



# Energy production: Is short-termism damaging our planet?

Lydia White

Lydia White ponders whether the very nature of our democratic societies stands in the way of a genuine move to a renewably-powered world.

The U.S. Energy Information Administration (EIA) estimates that about only 11% of global energy consumption is from renewable sources.

Under increasing pressure politicians will soon have to address the imbalance between renewable and non-renewable energy sources. Difficult questions will have to be answered, key among them are:

- What alternative energy sources exist to replace our present great dependency on petroleum?
- How much longer can fossil fuels meet demand for energy production?
- Can renewable energy be derived across the globe?
- If renewable energy is viable, why is uptake slow?

Does the very nature of our democratic societies stand in the way of change? Political representatives are elected for short terms, offering little motivation to adopt initially costly, but sustainable energy policies geared to counteract the inevitable energy crisis.

This article explores some of the potential implications this is having on the environment and how renewable energy sources could offer the balanced solution where demand is met and environmental impacts are reduced.

## Highlighting the problem

1. Rise in global energy demand
2. Finite supplies

Fossil fuel reserves are finite, meaning it's a case of when they run out – not if. Globally in a year we currently consume the equivalent of over 11 billion tonnes of oil in fossil fuels. Crude oil reserves are vanishing at the rate of 4 billion tonnes a

year, meaning if we carry on at this rate without any increase for our growing population or aspirations, our known oil deposits will be almost entirely exhausted by 2052.

## 3. Carbon imbalance

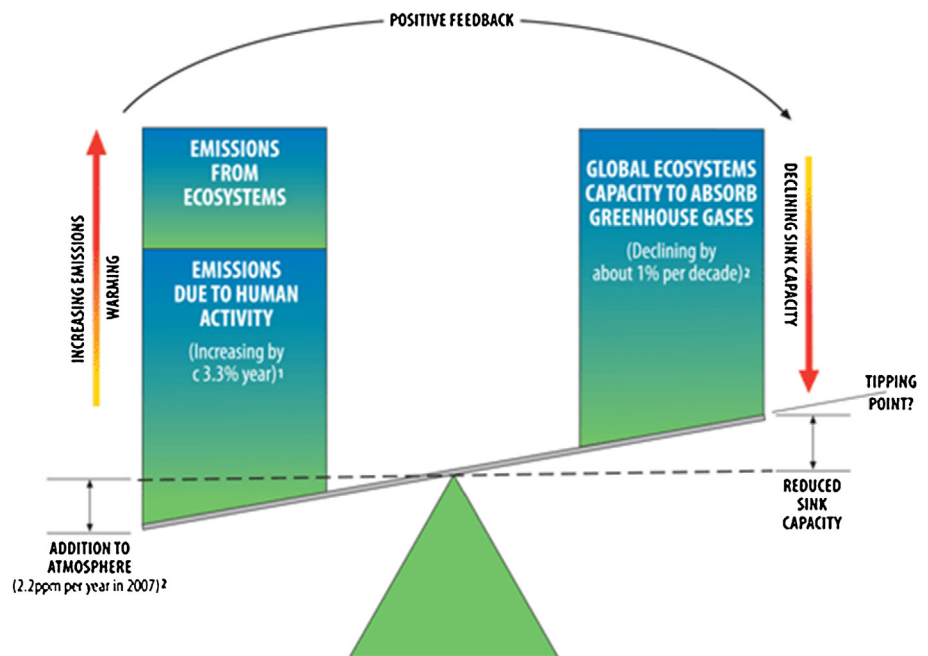
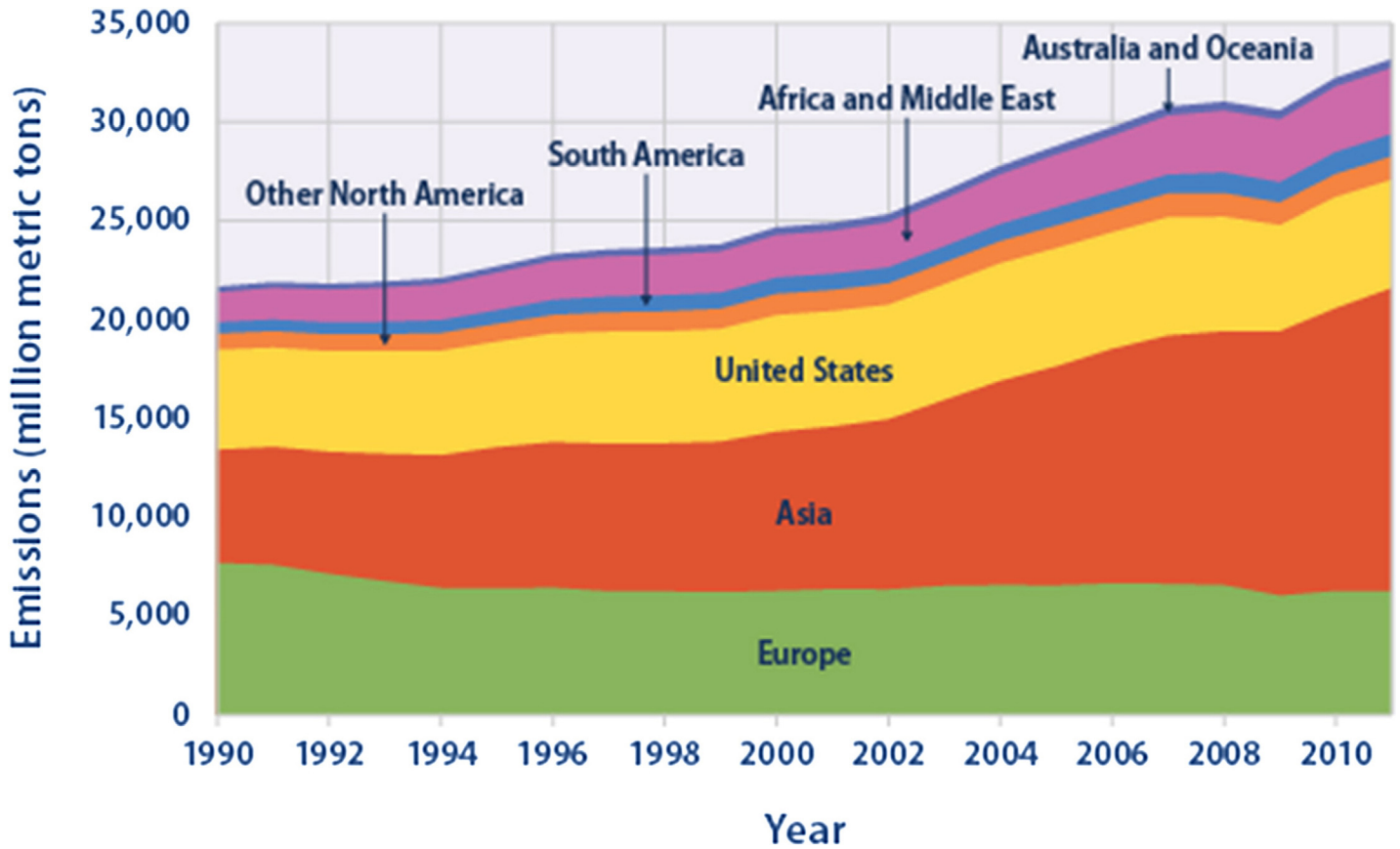


Figure 1.

While human caused greenhouse gas emissions continue to rise, the global capacity to absorb them is also declining due to ecosystem degradation. Continuing to displace fossil fuels from the land (and sea) and converting them into gases will lead to further climate instability and reduce essential ecosystem services. (Image courtesy of World Resources Institute; Note: proportions of size are not to scale and do not reflect actual values of fluxes).

**Impact of fossil fuel driven energy**

*Atmospheric pollution*



**Figure 2.**

Burning fossil fuels emits harmful greenhouse gases into the air. These gases, primarily carbon dioxide, damage the ozone layer which acts as a shield from the sun’s radiation. The air pollution also negatively affects our respiratory health. A 2004 study concluded that pollution from coal-powered plants shortened nearly 24,000 lives a year in the U.S alone (Image courtesy of EPA).

**A. Acid rain**

Corrosive to buildings and detrimental to local ecosystems through the destruction of forests and pollution of lakes. According to the World Resources Institute, acid rain is

now particularly problematic in areas of southeast China, northeast India, Thailand, and the Republic of Korea that are in or downwind of urban and industrial centres.

Research in the late 1990s has shown high levels of acid rain in these areas and has linked this to declines in crop yields and tree growth.

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