

CLIMATE SKEPTICISM – QUESTIONS, ANSWERS, AND WAYS FORWARD

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ABSTRACT

The controversies on global warming focus on two essential points: the very existence of global warming and its causes of it. If the existence of the first is generally no longer questioned within the scientific community, its magnitude is more so, especially compared to other older periods of warming. As for the causes, the absolute consensus has not yet been reached even if the balance goes very strongly to say that global warming is due to "human activities". It is in this context of certainties and uncertainties, of hypotheses to be validated, of contested models that the issue of "climate skepticism" appeared and grew. And what could have been a fine debate, a noble controversy, a healthy dispute, gradually turned into an object of passion. Conspiracies, calumniations, anathemas, ex-communications, not to mention the accusations of conflicts of interest... nothing was missing. In this paper, we will try to answer the main arguments raised during the general debate concerning climate change. We want to see which countries are more skeptical and who are the people who can influence the behaviors, given the huge number of admirers and followers they have.

KEYWORDS: *climate change, climate skepticism, GHGs emissions, global warming*

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1. INTRODUCTION

The objective of this paper is to understand the background of climate skepticism, who is the people that are pushing forward this current of thinking that systematically, understates their disbelief in human-caused climate changes. We also see what countries are the performers and the worse in the ranking of confidence in what scientists say about the environment. We will also have a look at who might influence the debates and could be an example in this challenge, from sports and shows (movies, music, etc.).

To understand the phenomena of climate skepticism we should start our analysis by looking at the situation through their eyes. The people supporting the climate skepticism current (either we talk about activists or some others from academia) say that we ignore historical knowledge and evidence of global warming experienced happened during Roman times, the Middle Ages, or other climatic phenomena whose cause could not be the production of CO₂ by human beings. It has been said also that it is not serious to build an economy and politics of the future based on unknown or hidden premises.

They also say that overall, there is a lack of scientific knowledge among the general public. Though, it is well known that 95% of scientists say that global warming is of anthropogenic origin (Oreskes et al., 1994). More than that, Peter T. Doran, and Maggie Kendall Zimmerman in their

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paper realized a survey of 3146 scientists and climate experts and they found out that 97.5% of those who published an article about climate change declared being convinced that human activity is the result of global warming (Doran & Zimmerman, 2009).

2. THE CONTESTER'S PERSPECTIVE

Some of the contesters are saying that there is never in the public media, openly, a real discussion between scientists on this subject. Yet scientists have been studying and debating the physical underpinnings of climate change for more than 30 years. The first assessment report of the Intergovernmental Panel on Climate Change (IPCC) was written in 1990. Several other assessment reports followed, all of which can be found freely accessible (IPCC, 1990).

In each of these reports, the role of the various factors that influence the climate is discussed in complete transparency and an increasingly detailed fashion as knowledge is accumulated. Evidence for the role of greenhouse gases in global warming is detailed. Natural factors influencing the climate, such as volcanic activity and the cycles of the sun's activity, are also discussed. It should be noted here that the IPCC is not a closed circle committed to the cause of the climate. Thousands of scientists have participated directly or indirectly in its work since its inception. The IPCC reports constitute the most exhaustive synthesis of the results from the climate scientific literature. They form the basis of scientific consensus on the subject, the best standard of knowledge of the Earth's climate. Other reports and scientific entities reached the same conclusion.

If there is no debate today on the anthropogenic contribution to the rise in CO₂, it is because the question has long been closed. The 5% of scientists we mentioned earlier have been unable to produce rigorous experimental results to prove their claims – one of the bases of validation in science. They very often express themselves outside their area of expertise (a mathematician, for example, will not be in the best position to provide a credible opinion on global warming, even though he is a scientist). The arguments put forward by these so-called experts generally do not resist analysis by specialists for very long, as evidenced.

Giving too many echoes to these minority works only interferes with the discourse that we must, in all intellectual honesty, hold on to knowledge in the matter. Their promotion can be explained maybe as a part of a strategy developed by certain economic groups, who hope to divert attention and avoid taking measures contrary to their interests, according to a strategy developed by the tobacco industry (Brandt, 2012). This has been shown in many articles in the media (Holden, 2020). The next graphic shows the huge amount of money spent on publicity by the largest oil companies in the U.S., for the last 30 years.

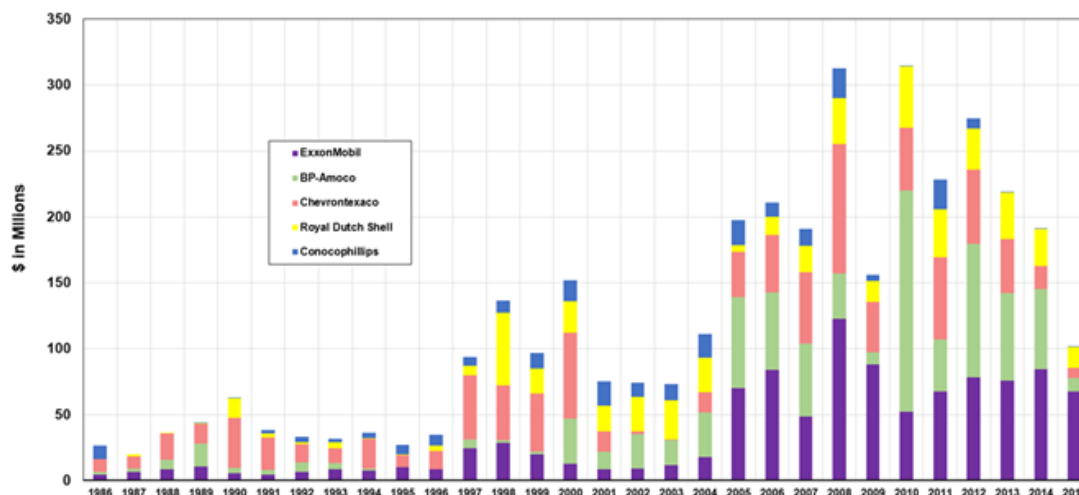


Figure 1. Largest oil & gas companies advertising spending 1986-2015

Source: Brulle et al. (2019)

Their interests are to keep going their business. In any case, the research continues and any scientifically validated experience that would challenge the current consensus would meet the media coverage it deserves. An important step was achieved, the electric cars that are today everywhere. It is proven that than an electric vehicle is producing less 70% CO₂ during its lifetime. It was also proved that, in the worst-case, an electric vehicle with a battery produced in China and used in Poland (where most of the electricity is coming from a coal-fired power plant) still releases 37% less CO₂ into the atmosphere than a thermic vehicle. The best situation is an electric car having a battery produced in Sweden and driven in Sweden which will pollute 83% less than a normal car (Transport & Environment, 2022).

3. THE ORIGIN OF CLIMATE-SCEPTICS

While there is consensus among specialists, worldwide, the population is only half convinced about the emergency and consequences of climate change. India, Bangladesh, and Pakistan are among the population who trust more scientists. Since there is no clear explanation in the literature on why this is happening, we believe there is a mix of the situation: in these countries, people like to be up to date with the news (perhaps for different reasons but certainly global warming is present in all journals so they started to follow also this subject), there is a certain respect for scientists, and obviously, their territories are affected by climate changes.

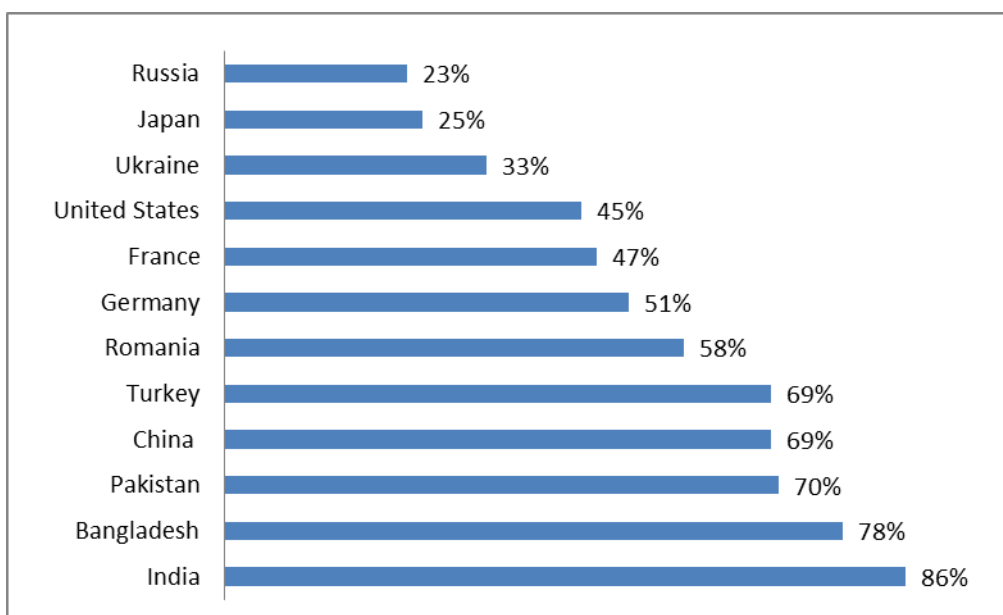


Figure 2. Level of confidence in what science say about the environment

Source: World Economic Forum (2020)

When we look at the data, we see that people from South Asia most trust the researchers while those from Russia, Japan, Ukraine, the United States, and France are the most skeptical. Another problem is that it looks like the general sentiment of trust in scientists' conclusions about the environment is diminishing with time.

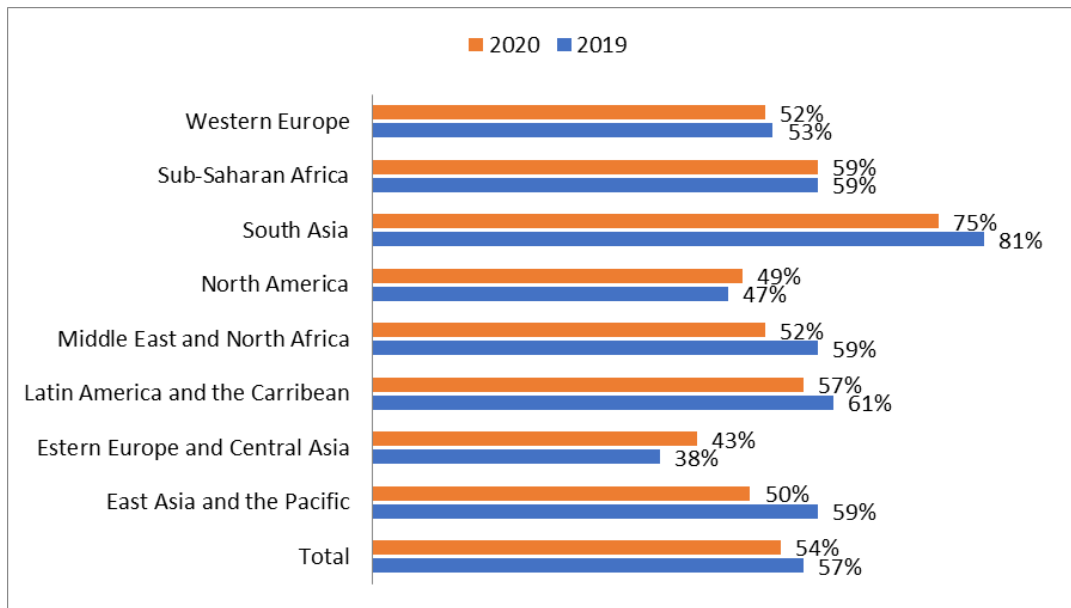


Figure 3. The level of trust in what scientist says about climate change
 Source: World Economic Forum (2020).

Except for Eastern Europe & Central Asia and North America, in 2020, in all other areas, the trust is decreasing or at best remains stable, compared with 2019. The skepticism about global warming is shared by many people.

4. PEOPLE THAT COULD INFLUENCE THE DEBATE

In today's world, where many people are dependent on social networks and are trying to replicate the behaviors of celebrities, some of the most famous actors stand out in the campaigns against climate change. The most known activists are Leonardo DiCaprio (donations for projects for the benefit of wildlife, marine life, social initiatives, etc.), Jane Fonda (long-term activist, well known for her dedication to the cause), Matt Damon (he creates an ONG which fight for giving people access to water), Mark Ruffalo (he stands for total transition to renewable energy), Robert Redford (activist for conservation and climate change), etc. Many others are also involved in different social causes that finally contribute to the global effort of reducing climate change. But are they those who earned the most last year? In the next graph, we can see who the best is paid.

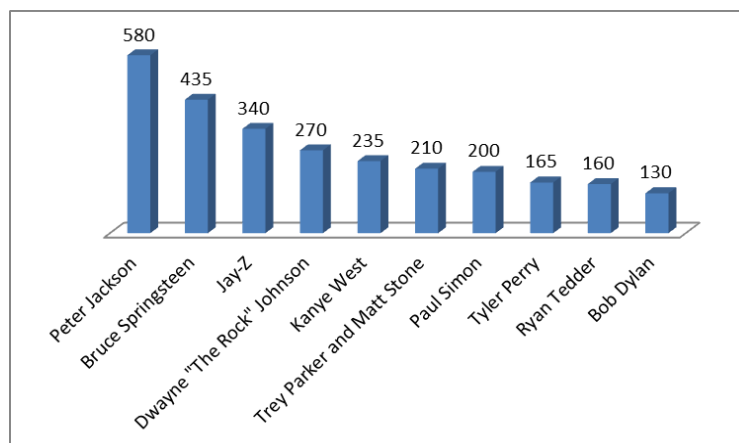


Figure 4. Best paid celebrities in 2021 (million USD).
 Source: Statista (2022)

Unfortunately, none of those from the graph is on the activist list. Their public contribution to the cause would help to change the ideas of some of the deniers. Internet media doesn't help these days. Ironically, Greta Thunberg became "Saint Greta" and is chased for her eventual energy waste, even though she succeeded to raise the issue at the highest political and legislative levels. The negative news is favored because it creates breaking-news and the public love to look at it. It is more attractive to see a disaster somewhere than reportage about a public campaign.

Another sector that is well appreciated by a large majority of people is sports. Many athletes are highly appreciated, and their behavior is closely followed and copied by their fans. That is why it would be desirable for them to be part of the group against climate change activists. Especially because the sport is generally linked with clean air, green grass, health, ice, etc. Some of them are already acting against climate change: Will Gadd (ice climber), Lewis Pugh (long-distance swimmer), Gretchen Bleiler (snowboarder), and Lauri Markkanen (basketball player). With all respect for their performances, they are not the best known and have the potential to be followed in behavior. The next graph shows those who are the best paid, and who naturally are the most celebrities.

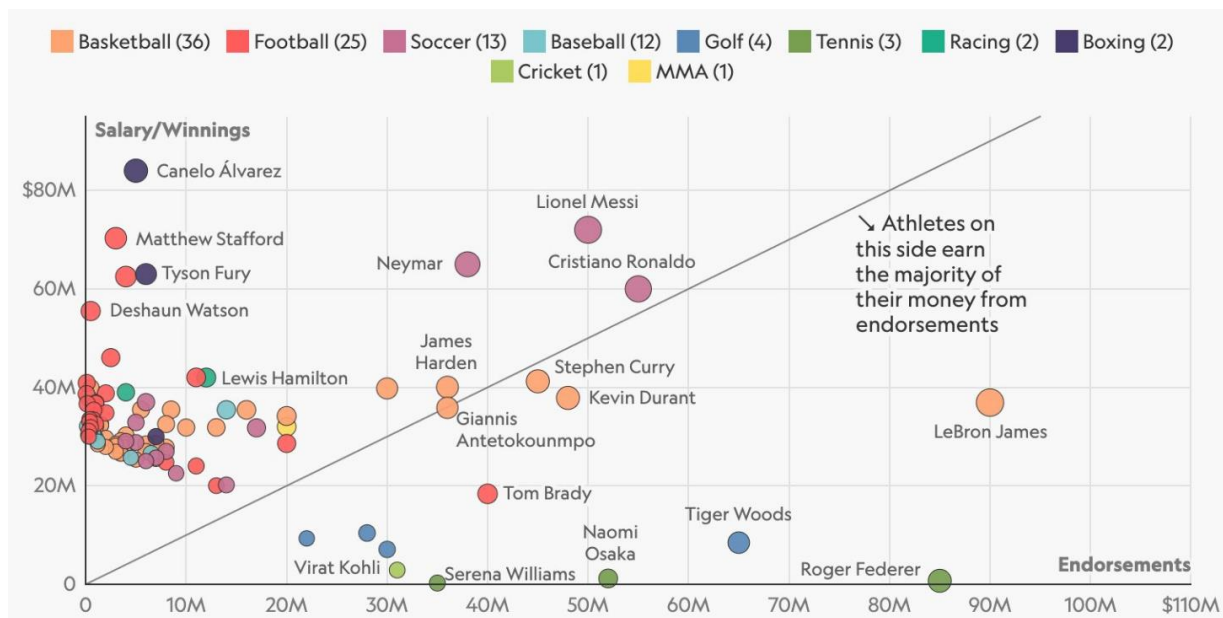


Figure 5. Best paid athletes in 2022

Source: Badenhausen (2022)

As it can be observed, everyone makes a lot of money. More than that, Roger Federer saw his reputation affected after one of his sponsors, Credit Suisse, invested in fossil fuel extractions (Morgan, 2020). Of course, some of them support different social causes or are involved in different campaigns. But it would be useful if they could be attracted to climate change. Unfortunately, we see them more when they buy a new powerful car or a new yacht, so their carbon footprint is very high.

That is why many of the skeptical are rather circumspect regarding the value of their efforts when they see celebrities not being so concerned. In our view, this is an important feeling to test in sociologic research. Putting the poor and the rich, people or countries, at the same level, when is about reducing energy consumption, cannot be the right solution. It can generate changes of behavior, that not anybody can accept, which lead to frustration and finally, denials. The next step is to find a good excuse to do nothing to reduce global warming, for example, the researchers are biased, the reports and models are manipulated, etc.

Therefore, to succeed in having a clean planet with controllable global warming effects (since complete elimination seems impossible), those responsible should take into account not only the sources of climate skepticism but also the countries where this trend is dominant. We should also try to involve more stars in this campaign to get better results because we live in a world where social media is important at least for the younger generation, but not only, and V.I.Ps are role models.

5. CONCLUSIONS

We constantly confuse the cause and the proven fact. Unfortunately, some use this as an argument to mercilessly condemn the capitalist world, Europe with its colonialist and even Christian past. They confuse everything to make it their political dish and leave no room for those who would try to put the scientific terms of the equation.

Our Western societies have based their industrial and economic development on access to abundant and inexpensive sources of energy (coal, gas, oil, etc.). Our daily lives are fed by this energy, whether it is to move us, heat us, light us, communicate, or even consume inexpensive products. But this model is out of breath. Fossil resources, which took millennia to form, are burned in a few centuries, emitting greenhouse gases that the atmosphere cannot absorb. Moreover, oil and gas have limited reserves and have already caused numerous geopolitical conflicts, but also international financial scandals. Nuclear power has also shown its limits, with the risk of accidents increasing with the aging of reactors, the question of nuclear waste which remains unresolved, and the astronomical costs of this sector (including the dismantling of reactors which is not considered at its fair value in the operators' accounts). Our system based on abundant energy has however left out part of the population.

When we have demystified the cause of global warming, we will finally be able, in all intelligence and efficiency, to undertake the fight against pollution, abusive exploitation, and the tyrannies of money and power, which concern all countries and all regimes.

But for that, it would indeed be necessary to inform the general public and economic and political decision-makers through objective exchanges between scientists and not by resorting to threats and the deployment of force.

We can certainly discuss ways to reduce greenhouse gas emissions, policies to adopt, or laws to implement. We are here in the political and more scientific field and putting priorities on the problems to be solved is, fortunately, no longer the responsibility of scientific experts in climate, pollution, meteorology, etc., but the anthropogenic cause of global warming is no longer a matter of debate.

Every help for the cause is welcomed so few celebrities, admired and with a certain influence, could bring fresh air to the climate change campaign.

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