

Is there a scientific consensus on global warming?

Science achieves a consensus when scientists stop arguing. When a question is first asked – like ‘what would happen if we put a load more CO₂ in the atmosphere?’ – there may be many hypotheses about cause and effect. Over a period of time, each idea is tested and retested – the processes of the scientific method – because all scientists know that reputation and kudos go to those who find the right answer (and everyone else becomes an irrelevant footnote in the history of science). Nearly all hypotheses will fall by the wayside during this testing period, because only one is going to answer the question properly, without leaving all kinds of odd dangling bits that don’t quite add up. Bad theories are usually rather untidy.

But the testing period must come to an end. Gradually, the focus of investigation narrows down to those avenues that continue to make sense, that still add up, and quite often a good theory will reveal additional answers, or make powerful predictions, that add substance to the theory. When Russian scientist Dmitri Mendeleev constructed his periodic table of elements, not only did he fit all known elements successfully, he predicted that elements we didn’t even know about would turn up later on – and they did!

So a consensus in science is different from a political one. There is no vote. Scientists just give up arguing because the sheer weight of consistent evidence is too compelling, the tide too strong to swim against any longer. *Scientists change their minds on the basis of the evidence, and a consensus emerges over time.* Not only do scientists stop arguing, they also start relying on each other’s work. All science depends on that which precedes it, and when one scientist builds on the work of another, he acknowledges the work of others through *citations*. The work that forms the foundation of climate change science is cited with great frequency by many other scientists, demonstrating that the theory is widely accepted - and relied upon.

In the scientific field of climate studies – which is informed by many different disciplines – the consensus is demonstrated by the number of scientists who have stopped arguing about what is causing climate change – and that’s nearly all of them. A survey of all peer-reviewed abstracts on the subject ‘global climate change’ published between 1993 and 2003 shows that [not a single paper rejected the consensus position that global warming is man caused](#). 75% of the papers agreed with the consensus position while 25% made no comment either way, focusing on methods or paleoclimate analysis ([Oreskes 2004](#)).

[Several subsequent studies confirm](#) that “...*the debate on the authenticity of global warming and the role played by human activity is largely nonexistent among those who understand the nuances and scientific basis of long-term climate processes*”. ([Doran 2009](#)). In other words, more than 95% of scientists working in the disciplines contributing to studies of our climate, accept that climate change is almost certainly being caused by human activities.

We should also consider official scientific bodies and what they think about climate change. *There are no national or major scientific institutions anywhere in the world that dispute the theory of anthropogenic climate change.* Not one.

In the field of climate science, the consensus is unequivocal: human activities are causing climate change.