

Technology - Friend or Foe? A reflection on David Attenborough's Ocean

By Wayne Visser

Last night, I watched Sir David Attenborough's "Ocean" documentary, which I highly recommend, although the scenes of destructive bottom trawling are hard to watch. It made me think of Paul and Anne Ehrlich's famous Impact Formula from the 1960s: $I = P \times A \times T$.

Paul Ehrlich was an American biologist who wrote a controversial book called "The Population Bomb". Some believe he has been discredited, since his fears of mass starvation were averted by the so-called Green Revolution in agriculture. But he was onto something. Let's dig into his formula.

I (Environmental Impact) = P (Population) $\times$ A (Affluence) $\times$ T (Technology). The first two factors make intuitive sense. The more people there are (P) and the more stuff they consume (A), the higher the environmental impact (I). But what about technology (T)? Is it true that it increases negative impact?

Since the Industrial Revolution - and arguably before - technology has increased our ability to extract or exploit resources, damage or destroy ecosystems and pollute or poison the environment. And the effects on ecosystem breakdown and biodiversity loss are plain to see.

Ocean bottom trawling is a perfect example: a sea-bed area bigger than the Amazon rainforest is bulldozed every year, turning flourishing ecosystems into lifeless deserts. Many governments subsidise this practice, and - hard as it is to believe - even allow it in Marine Protected Areas.

Recent good news is that the UK government is proposing to expand the ban on bottom trawling from 18,000 km² to 48,000 km² of the UK's marine protected areas. And they are not alone: the US has already banned it across 1.5 million km² and New Zealand across 1.2 million km².

But that is only part of the story. Technology can also be used to reduce our environmental impacts. We've replaced CFC refrigerants, created unleaded fuels, innovated LED lights, designed eco-efficient appliances, and found alternatives to toxic chemicals like DDT.

What if we were to scale eco-technologies - solar, wind, batteries, green hydrogen, cultivated meat, precision fermentation, biomaterials and countless others? Could we change Ehrlich's impact formula to what former CEO of Interface, Ray Anderson

proposed, where:

$$I = (P \times A) / T$$

This is the challenge of our generation. It is what I call The Age of Alchemy (the title of my next book on the subject). With progressive political leadership in short supply these days, technology needs to become the friend - rather than the foe - of the environmental movement. I believe it can and it will and it is already becoming so.

The Bottom Line

If you haven't watched it already, check it out:

The Bottom Line with Stephen Fry and Theo James

My bestseller Thriving is now available in paperback, audiobook and ebook.

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