


The possible impacts on the global environment: after United States withdrawing from Paris Climate Agreement.

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ABSTRACT

On the 20th (January 20, 2025), the first day after Donald Trump officially took office as President of the United States, he signed an executive order to withdraw from the Paris Climate Agreement after claiming that it was unfair blackmail. This was the second time that he had withdrawn from the agreement after his previous administration. As the world's second largest carbon emitter, the impact of the United States' withdrawal from the economy again may be even greater than the first time. When will the U.S.'s withdrawal announcement take effect at the earliest? What were the consequences of the last withdrawal from the climate agreement? Why do experts think this exit will have a bigger impact?

KEYWORDS: Withdraw; Paris Climate Agreement; Carbon Emitter; Impact; Announcement Take Effect

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1. INTRODUCTION

The Paris Climate Agreement (Stankovic et al., 2023) is an international treaty adopted [in December 2015 during the 21st Conference of the Parties \(COP21\)](#) the United Nations Framework Convention on Climate Change (UNFCCC). Climate change is a significant and complex issue that affects various aspects of our planet. Climate change refers to a statistically defined change in the average and/or variability of the climate system, which includes the atmosphere, the water cycle, the land surface, ice, and the living components of Earth. While the definition does not usually attribute the causes of change, human activities, particularly the burning of fossil fuels and deforestation, are major contributors to the current warming trend. 2025 has started with record-breaking warmth, extending the recent period of exceptional warmth and raising questions about the rate of ongoing climate change. The 2024 Climate Technology Progress Report underscores the urgent need to triple renewable energy capacity and double energy efficiency by 2030. The 2021 Emissions Gap Report found that updated national commitments for reducing emissions by 2030 fall short of the Paris Agreement goals, with the world on track for a global temperature rise of at least 2.7°C. Climate change is likely to reduce crop yields due to unpredictable changes in temperature and water availability. For example, East Africa has experienced recurrent droughts causing crop failures and loss of livelihoods (Haile et al., 2019). The range of pests and diseases is expanding, exposing previously unaffected areas to new risks. Climate change can exacerbate agriculture's existing impacts, such as increasing greenhouse gas emissions from rice paddies and degraded soils. Achieving this requires a 45% reduction in greenhouse gas emissions by 2030 and net-zero emissions by mid-century (Huang and Zhai, 2021). Scaling up renewable energy with improving energy efficiency is crucial (Lin, 2024). The 2024 Energy Compacts Annual Progress Report highlights new commitments to boost

renewable energy and increase access to clean technologies. Developing countries face financial and capacity barriers in implementing climate actions, emphasizing the need for international support and innovative financing mechanisms. It aims to combat climate change by limiting global warming to well below 2°C above pre-industrial levels, with efforts to keep it at 1.5°C. The global temperature rises below 2°C, with an aspiration to limit it to 1.5°C. Each country sets its own climate goals and updates them every five years. Developed nations pledged to provide \$100 billion per year to help developing nation's transition to greener economies. It means that developed nations pledged to provide \$100 billion per year to help developing nations transition to greener, low-carbon and climate-resilient economies. This is a longstanding climate finance commitment under the United Nations Framework Convention on Climate Change (UNFCCC) and related agreements. The pledge was originally made in [2009 at the UN Climate Conference in Copenhagen \(COP15\)](#), where wealthy, industrialized countries agreed to mobilize \$100 billion annually by 2020 to support climate mitigation and adaptation in developing countries. It was later confirmed in [the Cancun Agreements \(2010\)](#) and reaffirmed in [the Paris Agreement \(2015\)](#), which also called for continuing that level of finance through 2025 and for agreeing a new, larger climate finance goal thereafter. The \$100 billion a year is intended to help developing nations. Mitigate greenhouse gas emissions by transitioning to renewable and cleaner energy, energy efficiency, and low-carbon development; Adapt to climate impacts such as extreme weather, sea-level rise, and droughts. Build resilience and support green economic growth in ways that are affordable and sustainable. Developed countries were late in meeting the original deadline, with [Organization for Economic Co-operation and Development \(OECD\)](#) data showing the \$100 billion threshold was likely first reached in 2022, two years later than promised. According to the OECD's 7th annual assessment, developed countries provided and mobilised USD 115.9 billion in climate finance for developing countries in 2022, exceeding the \$100 billion goal for the first time. This was about 30% higher than in 2021 and significantly above what OECD projections had expected for 2025. The earlier OECD report showed that in 2021, developed countries provided and mobilised about USD 89.6 billion, still short of the \$100 billion target. The \$100 billion per year goal was first agreed in 2009 at COP15 in Copenhagen and later extended through 2025 under the Paris Agreement. OECD figures include public climate finance (from bilateral and multilateral sources) as well as private finance mobilised by public interventions. The original 2020 target of reaching \$100 billion annually was not met on time. The OECD reports show that 2022 was the first year the goal was achieved (and two years late). Public sources still account for the majority of climate finance, although the share of private finance mobilised has grown. There has been ongoing debate and calls from developing nations for greater transparency, more grant-based funding (not mostly loans), and higher climate finance levels, especially as global climate needs far exceed this amount. Under the Paris Agreement framework, parties are expected to agree on a successor to the \$100 billion goal by 2025, with discussions at recent COP meetings focusing on raising the target significantly to match the financing required for a global green transition. This \$100 billion commitment is often referenced in debates about climate equity and trust between wealthy and poorer countries, reflecting both progress and challenges in global climate cooperation. Achieve net-zero greenhouse gas emissions by the second half of the 21st century. Nearly 200 countries have signed the agreement. However, on the first day of his official inauguration on the 20th local time (January 20, 2025), U.S. President Donald Trump (**Figure.1**) signed a large number of executive orders to promote new policies. He also announced the revocation of 78 executive orders during Biden's term. These new policies also include withdrawing from the Paris Climate Agreement (**Figure.2**) again. This is the second time that the United States, the world's second largest carbon emitter, has withdrawn from the Paris Climate Agreement under Donald Trump's leadership. He took the same action during his first term, but after his successor Biden took office, he immediately re-announced its participation four months after the United States withdrew from the agreement. Now that Donald Trump has withdrawn again after taking office, we commented

that this has had a profound impact.

2. WHY DID DONALD TRUMP WITHDRAW FROM THE PARIS CLIMATE AGREEMENT AGAIN?

When signing the executive order, Donald Trump said that the Paris Climate Agreement is an unfair blackmail and that unless every country does so, carbon reduction (Dragomir et al., 2023) will not make any difference. The United States will not destroy its own industry, while China pollutes with impunity. Donald Trump also added that withdrawing from the agreement will save the United States more than \$1 trillion. It means that the United States will not sabotage their own industries because pulling out of the non-binding pact would save the US over \$1 trillion.

3. DISCUSSION

When Donald Trump announced his withdrawal from the Paris Climate Agreement for the first time in 2017, due to restrictions in the agreement that took effect in 2016, it contained provisions that member states were not allowed to withdraw within three years, and that any country that wanted to withdraw should not take effect until one year after formally notifying the United Nations. Therefore, the United States did not officially withdraw until 2020, at the end of Donald Trump's first presidential term. However, since this year (2025) has passed the three-year threshold of the agreement's effectiveness, the United States announced its withdrawal again, and it will take effect in as soon as one year. What are the consequences of the United States' first withdrawal from the Paris Climate Agreement? The Paris Climate Agreement is an agreement signed by more than 200 countries around the world. The goal is to control the global temperature rise within 1.5°C before 2100 (Santos et al., 2022; Lin, 2025). The agreement also promises that rich countries will provide climate finance (Gordon, 2023) (**Figure.3**) to help poor countries adapt to climate change and switch to renewable energy. Climate finance refers to the financial resources and instruments used to support actions aimed at mitigating and adapting to the impacts of climate change. According to the United Nations Framework Convention on Climate Change (UNFCCC) Standing Committee on Finance, climate finance is defined as financing that reduces greenhouse gas (GHG) emissions (**Figure.4**), enhances sinks of these gases, and reduces vulnerability while increasing the resilience of human and ecological systems to negative climate change impacts. Climate finance is essential for achieving global climate goals and ensuring a sustainable future. It requires coordinated efforts from governments, financial institutions, and the private sector to mobilize the necessary resources and drive meaningful climate action. We pointed out that one of the major consequences of the United States' first withdrawal from the Paris Agreement is the interruption of climate financing, and most of those who rely on this financing are poor countries that are more vulnerable to the impacts of climate change. Debasu Bayleyegn Eyasu, an Ethiopian official, said at the time, the Paris Agreement is our lifeline. The withdrawal of the United States means that more than 1 billion people in Africa, Latin America, and Pacific island countries will face threats because the resilience of human and ecological systems for these poor countries to negative climate change impacts will become fragile. However, relatively, while the withdrawal of the United States from the Paris Agreement does create a funding gap, it does not mean that these countries will have no funds to deal with the negative impacts of climate change. Other sources of funding, both public and private, are available to support climate mitigation and adaptation efforts. The previous statements are compiled into **Figure.5**.

In addition, Donald Trump's decision to withdraw from the Paris Agreement also comes with a series of

loosening of hundreds of environmental regulations, from gasoline fuel standards to coal-fired power plants. We commented that the momentum for global carbon reduction has stalled with the austerity in the United States. According to the International Energy Agency, global energy-related carbon emissions increased by 1.7% in 2018 (Adu et al., 2024), and had just experienced three consecutive years of steady decline before that. Will withdrawing from the agreement a second time have a greater impact? The second withdrawal of the United States from the climate agreement will have a greater impact on the world than the first. In addition to the fact that this exit will last longer than the last time, including the \$11 billion in climate financing provided to poor countries during Biden's term, as well as the budget of [the United Nations Secretariat responsible for managing world climate change negotiations](#), and the huge greenhouse gas reduction fund launched in the United States, they are also considered to be difficult to maintain after Donald Trump takes office. In addition, 2024 has just become the hottest year on record on Earth, and it is also the first year that the global average temperature has increased by more than 1.5°C. In 2024, global average surface temperatures were about 1.6 °C above pre-industrial (1850–1900) levels, making it the first full calendar year to exceed 1.5 °C in some datasets. The previous statements are compiled into **Figure.6**.

The Paris Agreement's 1.5 °C goal is defined over long time periods (e.g., 20–30 years) to smooth out short-term fluctuations like El Niño/La Niña. So a single year above 1.5 °C doesn't mean the threshold has been permanently crossed in the climate-policy sense. 3. Current multi-year averages are below 1.5 °C. Recent decade-long and two-decade averages are below 1.5 °C, typically around ~1.2–1.3 °C above pre-industrial. The World Meteorological Organization (WMO) and other agencies project a high likelihood that at least one year between now and 2029 will exceed 1.5 °C again. There's also a considerable chance that multiyear averages could approach or exceed 1.5 °C in the next few years if warming continues. Annual exceedances (e.g., a year above 1.5 °C) are important signals of rapid warming. Long-term average exceedance (the metric used in international climate policy) hasn't been reached yet, but the world is very close, and projections suggest it could happen soon if current trends continue. It is very close to the 1.5 °C mark. Annual measurements have already crossed it, and climate trends point toward soon surpassing it more consistently. The long-term climate average used for policy hasn't officially been above 1.5 °C yet. This means that countries should take more active actions on climate change. The effect of the United States withdrawing from the agreement again is like. If the key players leave the room again, why do others continue to pick up the pieces? United Nations Secretary-General António Guterres called before Donald Trump took office that the world needs the United States to stay in the international climate process and avoid paralyzing the Paris Agreement, because this may indirectly encourage other countries to leave the agreement and threaten international cooperation on climate issues. At [the COP29 climate](#) (COP 29 is the United Nations Climate Change Conference taking place in Baku, Azerbaijan from 11 to 22 November 2024) talks two weeks after Donald Trump won the election, countries did not reiterate their commitment a year ago to transition away from fossil fuels as soon as possible. Officials at the meeting said Donald Trump's victory had emboldened supporters of oil, gas and coal in Saudi Arabia, Russia, China and other countries, and countries originally seen as leaders on climate issues may have become increasingly reluctant to commit to cutting the use of fossil fuels. The previous statements are compiled into **Figure.7**.

4. CONCLUSION

On the 20th (January 20, 2025), the first day after Donald Trump officially took office as President of the United States, this was the second time that he had withdrawn from the agreement after his previous administration. As the world's second largest carbon emitter, the impact of the United States' withdrawal from the agreement again may be even greater than the first time. The United States will not destroy its own industry, while China pollutes with impunity. The Paris Climate Agreement is an agreement signed by more than 200 countries around the world. The goal is to control the global temperature rise within 1.5°C before 2100. The agreement also promises that rich countries will provide climate finance to help poor countries adapt to climate change and switch to renewable energy. The withdrawal of the United States means that more than 1 billion people in Africa, Latin America, and Pacific island countries will face threats because the resilience of human and ecological systems for these countries to negative climate change impacts will become fragile. In addition, Donald Trump's decision to withdraw from the Paris Agreement also comes with a series of loosening of hundreds of environmental regulations, from gasoline fuel standards to coal-fired power plants.

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(1) All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

(2) The author declares that there are no conflicts of interest.

(3) Informed consent was obtained from all individual participants involved in the study.

(4) This work does not include animals as subjects.

(5) Declaration of generative AI in scientific writing: The author declares no AI in scientific writing.

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Figure captions



Figure.1 U.S. President Donald Trump signed an executive order Monday directing the United States to again withdraw from the landmark Paris climate agreement, dealing a blow to worldwide efforts to combat global warming and once again distancing the U.S. from its closest allies (source: A report and Associated Press writer Linley Sanders contributed to this report).



Figure.2. Paris Climate Agreement



Figure.3 Climate finance solutions



Figure.4 Global monthly greenhouse gas (GHG) emissions (Jan 2021-Feb 2025) (Source: Copyright © 2025, Climate TRACE).



Figure.5 Consequences of the U. S. first withdrawal from the Paris Climate Agreement



Figure.6 U.S. exit from Paris Climate Agreement 2.0: The global impact



Figure.7 The Paris Agreement's 1.5 °C goal