

James Lovelock: Nuclear power is the only green solution

**We have no time to experiment
with visionary energy sources;
civilisation is in imminent danger.**

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Sir David King, the Government's chief scientist, was far-sighted to say that global warming is a more serious threat than terrorism. He may even have underestimated, because, since he spoke, new evidence of climate change suggests it could be even more serious, and the greatest danger that civilisation has faced so far.

Most of us are aware of some degree of warming; winters are warmer and spring comes earlier. But in the Arctic, warming is more than twice as great as here in Europe and in summertime, torrents of melt water now plunge from Greenland's kilometre-high glaciers. The complete dissolution of Greenland's icy mountains will take time, but by then the sea will have risen seven metres, enough to make uninhabitable all of the low lying coastal cities of the world, including London, Venice, Calcutta, New York and Tokyo. Even a two metre rise is enough to put most of southern Florida under water.

The floating ice of the Arctic Ocean is even more vulnerable to warming; in 30 years, its white reflecting ice, the area of the US, may become dark sea that absorbs the warmth of summer sunlight, and further hastens the end of the Greenland ice. The North Pole, goal of so many explorers, will then be no more than a point on the ocean surface.

Not only the Arctic is changing; climatologists warn a four-degree rise in temperature is enough to eliminate the vast Amazon forests in a catastrophe for their people, their biodiversity, and for the world, which would lose one of its great natural air conditioners.

The scientists who form the Intergovernmental Panel on Climate Change reported in 2001 that global temperature would rise between two and six degrees Celsius by 2100. Their grim forecast was made perceptible by last summer's excessive heat; and according to Swiss meteorologists, the Europe-wide hot spell that killed over 20,000 was wholly different from any previous heat wave. The odds against it being a mere deviation from the norm were 300,000 to one. It was a warning of worse to come.

What makes global warming so serious and so urgent is that the great Earth system, Gaia, is trapped in a vicious circle of positive feedback. Extra heat from any source, whether from greenhouse gases, the disappearance of Arctic ice or the Amazon forest, is amplified, and its effects are more than additive. It is almost as if we had lit a fire to keep warm, and failed to notice, as we piled on fuel, that the fire was out of control and the furniture had ignited. When that happens, little time is left to put out the fire before it consumes the house. Global warming, like a fire, is accelerating and almost no time is left to act.

So what should we do? We can just continue to enjoy a warmer 21st century while it lasts, and make cosmetic attempts, such as the Kyoto Treaty, to hide the political embarrassment of global warming, and this is what I fear will happen in much of the world. When, in the 18th century, only one billion people lived on Earth, their impact was small enough for it not to matter what energy source they used.

But with six billion, and growing, few options remain; we can not continue drawing energy from fossil fuels and there is no chance that the renewables, wind, tide and water power can provide enough energy and in time. If we had 50 years or more we might make these our main sources. But we do not have 50 years; the Earth is already so disabled by the insidious poison of greenhouse gases that even if we stop all fossil fuel burning immediately, the consequences of what we have already done will last for 1,000 years. Every year that we continue burning carbon makes it worse for our descendants and for civilisation.

Worse still, if we burn crops grown for fuel this could hasten our decline. Agriculture already uses too much of the land needed by the Earth to regulate its climate and chemistry. A car consumes 10 to 30 times as much carbon as its driver; imagine the extra farmland required to feed the appetite of cars.

By all means, let us use the small input from renewables sensibly, but only one immediately available source does not cause global warming and that is nuclear energy. True, burning natural gas instead of coal or oil releases only half as much carbon dioxide, but unburnt gas is 25 times as potent a greenhouse agent as is carbon dioxide. Even a small leakage would neutralise the advantage of gas.

The prospects are grim, and even if we act successfully in amelioration, there will still be hard times, as in war, that will stretch our grandchildren to the limit. We are tough and it would take more than the climate catastrophe to eliminate all breeding pairs of humans; what is at risk is civilisation. As individual animals we are not so special, and in some ways are like a planetary disease, but through civilisation we redeem ourselves and become a precious asset for the Earth; not least because through our eyes the Earth has seen herself in all her glory.

There is a chance we may be saved by an unexpected event such as a series of volcanic eruptions severe enough to block out sunlight and so cool the Earth. But only losers would bet their lives on such poor odds. Whatever doubts there are about future climates, there are no doubts that greenhouse gases and temperatures both are rising.

We have stayed in ignorance for many reasons; important among them is the denial of climate change in the US where governments have failed to give their climate scientists the support they needed. The Green lobbies, which should have given priority to global warming, seem more concerned about threats to people than with threats to the Earth, not noticing that we are part of the Earth and wholly dependent upon its well being. It may take a disaster worse than last summer's European deaths to wake us up.

Opposition to nuclear energy is based on irrational fear fed by Hollywood-style fiction, the Green lobbies and the media. These fears are unjustified, and nuclear energy from its start in 1952 has proved to be the safest of all energy sources. We must stop fretting over the minute statistical risks of cancer from chemicals or radiation. Nearly one third of us will die of cancer anyway, mainly because we breathe air laden with that all pervasive carcinogen, oxygen. If we fail to concentrate our minds on the real danger, which is global warming, we may die even sooner, as did more than 20,000 unfortunates from overheating in Europe last summer.

I find it sad and ironic that the UK, which leads the world in the quality of its Earth and climate scientists, rejects their warnings and advice, and prefers to listen to the Greens. But I am a Green and I entreat my friends in the movement to drop their wrongheaded objection to nuclear energy.

Even if they were right about its dangers, and they are not, its worldwide use as our main source of energy would pose an insignificant threat compared with the dangers of intolerable and lethal heat waves and sea levels rising to drown every coastal city of the world. We have no time to experiment with visionary energy sources; civilisation is in imminent danger and has to use nuclear - the one safe, available, energy source - now or suffer the pain soon to be inflicted by our outraged planet.

James Lovelock is an independent scientist, the creator of the Gaia hypothesis which considers the Earth as a self-regulating organism, and a member of EFN - the association of Environmentalists For Nuclear Energy - www.ecolo.org