

COSMOS magazine

Opinion · Cosmos Online

Opinion

Nothing to fear but fear itself

by Wilson da Silva

14 October 2008

Cosmos Online

The greatest danger facing humanity isn't climate change. It's the misguided belief that there's nothing we can do about it.

HUMANITY IS FACING a perfect storm: a confluence of forces we've never encountered before. Our population continues to grow at the same time as we're seeing strains on global food supply, increasing water scarcity, concerns about energy security and the paranoia and cost that the fear of increased terrorism brings.

As if that weren't enough, this is all happening at the same time as we're trying to deal with the accelerating effects of climate change.

World population will rise from 6.8 billion to 9 billion by 2050. That's a 30 per cent increase, and it's going to place enormous pressures on an already buckling system – on our established industrial and agricultural infrastructure, and on the ecological services provided by nature, upon which all of us rely.

The carbon crisis

Even now we're having trouble dealing with the booming demand for more food, more water, more oil, more land – and climate change is only going to make these resources increasingly scarce over the next 40 years.

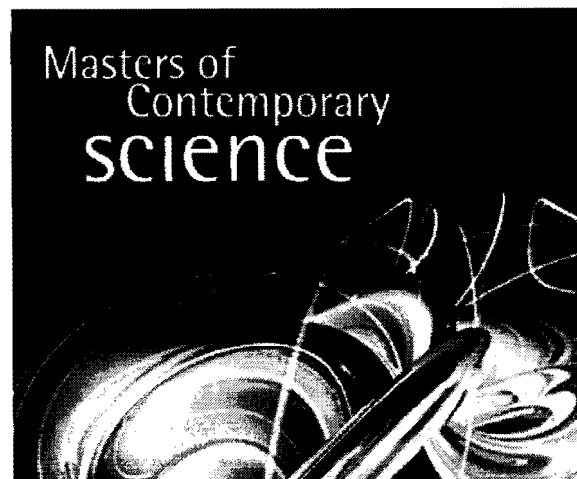
It's distressing to admit, but no matter what we do today, the climate is going to get hotter and nastier and more unpredictable in the next few decades – that's even if we shut down all coal-fired power stations tomorrow and ban all cars from our roads.

Carbon dioxide is a powerful greenhouse gas that stays active in the atmosphere for 400 years, trapping heat close to the Earth and further warming our world. Some of the CO₂ still warming our planet today was generated when Galileo first turned a telescope towards the heavens.

And every year, our growing populations, with their



Credit: iStockphoto/Tobias Helbig



[Related articles](#)

growing taste for more energy for their plasma screens and air conditioners, and the resulting dramatic increases in the burning of coal, oil and natural gas – as well as deforestation and land-clearing – are releasing billions upon billions more tonnes of CO₂.

It's a recipe for disaster. People know this – despite a disinformation campaign by climate change deniers that's the most concerted and effective since the tobacco lobby tried to make us all believe smoking didn't cause lung cancer.

Problem of paralysis

Just about everyone now accepts that global warming is real, and largely caused by human activity (even certain Vice-Presidential candidates). Recent polls show that 80 per cent of Britons are very concerned about climate change, while 75 per cent of Americans believe global warming can only be reduced if individuals change their lifestyles.

So why aren't we doing more? Because people are increasingly paralysed by the enormity of the problem.

One socio-economic impact of climate change is that citizens, governments and corporations have begun to believe that it's all too hard and nothing can really be done. This response is like standing on train tracks being mesmerised by an approaching train while doing nothing to get out of the way.

The power of belief

Human beings are incredibly prone to suggestion: just witness the meltdown in global financial markets over the past few weeks – largely driven by the evaporation of confidence.

Even solid companies and banks with healthy balance sheets and prudent accounting are being hammered mercilessly. And as any pharmacologist will tell you, you can get extraordinary medical improvements in patients taking part in a drug trial if they think they're getting the drug rather than a placebo.

So what we don't need at this critical time is a loss of nerve. Or a belief that climate change cannot be abated or cannot be reversed.

Such fatalism would spell calamity for the 150 million people who live within one metre of high-tide level (likely to be inundated by the end of this century); it could also see countless cities and towns collapse, and irreparable damage to large parts of our planet's biodiversity, not to mention our global civilisation and economies.

Citizen change

The solution is not just to leave it to government, nor rely on the free market. It requires a change in all of us as citizens: first, a belief that something can be done; and second, the resolve to do something about it – both personally and professionally.

Surveys show that most people *want* to do something to help forestall climate change – they just don't know *what* to do. We need to harness this desire, because it can deliver real dividends.

The U.S. National Research Council has calculated that by making small changes to the selection and use of household and motor vehicle technologies (without making major economic sacrifices or losing a sense of well-being), American households could reduce their energy consumption by almost 30 per cent – that's about 11 per cent of total U.S. consumption.

On a professional level, we need to become advocates in our workplaces for greater efficiency and smaller carbon footprints. Research by management consultants McKinseys shows that the projected growth of world energy demand could be halved by 2020 just by taking advantage of existing ways to reduce waste and inefficiency.

Green fallout from nuclear report

Curbing deforestation offers big global warming gains

Factfile: The evidence for climate change

Failure on climate will "haunt humanity"

Climate change can be slowed, says U.N.

These include improvements to how homes, buildings and factories use energy, like high-efficiency heat pumps and appliances, better insulation and stingier light bulbs. They estimate that this would deliver savings equal to 1.5 times the energy used by the whole of the United States annually.

Then there's the wedge idea. Two scientists at Princeton University, Rob Socolow and Stephen Pacala, have proposed an elegant approach to stabilising emissions over the next 50 years. Instead of being overwhelmed by the immensity of the problem, they break it down into smaller chunks: 15 different ways to reduce carbon emissions by one billion tonnes per year by 2050.

One wedge would be to install about two million hectares of solar arrays (an area about the size of the U.S. state of New Jersey); another would be to get everyone driving half as much (or only driving petrol electric hybrids); building another 700 nuclear power stations would be another wedge.

Capability to overcome

If you couple this with a global emissions trading scheme – one that creates economic disincentives to emit more CO₂, and encourages further efficiencies – the most dangerous effects could be forestalled, and maybe avoided altogether.

So yes, climate change is a devilish problem like no other we have faced before. But it is not insurmountable. And our species has the capability to overcome it: we certainly have the brains, and the technology is here now.

The danger is not that we can't do anything, but that we'll believe we can't; that we might lose confidence and fail to sidestep the "climate change train" before it's too late.

Wilson da Silva is the Editor of COSMOS and the past president of the World Federation of Science Journalists. This is an edited extract of a speech given to the Science and Technology in Society Forum in Kyoto, Japan, on 5 October 2008.

Readers' comments

[Add new comment](#)