One last chance
to save mankind

by **Gaia Vince**, ***New Scientist***, 23 Jan 2009
issue 2692, page 30-31

*With his 90th birthday in July, a trip into space, and a new book, 2009 will be exciting for **James Lovelock**. But originator of Gaia Theory—which describes Earth as self-regulating planet—has a stark view of our human future. He tells **Gaia Vince** we have one last chance to save ourselves.*

Image: Eamonn McCabe / Camera Press

James Lovelock
thinks humanity has only one option to halt climate change and save ourselves

Your work on atmospheric chlorofluoro-carbons led eventually to a global CFC ban that saved us from ozone-layer depletion. Do we have time to do a similar thing with carbon emissions to save us from climate change?

Not a hope in hell. Most of the "green" stuff is verging on a gigantic scam. Carbon trading, with its huge government subsidies, is just what finance and industry wanted. It's not going to do a damn thing about climate change, but it'll make a lot of money for a lot of people, and postpone the moment of reckoning. I am not against renewable energy, but to spoil all the decent countryside in the UK with wind farms is driving me mad. It's absolutely unnecessary, and it takes 2500 square kilometres to produce a gigawatt—that's an awful lot of countryside.

What about work to sequester carbon dioxide?

That is a waste of time. It's a crazy idea—and dangerous. It would take so long, and use so much energy, it will not be done.

Do you still advocate nuclear power to solve climate change?

It's a way for UK to solve its energy problems, but it's not a global cure for climate change. It's too late for emission reduction measures.

So are we doomed?

There is one way we could save ourselves, and that is through the massive burial of charcoal. It would mean farmers turning all their agricultural waste—which contains carbon that plants have spent the summer sequestering—into non-biodegradable charcoal, and burying it in the soil. Then you can start shifting really hefty quantities of carbon out of the system, and pull the CO_2 down quite fast.

Would it make enough of a difference?

Yes. The biosphere pumps out 550 gigatons of carbon yearly; we put in only 30 gigatons. 99% of the carbon fixed by plants is released back into the atmosphere within a year or so by consumers like bacteria, nematodes and worms. We can cheat those consumers by farmers burning their crop waste at very low oxygen levels to turn it into charcoal, which is then ploughed into the field. A little CO_2 is released, but the bulk of it is converted to carbon. A few per cent of biofuel is a by-product of the combustion, which farmers can sell. This scheme would need no subsidy: the farmer would make a profit. This is the one thing we can do that will make a difference, but I bet they won't do it.

Do you think we will survive?

I'm an optimistic pessimist. I think it's wrong to assume we'll survive 2 °C warming: there's already too many people on Earth.

At 4 °C, we can't survive with even one-tenth of our current population. The reason: we won't find enough food, unless we synthesize it.

Because of this, the cull during this century is going to be huge, up to 90 per cent. The number of people remaining at the end of century will probably be a billion or less.

It has happened before: between the ice ages, there were bottlenecks, when there were only 2000 people left. It's happening again.

I don't think humans react fast enough or are clever enough to handle what's coming. Kyoto was 11 years ago. Virtually nothing's been done except endless talk and meetings.

It's a depressing outlook.

Not necessarily. I don't think 9 billion is better than 1 billion. I see humans as rather like the first photosynthesisers, which—when they first appeared on the planet—caused enormous damage by releasing oxygen—a nasty, poisonous gas. It took a long time, but in the end, it was of enormous benefit.

I look on humans in much the same light. For the first time in its 3.5 billion years, the planet has an intelligent, communicating species that can consider the whole system, and do things about it. They're not yet bright enough—they still have to evolve quite a way, but they may become a very positive contributor to planetary welfare.

Will much biodiversity be left after this climatic apocalypse?

An example is the Palaeocene-Eocene Thermal Maximum event 55 million years ago. About the same amount of CO_2 was put into the atmosphere as we are putting in, and temperatures rocketed by about 5 °C over about 20,000 years. The world became largely desert. Polar regions were tropical, and most life on the planet had the time to move north and survive. When the planet cooled, they moved back again. So there doesn't have to be a massive extinction. It's already moving: if you live in the countryside as I do, you can see the changes, even in the UK.

If you were younger, would you be fearful?

No, I have been through this kind of emotional thing before. It reminds me of when I was 19, and the second world war broke out. We were very frightened, but almost everyone was so much happier. We're much better equipped to deal with that kind of thing than long periods of peace. It's not all bad when things get rough. I'll be 90 in July, I'm a lot closer to death than you, but I'm not worried. I'm looking forward to being 100.

Are you looking forward to your trip into space this year?

Very much. I've got my camera ready!

Do you have to do any special training?

I have to go in a centrifuge to see if I can stand the *g*-forces. I don't anticipate a problem, because I spent a lot of my scientific life on ships on rough oceans, and never been even slightly seasick. So, I'm not likely to be space sick. They gave me an expensive thorium-201 heart test, and then put me on a bicycle. My heart was performing like an average 20 year old, they said.

I bet your wife is nervous.

No, she's cheering me on. And it's not because I'm heavily insured, because I'm not.

James Lovelock, British environmentalist, chemist, inventor, best-known for formulating the controversial ***Gaia Hypothesis*** in the 1970s, which says organisms interact with and regulate Earth's surface and atmosphere. Later this year he will travel to space as Richard Branson's guest aboard Virgin Galactic's SpaceShipTwo. His latest book, *The Vanishing Face of Gaia*, published by Basic Books in February.

http://www.newscientist.com/article/mg20126921.500-one-last-chance-to-save-mankind.html