

# Could a carbon fee save us from climate change?

*Climatologist James Hansen explains how government can stave off global catastrophe -- and what we can do to help*

**Tara Lohan, AlterNet, 4-26-13**

It's hard to imagine anyone who has done more to further our understanding of the impacts of climate change than Dr. James Hansen. After 46 years working a scientist and climatogolist for NASA's Goddard Institute for Space Studies, Hansen wasn't content to simply catalog the dangers facing humanity and our planet — he has been ringing the alarm bell. "On a blistering June day in 1988 he was called before a Congressional committee and testified that human-induced global warming had begun," the *New York Times* [wrote](#) in a recent story about Hansen. "Speaking to reporters afterward in his flat Midwestern accent, he uttered a sentence that would appear in news reports across the land: 'It is time to stop waffling so much and say that the evidence is pretty strong that the greenhouse effect is here.'"

Over the next several decades as scientific evidence poured in about the threats from climate change, and as governments — including the U.S. — failed to take any meaningful action, Hansen stepped out of the lab and into the media spotlight. He has participated in climate change protests, including being arrested several times, and has been outspoken about urging the Obama administration to kill the Keystone XL pipeline proposal. He warned that building the pipeline would mean "game over" for the climate.

This week Hansen was awarded the [2013 Ridenhour Prize for Courage](#) from the Fertel Foundation and the Nation Institute. Ridenhour prizes are named in honor of the late Ron Ridenhour, who blew the whistle on the My Lai massacre in the Vietnam War and went on to become an award-winning investigative journalist.

"At a moment when a debate is raging about the treatment of whistleblowers, the Ridenhour Prizes recognize those who put their lives on the line to challenge the status quo," said Randy Fertel, founder of the Fertel Foundation, which co-sponsors the prizes. "The 2013 winners represent voices who have come forward to speak truth on the most defining issues of our time."

Hansen recently announced that he is stepping down from his post at NASA. He talked to AlterNet about what he plans to do next, what may be in store for our future, and the most important thing we can do to prevent catastrophic, runaway climate change.

**Tara Lohan. First off, congratulations on your Ridenhour Prize for Courage. They selected you for your decades of hard work ringing the alarm bell about climate change. Does it get a little lonely out there for you?**

James Hansen: Well, that is an interesting question I have never been asked before. I am a little surprised that the scientific community has allowed us to go so far down the line that it's almost too late to avoid the rather substantial climate change and practical impacts. It was not surprising at all that the scientific community or at least many people in it objected to my testimony in the late 1980s and was illustrated so well by the article that Dick Kerr wrote in *Science Magazine* that was called "Hansen vs. the World on the Greenhouse Threat."

It was interesting because in that article he interviews a lot of people at a meeting, which was described as a "get Hansen" meeting, but in any case, he got the comment from one of the scientists that said, "Well, if there was a secret ballot, a secret vote probably the majority of us would agree that this global warming was

underway,” but they weren’t ready to say so yet. And I can completely understand that, in the 1980s it was not yet statistically proven.

But what’s a little disappointing is that we’ve reached a point where we should really be pounding on the desk of leaders and saying, “Hey, you’ve got to do something. You have to do something in a hurry or we’re going to leave our children and grandchildren a situation that’s out of their control. There will be large impacts, which they simply cannot do anything about.” And the basic physics for that is very well understood that the climate system has tremendous inertia, it does not respond quickly as humans or nature applies forces to the system. But now we know those forces, those human made forces — the CO<sub>2</sub> amount and how it’s changing is known very precisely. And we know the consequences on the century timescale are going to be enormous. So there’s really no disagreement about that and the fact that we won’t be able to control it.

So in that sense, the answer to your question is that I am disappointed that there aren’t more of my colleagues out there. On the other hand, it’s not that most of them now disagree, I mean those who are in the category of knowing what you are talking about because of relevant expertise, actually say that they’re glad I’m making noises because they think it’s appropriate.

**TL: A lot of people in the activist community like to point their fingers at government for a very good reason, but what do you think the scientific community should be doing?**

JH: Well, I think the government should be asking the scientific community. We have a National Academy of Sciences that was formed at the request of Abraham Lincoln to advise the government on technical matters, which require scientific expertise. So if the government wants to do something it could ask the Academy to give it a report to provide some guidance and that’s not really happening. Instead, we’re allowing the politics to control the discussion and that then ends up leading to little if any action because politics is not going to allow it simply because there’s such a preference among the fossil fuel industry and the people who are making a lot of money off of it to continue business as usual.

So the politics ends up in a stalemate. The scientific community has issued reports. The major scientific groups like the American Geophysical Union, the American Meteorological Society have pretty strong statements about the fact that humans are causing climate change and there will be consequences. So I’m not sure that it can do a lot more if it’s not asked to provide specific guidance.

**TL: Why do you think we are so incapable of taking action when we are presented with the overwhelming scientific evidence?**

JH: Well, what I’ve learned in going to several different countries is that the money has a huge influence on national politics not only in the United States but in practically every country in the world. And the fossil fuel industry is the wealthiest industry in the world, so it becomes difficult to get government action without more pressure from the public. And that, in the case of this problem, is something that is really difficult because of the fact of this inertia and delayed response so the public doesn’t see that much happening.

The difficulty is that because of this inertia of the system, we have only realized, the planet has only realized, about half of the effect of the gases that are already in the atmosphere — the rest is still in the pipeline and will occur over coming decades and this century. And that makes it very difficult. The public has many other issues on its mind like feeding their families and important practical issues. If they don’t see a major effect then it’s just not high enough on their priority list.

It’s clear now to the scientific community that we should be doing something and yet we’re not doing much. As I say, we’re almost to the point where it’s going to be unavoidable that we will have significant consequences this century, in the lifetime of today’s young people.

**TL: Based on that, where we stand right now, what does our future look like if we continue along the path we're on?**

JH: Well, okay it still depends. If we continue on the path that we're on, which is continuing to actually increase CO<sub>2</sub> emissions, then we're talking about a different planet by the end of the century in the sense that we could get warming of at least a few degrees Celsius which would mean that, among other things, the two biggest effects that I'm concerned with are those that are irreversible. And if we continue on that business-as-usual pathway then the ice sheets are not going to be stable, they're going to begin to disintegrate rapidly, which will mean sea level rise of many meters. Scientists will argue about how much sea level rise will occur this century in the next 87 years, for some reason the year 2100 is picked as the year we're trying to estimate the change.

It's very hard to say when that collapse will occur. It's like the stock market, if the country has a stupid economic policy then eventually the stock market is going to reflect that with a collapse, but you can't predict exactly when it's going to occur. Anyway, in my opinion, we would get multi-meter sea level rise this century. Some other scientists argue that we'll only get about one meter this century and the multi-meter rise will be next century. But, in either case it means that all the coastal cities would have to be abandoned at some point whether it's this century or next century and that's thousands of cities around the world on coastlines. Cities develop from coastlines because commerce was by ships for much of history so that's one of the irreversible effects.

The other one is the extermination of species. If we begin to slow down emissions by the end of this decade, then we can keep the warming less than two degrees Celsius. In that case, I think most of the species can survive. But if we continue business as usual, the whole century, so that climate zones really shift a large amount so that species have to migrate to a different region in order to survive; then when that's combined with the other pressures we're putting on species, the other stresses that we're causing as humans basically take over the planet, it's going to mean that a large fraction of species get exterminated, which is another irreversible effect — one which is morally reprehensible.

But the practical thing, many people are not too concerned about sea level rise later this century or species extermination later this century. They are more concerned with climate events that are beginning to happen now. We can see that climate extremes are beginning to increase as expected with a globally warming because the distribution of anomalies from a normal climate is shifting such that the extreme events are more frequent. That's true both for temperature and for rainfall because the amount of rainfall depends upon the amount of moisture in the atmosphere, which increases as the planet gets warmer.

So you get more extreme rain events when you do get rain, but because of the increased temperature the droughts also increase in intensity and the fires that go with drought conditions become more intense and burn hotter. So we're beginning to see these more extreme paths. Also, storms that are driven by latent heat increase water vapor in the atmosphere also can be more powerful as the planet gets warmer. I think we're beginning to see that effect also. If we stay with business as usual, those effects will be larger and larger as we go decade by decade into the future.

**TL: What kind of policy changes should we be advocating for immediately?**

JH: Yes, that's a good question and it's actually quite clear what we should do. The fundamental fact is that as long as fossil fuels appear to be the cheapest energy to the consumer then we'll just keep burning that. That's what's happening so far. The truth is fossil fuels are not the cheapest. If we would eliminate the subsidies for them and if we would include in their price, the external costs of them — the human health effects of air pollution and water pollution from burning and mining of fossil fuels are presently worn by the public entirely without any of the health effects being charged to the fossil fuel industry. The public picks up their health costs

and the effect of climate change. The increased climate extremes are already causing some very expensive events.

Either the public picks it up by just suffering the damage or the federal government may come in and provide relief of billions of dollars. But again, that comes out of the taxpayers' pocket. So what we should do to solve the problem and get us to move to a clean energy future is to book a gradually rising price on carbon, which would be a fee that you collect from possible fuel companies at the domestic mine or the port of entry. So it's a very small number of sources and very accurately known. So you can just have a carbon fee which we suggest, for example, should be 10 dollars a ton to start with and increase year-by-year. The money that's collected should be distributed 100 percent back to the public, to all legal residents, in equal amount. That way people would have the resources needed to make changes over coming years.

When they buy a new vehicle, they buy one that's more efficient, they insulate their homes, they make choices. And it would provide the incentive for the business community, for entrepreneurs to develop low-carbon and no-carbon energy sources and products that are more energy efficient. And would stimulate our economy and make us much more competitive on international trading by making us leaders in clean energies. That is finally beginning to be recognized.

You may have noticed in the past two weeks, there was an op-ed in the *Wall Street Journal*, a conservative newspaper, by George Shultz and Gary Becker, which advocated exactly what I just described. The carbon fee with 100 percent of the money distributed to the public. So it does not make the government any bigger and it allows the market to determine what are the most efficient ways to move to a clean energy future. Yesterday, the *Washington Post*, which is a liberal newspaper, had an editorial saying essentially the same thing, they were pointing out that the European cap and trade system has collapsed and is completely ineffectual. That's what we've been saying for the last few years that cap and trade with offsets is a hokey system, which has no hopes of solving the climate problem. We need a simple honest approach, which makes fossil fuels pay their true cost to society and which stimulates the development of clean energy alternatives.

Unless you make fossil fuels pay their true costs, people will just keep burning them. The [Obama] administration's approach is, "Well, let's reduce coal use and make vehicles more efficient." Those things will reduce U.S. carbon emissions, but they won't solve the problem because they reduce the demand for fossil fuels which makes them cheaper and somebody else will burn them.

The only way to solve the problem is to put an honest price on the fossil fuels. And it's going to need to be international. So the United States and China are going to have to get together and agree on the fact that they both will need to put a gradually rising price on carbon emissions. And I feel that's a doable thing because China knows that they will suffer from climate change more than most places. They have their 50 million people that are living near sea level. They have tremendous pollution, air and water pollution from fossil fuels. So they have a strong incentive for wanting to deal with this problem.

And to have a bilateral agreement between China and the U.S. is a practical solution. While trying to get 190 nations to agree with the Kyoto protocol type approach is hopeless as we've seen from the negotiations that have occurred over the last 20 years. That's kind of a truth telling, which we have to have. Otherwise, we just continue down this line where we pretend that the UN is going to solve the problem eventually and they're not doing anything to help.

**TL: If governments can't move fast enough, and so far our government especially has not moved much at all, what's our plan B?**

JH: It's interesting, I was at a meeting of some of the 20 top scientists in the country just a few weeks ago and they're already at the point of saying, "Well, we have to do geoengineering." So they keep thinking of finding ways to suck the CO<sub>2</sub> out of the atmosphere, well it will be incredibly expensive and we will be leaving that job for young people. It's not clear that it will work, it's not clear that it will be practical. It will be so expensive that it will make no sense.

We really need to have a plan A, plan B just is frightening. That's why I think it's really important that the U.S. and China start talking to each other about this. And you know, there actually was a meeting within the last two weeks between Secretary of State John Kerry and Chinese counterparts. One of the outcomes is that they will have some continuing talks between the two nations on the climate issue. And that is probably the most promising avenue for a plan A.

**TL: I remember probably about five years or so ago everyone was talking about peak oil and then we had this resurgence of fossil fuels with the tar sands and fracking. Is the use of more unconventional sources more of a sign that we are in fact running out of the cheap and easy stuff and that we are running toward peak oil or does that mean the predictions of peak oil were actually off?**

JH: Well, it's a sign that governments don't get it. That they think we just continue to go after every fossil fuel we can find including those that are very hard to get at, it takes a lot of energy to extract them and they're particularly dirty and cause other environmental problems as well as climate change. They don't get it, we can't exploit the unconventional fossil fuels without guaranteeing that our children and grandchildren will have problems that are out of their control. That's the message that has to get through.

I'm hoping that the Obama administration is beginning to understand this and that they will reject the Keystone Pipeline. That's becoming more likely than pundits have been suggesting because it is just crazy to approve that pipeline. It would guarantee that we do exploit a significant fraction of those tar sands. Whatever we extract out of there and put into the atmosphere we're going to have to take back out somehow and it's going to be very expensive and may be impossible. If it's impossible then our children will suffer the consequences.

So just by putting this moderate rising price on carbon you can be far more effective and more helpful for U.S. energy independence and economic development than you would be by approving that pipeline and producing a small number of jobs, temporary jobs associated with building a pipeline. You would get far more better jobs with this rising price on carbon because it would stimulate the development of clean energies and energy efficiency.

**TL: I know that you have recently announced your retirement from your long-held post at NASA. What's next for you?**

JH: I want to continue to do science so I have to generate non-government support for a couple of people to work with me on doing science. I will be able to hopefully spend more time on it because I won't have these administrative duties that I had with the government. But, it will also allow me to do things that I couldn't do as part of the government. For example, I'm working with Our Children's Trust on legal actions against the government for not protecting the rights of young people. I was not able to testify against the government when I was a government employee, but I can do that in the future.

And also, there are going to be some legal actions trying to stop the expansion of coal exports from the West Coast and legal actions to try to stop the pipelines, the tar sands pipelines both the east-west pipeline and the north-south one. And I will now have the time that I can contribute to the science aspect of those attempts to stop this senseless development of unconventional fossil fuels and continued reliance on coal. Because what the

science tells us is we can't do that, we've got to leave most of the remaining coal in the ground and we've got to leave those unconventional fossil fuels in the ground.

**TL: Given everything that you know and how much you understand about this, how is it that you stay hopeful?**

JH: Well, that's fairly easy because if you look at our planet and nature it's so incredible. With my grandchildren, we've been focusing on one particular species, the Monarch butterfly, which is just absolutely incredible. You have to preserve this incredible life on the planet. I believe as biologist Ed Wilson has argued that we can. It's possible that this present time in which we are putting so much pressure on other life on the planet, that this is a bottleneck and if we are smart we can win this battle and allow the other life on the planet to continue to exist, co-exist with us, and I think that's possible. But it's going to require that people understand the situation and put the pressure on governments to see that we have policies that will achieve that. I think it's still possible, but we're running out of time.