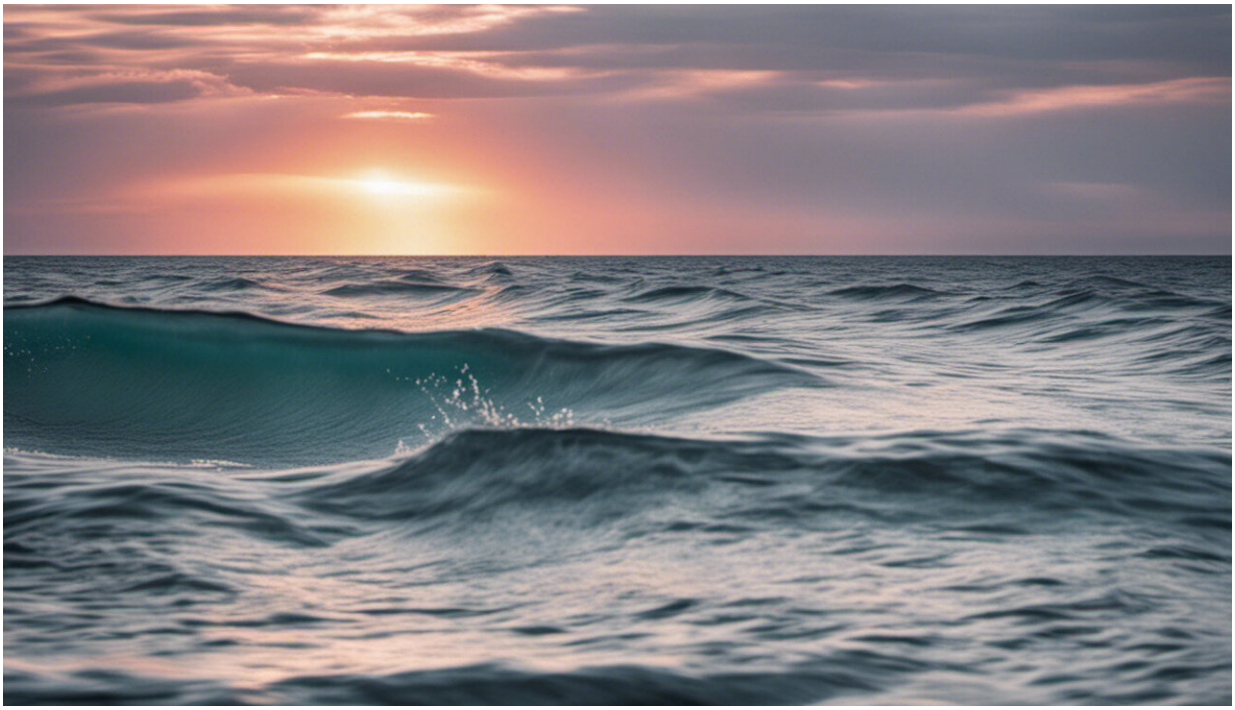
Gulf stream slowdown to spare Europe from worst of climate change

July 11 2016, by James Hakner



Credit: AI-generated image (disclaimer)

Europe will be spared the worst economic impacts of climate change by a slowing down of the Gulf Stream, new research predicts.

Scientists have long suggested that global warming could lead to a slowdown – or even shutdown – of the vast system of ocean currents,

including the Gulf Stream, that keeps Europe warm.

Known as the Thermohaline Circulation, this system operates like a conveyor belt, transporting warm water from the tropics to Europe, where evaporation decreases salinity and density so that the water sinks.

As the world warms, melting icecaps and increased rainfall are widely predicted to slow this process down by flooding oceans with cold freshwater.

Some experts even fear that the process could shut down altogether, plunging Europe into a new ice age.

However, a new study by the University of Sussex, Universidad Nacional Autónoma de México and the University of California, Berkeley finds that, rather than cooling Europe, a slowdown of the Thermohaline Circulation would mean the continent still warms, but less quickly than other parts of the world.

This would lead to a rise in welfare standards in Europe, concludes the research, which is published in the leading economics journal the *American Economic Review*.

Professor Tol, Professor of Economics in the School of Business, Management and Economics at the University of Sussex, said: "Cooling is probably a good bit more harmful than warming, particularly in Europe. People rightly fear that climate change would cause a new ice age.

"Fortunately, our study finds no cooling at all. Instead, we find slower warming: a boon for Europeans."

Of course, as ocean currents redistribute rather than create heat, slower

warming for Europe means slightly accelerated warming elsewhere.

The study, therefore, adds to a growing body of evidence predicting a rich/poor divide in the climate change stakes. Developing countries will be less able to cope with rising sea levels, for example, and - as this research suggests - may warm faster than other, more developed parts of the world.

More information: David Anthoff et al. Shutting Down the Thermohaline Circulation, *American Economic Review* (2016). DOI: 10.1257/aer.p20161102

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