioxide or CO₂ is the “greenhouse gas” causing climate change
- When high-precision equipment monitoring commenced in March 1958, CO₂ in the world’s atmosphere was 315.71 parts per million (ppm)
- Today, atmospheric CO₂ is near 400 ppm
- Significance of these numbers is that in the 10,000 years or so of life and climate stability on earth CO₂ levels hovered around 275 ppm

It's Coming....

- From the time of the industrial revolution atmospheric CO₂ has been steadily increasing, today at a rate of around 2 ppm per year
- What emits CO₂ in such swelling proportions? Around two thirds emanate from fossil fuels, coal and oil for industry, transportation and domestic use. Of that, power plants emit 27 percent, industry 14 percent, road transportation 12 percent and international transportation 2 percent
- Big emitters of CO₂ are US and China. As a team they produce 42 percent of the global total against the EU's 15 percent
- Though in per capita terms 79 countries emit more than China
- And 50 percent of the Chinese increase derived from export production (which as we know is largely foreign owned) and of that, 60 percent is estimated to be directly tied to exports for Western economies

Us...Worry...?

- We are already near the point of 1 degree Celsius warming of the earth
- Note, as well, the CO₂ measurement of 400 ppm captures only carbon dioxide. Adding other greenhouse gases to the mix places us at around 440 ppm, total CO₂ equivalent
- This means we are already in the 1 to 2 degree long-term warming trajectory even if we flick the Luddite switch now
- The 1 to 2 degree limit entails frequent heat waves, extinction of one third of species, puts half a billion human beings at risk of starvation (this is on top of those the “economy” is starving), and adds highly disturbing unknowns with respect to the ocean