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## One last chance to save mankind

23 January 2009 by [Gaia Vince](#)

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James Lovelock thinks humanity has only one remaining option to halt climate change and save ourselves (Image: Eamonn McCabe / Camera Press)

*With his 90th birthday in July, a trip into space scheduled for later in the year and a new book out next month, 2009 promises to be an exciting time for **James Lovelock**. But the originator of the Gaia theory, which describes Earth as a self-regulating planet, has a stark view of the future of humanity. He tells [Gaia Vince](#) we have one last chance to save ourselves - and it has nothing to do with nuclear power*

**Your work on atmospheric chlorofluorocarbons 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 ourselves 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 that it will not be done.

### **Do you [still advocate nuclear power](#) as a solution to climate change?**

It is a way for the UK to solve its energy problems, but it is not a global cure for climate change. It is too late for emissions 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 the 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<sub>2</sub> down quite fast.

### **Would it make enough of a difference?**

Yes. The biosphere pumps out 550 gigatonnes of carbon yearly; we put in only 30 gigatonnes. Ninety-nine per cent of the carbon that is fixed by plants is released back into the atmosphere within a year or so by consumers like bacteria, nematodes and worms. What we can do is cheat those consumers by getting farmers to burn their crop waste at very low oxygen levels to turn it into charcoal, which the farmer then ploughs into the field. A little CO<sub>2</sub> is released but the bulk of it gets converted to carbon. You get a few per cent of biofuel as a by-product of the combustion process, which the farmer 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 of warming: there are already too many people on Earth. At 4 °C we could not survive with even one-tenth of our current population. The reason is [we would not find enough food](#), unless we synthesised 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 the 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 up.

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 it turned out in the end to be of enormous benefit. I look on humans in much the same light. For the first time in its 3.5 billion years of existence, the planet has an intelligent, communicating species that can consider the whole system and even do things about it. They are not yet bright enough, they have still to evolve quite a way, but they could become a very positive contributor to planetary welfare.

**How much biodiversity will be left after this climatic apocalypse?**

We have the example of the [Palaeocene-Eocene Thermal Maximum](#) event 55 million years ago. About the same amount of CO<sub>2</sub> 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. The 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 the 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 out on rough oceans and I have never been even slightly seasick so I don't think I'm 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.

### Profile

[James Lovelock](#) is a British chemist, inventor and environmentalist. He is best known for formulating the controversial Gaia hypothesis in the 1970s, which states that 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*, is published by Basic Books in February.



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