

## Fighting global warming under the Trump Administration: a one-on-one conversation with Joel Schwartz

Combattere il cambiamento climatico al tempo dell'Amministrazione Trump: intervista a Joel Schwartz

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**Joel Schwartz is professor of environmental epidemiology at Harvard University School of Public Health, his research is divided into three main areas: first, he is interested in epidemiology looking at the health consequences of exposure to pollutants (especially to lead and to air pollutants). In his air pollution works he has examined both acute and chronic effects of air pollution exposure. He has also done considerable work on health effects of ozone exposure. He is also interested in methodological questions regarding the modelling of continuous covariates in epidemiologic studies. And a third major focus of his research is on the effects of antioxidants on respiratory health. A final area of interest is the use of cost benefit analysis to make environmental decisions.**

**Professor Schwartz, please, tell the readers of *Epidemiologia&Prevenzione* three reasons why the decision of President Trump to withdraw the Paris Accord on climate change is wrong.**

First, I think people need to understand that withdrawing from the Paris accord is purely a symbolic act, that the Paris agreement does not commit any Country to doing anything more or less what they think is reasonable and so it was perfectly passable for the Trump Administration to do whatever they wanted without withdrawing from the climate accord. And so this is a symbolic act.

But it is important because it is symbolic of fundamental misunderstandings – and I would say deliberate misunderstandings – of the **economics**, of the **ecology**, and of the **environmental health** consequences.

So, first of all, the Trump Administration says that they need to do this to protect jobs for coalminers, when there are six times as many people employed in United States installing solar panels and maintaining them as there are coalminers. And so the notion that this is protecting jobs is completely wrong. Coalmining is a very automated process that provides relatively few jobs: there are 51 thousand coalmin-

ers in the US, there are 300 thousand people installing solar, there are another 200 thousand people installing wind power. It takes a lot of construction work to put alternative energy sources into operation, and they are completely non-polluting and generate much more employment. So, it is stupid on the economic front.

It also is ridiculous on the ecological front, because there is no question that carbon dioxide warms the Earth. We have known since the early 1800s that carbon dioxide reflects infrared light back to the Earth. Basically, the reason the Earth is not a ball of ice is because radiation falls on us from the Sun.

The reason it is not too hot, like the Sun, is that the Earth radiates some of that radiation back up into space in the form of infrared radiations. Carbon dioxide reflects some of that infrared radiation back to Earth like a partial mirror and so it has to warm the Earth. That is simple physics; 101, there is nothing fancy about that. How much that warms the Earth involves very complicated physics, including effects on oceans,

clouds, etcetera. But the basic notion is completely incontestable, and denying it is like saying you think the Earth is flat. And the third thing which, for ideological reasons, the Trump administration again wants to ignore is the simple fact that processes that burn fossil fuel generate air pollution and water pollution and they generate noise, and all those things are bad for people's health.

Coal burning power plants in the United States kill 40 thousand of people a year, we should shut them down even if they were not changing the climate, because that is more people than have died in most of our wars **each year**. It is crazy to let them to continue to operate when for basically the same amount of money we can product wind farms and solar farms.

In addition, cars produce exhaust that also kills tens of thousands of people per year. They make our cities incredibly noisy.

Electric cars are so quiet that we nearly require them to make a little noise so blind people can tell there is a car nearby. If we switch all our cars to electric, we will get rid of much of the pollution in our cities and

will make our cities much quieter and more relaxing and more enjoyable. You could sleep better at night and enjoy yourself without this kind of noise of vehicles going by, and you could breathe the air without worrying about your health. It is simply crazy to ignore all of these benefits that occur from switching to renewable energy, which is independently of global warming.



And so for all three of these reasons, as far as I see, that it makes no rational sense. Economically, health wise and for what we are doing to the Earth climate.

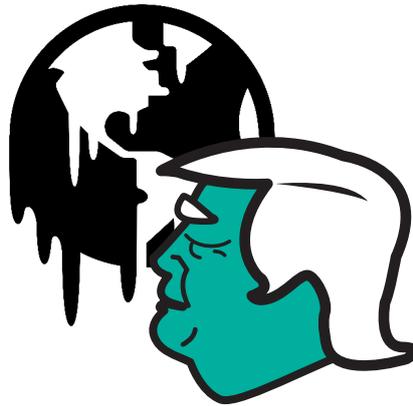
**What impact this withdrawal will have on the regulations concerning air quality in the United States?**

I do not think this withdrawal from the Paris accord has a direct impact on regulations concerning air quality, but it has a substantial indirect impact. It indicates that this administration does not care about air quality. And so what we see is that already the Trump administration has postponed for a year having States submit plans for how they are going to bring ozone levels down to meet the current ozone standard. They are trying to repeal or postpone all the regulations related to air quality. So they are part of the same package, but the connection is not direct.

**Dr. Kogevinas, President of the International Society for Environmental Epidemiology, encourages the members of the society to react against Trump's decision about climate change in two ways: the first as epidemiologists and the second as citizens. What do you think about his proposals?**

I think that as epidemiologists we really have to react to this and I think the way that we need to react is to listen very carefully to what the people from industry and the ideologues are saying, so that we can target our research to directly address the arguments that they are making. Because they have to justify in some way the decisions that they make. And so, for example, I have heard industry consultants say that studies about air pollution are non-sense, because it is really all due to the weather, it has nothing to do with air pollution.

We can listen to them carefully and we say: "What if I do a study where I compare two days that have the same temperature but different air pollution, and ask if I will see health differences?"; then obviously any differences in the health



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between those two days cannot be due to the temperature, because the temperature is the same. We may think we have already controlled for temperature in a good way, but by doing the study in that way, it is easy to explain to people who are not scientists that our conclusions must be true.

So we have an obligation to think about the arguments that have been marialed by people for attacking air quality regulations, do studies that directly address those arguments, and produce results that are easily explainable to the general population as refuting those arguments. I think that we have an obligation to pay careful attention and do research which otherwise we may think is not necessary, in order to provide such arguments, and defend the science that is under attack.

As citizens, of course, I think that we have

the same obligation as everyone else to think about what are the probable results of the Trump administration's decisions and oppose those we think are harmful. Epidemiology has a particular responsibility in this sense, because everybody in the world cannot concern themselves about every possible issue. And so there are people who are worried more about unemployment, there are people who are worried more about healthcare for the elderly, etcetera. As environmental epidemiologists, we have to take on the role as the people who particularly care about environmental issues and take on the role of telling politicians that this matters and trying energize the general population to think that this matters.

**The workers of Environmental Protection Agency say that, under Pruitt's direction, all the research projects on climate change are grinding to halt and the mood in EPA is so uptight that people are afraid of mentioning climate change even in their emails... How the Agency will change under this new management?**

It is going to be a hard 4 years under this management for people in EPA. I know that because I worked in EPA in 1980 when Reagan was elected President and Ann Gorsuch became the Administrator of EPA. She was a radical anti-regulation Republican like Pruitt and things were fairly bad. And so "will people be reassigned from the climate change division?" Yes, I am sure they will be.

All the budget cuts that there are in the President's budget, they are not all going to happen, because the President merely proposes a budget. Budgets are actually determined by the legislature and I think most of the cuts will not happen. But clearly President has authority over personnel, and so Pruitt can move people around the agency. My advice to people in the agency is to dig in and to do what you can to try to protect the environment, despite the best efforts of the Trump administration to stopping you from doing that. And wait for another election.