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# Crude Control

## Venezuela and the Politics of Fossil Imperialism

Authors
Bernardo Jurema
Elias König

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# Zusammenfassung

Der Artikel analysiert die US-Militärintervention in Venezuela im Januar 2026 und das darauffolgende bilaterale Erdölübereinkommen als mustergültigen Fall von fossilem Imperialismus. Er erklärt, wie Washington eine doppelte Strategie aus Expansion – der Sicherung direkter Beteiligungen und Konzessionen an riesigen Schweröl- und Gasreserven – und Obstruktion durch Sanktionen und Militärblockaden anwendet, um die eigene Energiedominanz durchzusetzen und den Einfluss von Konkurrenten wie China zu minimieren. Letztlich zeigt der Text, wie die Priorisierung der Kontrolle über fossile Brennstoffe das Völkerrecht, die globale Klimagovernance und den Ausstieg aus fossilen Energieträgern untergräbt.

# Summary

This paper analyzes the January 2026 US military intervention in Venezuela and the subsequent bilateral oil agreement as a textbook case of fossil imperialism. It explains how Washington utilizes dual strategies of expansion – securing direct equity and concessions in vast heavy crude and -fossil gas reserves – and obstruction, through sanctions and military blockades, to assert energy dominance and block rivals like China. Ultimately, the text demonstrates how prioritizing fossil fuel control undermines international law, global climate governance, and the transition away from hydrocarbons.

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# 1 Introduction

"A historic milestone in bilateral relations" – that's how Venezuela's interim president Delcy Rodríguez characterized the August 2026 agreement of her government with the United States. US President Donald Trump, in turn, described it as the "biggest oil deal in world history." The arrangement, granting Washington majority control over 65 billion barrels, or about one fifth of Venezuelan proven oil reserves, was framed by the Trump administration as a victory for "American energy dominance." The deal was announced with much fanfare but little substantive information about what exactly it consisted of – which oil fields and which actors would be concerned –, leaving observers struggling to piece together what it might entail.

As more information surfaced, it became clear that the deal effectively integrates the US State Department and the Department of War into foreign petroleum extraction as direct equity holders. Under the agreement, a private entity – *North American Blue Energy Partners* – was granted 100-year concessions across 17 strategic fields, with the Pentagon's Office of Strategic Capital leveraging penny warrants to hold a 35 percent passive equity stake and securing rights to buy 20 percent of output at cost. Similar efforts quickly expanded into securing direct access to Venezuela's critical mineral deposits, including gold. The agreement is a paradigmatic example of what we have called fossil imperialism (Jurema & König, 2024). One opposition figure said that it is "a massive land grab," adding "It sounds colonial, because it is" (Phillips, 2026).

This paper analyses how the dual dynamics of *expansion* – seizing and developing foreign carbon reserves – and *obstruction* – crippling or intercepting rival distribution networks – operate in tandem. Ultimately, it demonstrates that the persistent drive to control fossil infrastructure on the part of imperial states continues to erode both international law and the possibility of a just global climate transition.

# 2 In Defence of the Fossil Imperialism Hypothesis

On 3 January 2026, the US Armed Forces and the CIA carried out what they called *Operation Absolute Resolve*, a series of attacks in Caracas that killed up to one hundred soldiers and civilians and concluded with the kidnapping of sitting Venezuelan President Nicolás Maduro and his wife Cilia Flores on narcotics charges. Just a few days after his arrest, the US Justice Department discreetly dropped its claim that Venezuela's "Cartel de los Soles" was an actual drug cartel led by Maduro. It quickly became clear what the attack was really about: mere days after the kidnapping, President Trump said that he expected the United States would be extracting oil from Venezuela's huge reserves for the foreseeable future. Venezuela holds about 17 percent of the world's largest proven crude oil reserves, more than any other country. The country also holds significant offshore fossil gas reserves, dotted alongside the borders it shares with Trinidad and Tobago, Guyana and Colombia. While geopolitical instability and US sanctions had previously stymied the development of these gas fields, they could now be among the first new projects to be developed. In a press conference following the January attacks, Trump pledged to "run the country" until further notice, adding: "It won't cost us anything because the money coming out of the ground is very substantial."

At the same time, industry sources reported that US fossil fuel executives were largely uninterested in investing in the country as the situation remained rather unclear, with an oil industry in disarray and a history of oil asset seizures. As a result of sanctions and other factors, Venezuela currently only accounts for around 1 percent of global output. Prior to the US intervention, much of this oil was exported to China – currently the world's largest importer of oil – and processed in small tea-pot refineries on the Chinese East Coast. However, China's rapid buildout of renewable energy and its transition to electric vehicles are projected to lead to a downward trend in oil demand. In a global oil market already plagued by oversupply and declining prices, unlocking new supplies could put even more pressure on the profits of fossil fuel companies (an issue currently mitigated by the oil and gas shortages resulting from the US-Israeli war on Iran that followed the attacks on Venezuela). The majority of Venezuelan oil reserves is made up of extra-heavy crude deposits concentrated in the Orinoco Belt, whose extraction requires heavy investment. A much-cited study by energy firm Rystad Energy found that a return to previous levels of 3 million barrels per day (bpd) until 2040 would require total investments to the tune of $183 billion, more than $10 billion per year (Rystad Energy Analytics and Advisory Insights, 2026). Skilled workers from engineers to geologists have left the country in droves, and, as per *The Economist*, the state-owned oil infrastructure is "now largely run by the armed forces" (The Economist, 2026).

Other commentators argued that military, ideological and geostrategic considerations, not fossil fuels, were the key drivers behind the intervention. According to analyst Tracy Chi, the attack on Venezuela was driven not by oil, but instead by the combined desire to counter Chinese supply chain dominance in critical minerals, eliminating Iranian manufacturing capability, and expelling Russian military presence. It was this "convergence of strategic threats from all three major US adversaries that exceeded the threshold for military action." Another popular interpretation saw the intervention in Venezuela as ultimately aimed at weakening the government of Cuba, for which Venezuela had been a vital trade partner. In *Phenomenal World*, Fernardo Rugitsky argued that the attacks had to be seen as part of Washingon's campaign to contain China's influence in the region. Yale University management scholar Jeffrey Sonnenfeld meanwhile reasoned that the attack was largely due to Trump's desire to divert attention away from the cost of living crisis and the publication of the Epstein files.

While such accounts add important nuance to the analysis of the events in Caracas, they understate the centrality of fossil fuels within the global economy – and to the US imperial project. This has been painfully illustrated by the recent US-Israeli war of aggression on Iran and the subsequent closure of the Strait of Hormuz. As Isabella Weber and Gregor Semieniuk point out, the drastic impact of the blockade on the global economy demonstrates that fossil fuels are "by far the most systemically significant inputs in (as yet) predominantly fossil fuel-powered capitalism." Oil and fossil gas remain the world's most traded commodities by trade volume, far ahead of any other natural resources. They are overwhelmingly traded in dollars (the so-called "Petrodollar system"), which makes them central to the stability of the US currency, its status as the world's preferred reserve

currency, and Washington's hegemony over the global financial system – allowing it, crucially, to impose sanctions at will. Twenty-five nations under such sanctions – including Venezuela – released a joint statement denouncing such measures in 2022: "developing countries and their populations continue to fall victim to unilateral coercive measures, which run counter to the purposes and principles of the Charter of the United Nations and International Law, multilateralism and the basic norms of international relations" (Cong, 2025). Furthermore, in a rapidly militarizing world (Stockholm International Peace Research Institute, 2026), access to fossil fuels remains key for the functioning of the war machine. The latest National Security Strategy makes explicit that "restoring American energy dominance (in oil, gas, coal, and nuclear) and reshoring the necessary key energy components is a top strategic priority" (White House, 2025).

# 3 The Mechanics of Fossil Imperialism: Expansion vs. Obstruction

Imperial states like the United States regularly intervene both to take over and develop new fossil fuel resources and infrastructure, but also to obstruct or destroy the infrastructure controlled by rival capital factions and states in order to manipulate pricing and distribution (Jurema & König, 2024). Both modes of interference – expansion and obstruction – are aimed at maximizing control over the world's fossil fuel infrastructure.

A classic example of fossil imperialism as *expansion* is provided in Venezuelan history. The country became the destination of choice for US oil investments in the 1920s. As Adam Hanieh notes in *Crude Capitalism: Oil, Corporate Power, and the Making of the World Market* (2024), Venezuela had several advantages: Its oil reserves, concentrated around Lake Maracaibo, were plentiful and cheap to extract (Hanieh, 2024). Most importantly, it provided a relatively stable political environment. Unlike Mexico, the other leading oil producer outside the United States, where revolutionaries were threatening the nationalization of the oil industry, Venezuela was run by the autocratic general Juan Vicente Gómez, whose lease system provided excellent conditions for foreign capital. By 1928, Venezuela had become the world's largest exporter of oil (Wolfe, 2026). US oil majors like Exxon, Gulf, Mobil, Texaco, Chevron and Arco continued to dominate the Venezuelan oil industry until the sector's nationalization in 1976 as part of an international wave of oil industry takeovers. US oil companies were able to regain a foothold in the country in the 1990s, when the country opened up once again to foreign actors. Some companies, most notably Chevron, have remained in the country ever since – even as parts of the industry were re-nationalized under Hugo Chávez in 2007.

In light of the long history of Western oil interests in Venezuela, there are good reasons to read the current attack as yet another campaign of *expansion*. This is certainly the case for the promising offshore oil and gas fields located along the border of Venezuela and neighbouring Guyana, Trinidad, and Colombia, which had previously suffered from delays and uncertainty due to geopolitical instability. Following the attacks, fossil gas fields such as Dragon and Cocuina, both of which are shared with Trinidad and Tobago, could be among the first new projects to come online. Unlike Venezuela, Trinidad and Tobago hosts a large LNG export terminal, making it a key player in the local fossil economy. Even if global markets are oversupplied, US intervention secures future reserves and replaces depleting resources elsewhere, including a potential long-term decline in US shale oil production. Despite talk of a global oil glut, major US and European oil companies have since made pledges to increase oil production in Venezuela with the explicit support of the Trump administration. Following the US military intervention in the country, President Trump announced a supply deal and eased sanctions, leading to the highest levels of oil export in over seven years, mostly to refiners in the United States, India and Europe (Reuters, 2026). In mid-March, in response to the spike in global oil prices resulting from the US-Israel war of aggression on Iran, the US Treasury Department issued a broad authorization allowing Venezuelan oil to be sold to US oil companies and on global markets, in an attempt to increase global oil supplies. In addition, the Treasury Department currently oversees – that is, controls – Venezuela's sale proceeds. The bulk of these sales are carried out by commodity trading companies Singapore-based Trafigura and Swiss-based Dutch-owned Vitol and US producer Chevron. Statistics published by the *New York Times* reveal that in the first nine months of 2026, more than 12 billion have since passed through a US-owned bank account, with Vitol and Trafigura accounting for the majority of transactions (Anatoly Kurmanaev, 2026).

As of November 2026, oil production in the country has surpassed 1.2 million bpd (barrels per day) mark (compared to around 830,000 bpd in January 2026) and appears to be steadily climbing (Rystad Energy, 2026). According to US officials, more than fifty percent of Venezuelan oil exports now go to refineries in the US, while exports to China have dropped to zero (U.S. Energy Information Administration (EIA), 2026). In late August 2026, Washington and Caracas announced what President Trump hailed as the "biggest oil deal in world history." Under the arrangement, interim leader Delcy Rodríguez, reversing years of anti-imperialist rhetoric in which she had vehemently rejected Western "tutelage," conceded majority control over 17 strategic fields containing an estimated 65 billion barrels of

proven potential crude to a newly formed private entity, *North American Blue Energy Partners*. In an unprecedented expansion of state-capital integration, the Pentagon's Office of Strategic Capital leveraged penny warrants to acquire a 35 per cent passive equity stake and secure rights to buy 20percent of output at cost, effectively turning the US Department of War into a direct equity holder in foreign petroleum extraction. The deal's operational structure relies on controversial Venezuelan businessman Alejandro Betancourt, previously investigated across multiple jurisdictions for money laundering, whose intermediary role bypassed traditional majors like ExxonMobil and ConocoPhillips after they demurred over lingering legal volatility and dilapidated infrastructure. (Vera Bergengruen, 2026) While framed as a domestic price-stabilization measure amid the ongoing war with Iran, energy analysts point out that extra-heavy Orinoco crude cannot easily replace lost Middle Eastern light barrels. Instead, by locking in 100-year concessions, carving out Chinese claims, and integrating Trump-aligned capital insiders into Venezuelan mineral and energy assets, the agreement can be seen as a mechanism of long-term imperial enclosure – one that former oil minister Rafael Ramírez condemned as "the greatest looting in our country's history" (Brazón, Dyer, & Daniels, 2026).

While state support for increased oil production is an indication of an overall *expansive* strategy, another way to read current US policy is as a further attempt to *obstruct* the Venezuelan oil industry and its distribution network in order to increase the leverage of US oil companies within the global and regional markets. This would be a continuation of the more recent US strategy in Venezuela aimed at crippling the sector. Obstruction became a dominant mode of US fossil imperialism in Venezuela at the latest since the renationalization of parts of the sector in 2007 under the Chávez government, leading most US oil companies – including ConocoPhillips and ExxonMobil – to exit the country. Meanwhile, the US' own shale boom massively increased domestic oil and gas production, leading to the 2014 lifting of a forty-year ban on crude oil exports. In 2018, the US regained its position as the world's largest oil producer. A year later, it became a net oil exporter. In an already saturated international oil market, expansion no longer seemed like a desirable alternative. In this context, Washington labelled Venezuela as an "extraordinary threat" in 2015 and increased sanctions between 2017 and 2019, including a salvo of sanctions against the Venezuelan oil industry. By 2024, the US had levied 431 designations against Venezuelan entities, effectively using "secondary tariffs" to penalize any country – notably China – purchasing its oil (Center for a New American Security, 2021). This strategy of obstruction culminated in late 2025 with the deployment of warships and missile defences to enforce a total maritime blockade, leading to the capture of Maduro in January 2026. Following the attacks, secretary of state Marco Rubio explained: "We have plenty of oil in the US. What we're not going to allow is for the oil industry in Venezuela to be controlled by adversaries of the US", adding: "Why does China need their oil? Why does Russia need their oil? Why does Iran need their oil? They're not even on this continent."

That *obstruction* continues to be a major strategic goal can be seen in the US' approach to Venezuela's trade relations with China. Following the capture of Maduro, there was a 67 per cent decline in oil exports to Asia, notably China. This loss in exports was partly offset by an increase in exports to the US by 32percent and a ninefold increase of shipments to Europe. In the meantime, all factions in the fossil fuel industry have been profiting from geopolitical instability emanating from events such as the attacks on Caracas. As news of the Caracas attacks and the capture of President Maduro broke on the weekend of 3 January 2026, shares of major US energy companies surged to near-record highs. Chevron saw its stock jump over 5percent, while ExxonMobil climbed over 2 per cent to reach a record-high of nearly $126. This surge was arguably driven both by the anticipation of new oil and gas deals, but also by the mere presence of geopolitical insecurity, which tends to benefit the fossil fuel industry. The war on Iran has only exacerbated this situation, leading to a drastic increase in oil and gas prices and windfall profits of $30m every hour for the world's largest oil and gas firms.

# 4 The Limits of Liberal Global Climate Governance

Less than three hundred kilometres from the Venezuelan border lies the city of Santa Marta, which hosted the First Conference on Transitioning Away from Fossil Fuels, in April 2026. In a welcome contrast to the oil bonanza in nearby Venezuela, the conference in Santa Marta represents the most hopeful development in global climate governance in a decade. It was explicitly born out of the disappointment with the existing international climate regime. For over three decades, international climate governance under the United Nations Framework Convention on Climate Change (UNFCCC) has systematically avoided the key driver of the crisis: the production and extraction of fossil fuels. The UN negotiations have been an exercise in shadow boxing – negotiating abstract carbon budgets and emission goals while leaving the foundational architecture of fossil capital untouched – as research by the RIFS research group *Ecopolitics and Just Transformations* on international climate governance has shown (Oliveira M. C., 2026) (Oliveira M. C., 2022) (Oliveira, Marquardt, & Lederer, 2022). This structural deadlock had been laid bare once more at COP30 in 2025 in Belém, where Saudi Arabia, Russia, and other petrostates successfully blocked any meaningful language on a fossil fuel phase-out.

Convened by Colombian then-President Gustavo Petro, the Santa Marta conference finally sought to shift the conversation away from abstract emissions targets towards a concrete commitment towards phasing out fossil fuels. Under Petro, Colombia had made unprecedented strides in this direction, most notably by halting all new extraction licenses in the country's oil, gas, and coal industries and earmarking $40 billion for a fund dedicated to funding eco-tourism, biodiversity and energy transition projects (Malm & Guez, 2025).

Yet as the political ecologists Wim Carton and Joel Wainwright point out in their report from the conference, this new multilateral process is not without contradictions (Carton & Wainwright, 2026). Delegations from European states – notably co-host the Netherlands, deeply entrenched in North Sea gas infrastructure and corporate protection mechanisms like Investor–State Dispute Settlement (ISDS) – attempted to domesticate the radical potential of the phase-out agenda into voluntary roadmaps and techno-optimist "false solutions" (such as CCS and gas bridge narratives). Moreover, the future of the Santa Marta process remains uncertain. While a follow-up conference in Tuvalu was announced for 2027, the new group's main protagonist may be missing from the scene then: in August 2026, Petro's Historic Pact lost the presidential elections in Colombia to far-right candidate Abelardo de la Espriella, who had run on the promise to reverse Petro's climate policies and to "frack to the max." If there is any lesson, then, both from Petro's defeat and from the events in neighbouring Venezuela, it is that climate governance must confront not only the problem of fossil capital, but also the problem of fossil imperialism. An international order dominated by fossil empires will never deliver decarbonization, not to speak of climate justice.

# 5 Conclusion

This year's escalation in US policy towards Venezuela makes for a textbook case of fossil imperialism. Control over the Orinoco Belt's extra-heavy crude is only one part of this story, so is the rewiring of trade routes, control of offshore oil and gas fields, and the future of the US dollar as the world's dominant reserve currency. This makes the recent attacks only the latest campaign in a long history of US-led fossil imperialism in Venezuela, which has always relied on a broad arsenal of tools: covert operations, economic warfare, regime change, and the projection of military power.

Global climate governance cannot be understood set apart from a global order still defined by fossil imperialism. Historically, multilateral climate frameworks have been systematically relativized or undermined by the United States whenever binding emissions caps or supply-side phase-outs conflicted with its strategic and economic interests. This is illustrated by Washington's repeated exits from international climate agreements. The USA formally exited the 2015 Paris Agreement on January 27, 2026, marking the second time the Trump administration has withdrawn the country from the accord. The Trump administration initiated a withdrawal from the foundational 1992 UN climate treaty that underpins all global climate negotiations. Under a sweeping executive memorandum, the US also stepped back from 66 international organizations and entities, which included the International Renewable Energy Agency (IRENA), the UN Environment Programme (UNEP), UN-Habitat, and the Green Climate Fund.

When climate policy is divorced from structural redistribution and social justice, it invites backlash or gets captured by technocratic technofixes. If the Santa Marta process is anything to go by, in order to avoid becoming a hollow exercise in liberal reformism that has brought us to stalemate and overshoot, global climate governance must be anchored in tangible, concrete steps, such as debt cancellation, technology transfers, and dismantling of fossil capital.

# 6 References


Anatoly Kurmanaev, T. P. (2026, November 10). U.S. Received $12 Billion From Venezuela's Oil, Report Shows. *The New York Times*.

Brazón, A. R., Dyer, G., & Daniels, J. (2026, August 30). US oil deal denounced by both sides of Venezuelan politics . *Financial Times*.

Carton, W., & Wainwright, J. (2026, May 14). Santa Marta Versus Fossil Capital. *The Break-down*.

Center for a New American Security. (2021). Sanctions by the numbers: U.S. secondary sanctions. Center for a New American Security.

Cong, A. F. (2025). Joint Statement on Unilateral Coercive Measures at the Third Committee of the General Assembly at its 80th session. New York: Permanent Mission of the People's Republic of China to the UN.

Hanieh, A. (2024). *Crude Capitalism: Oil, Corporate Power, and the Making of the World Market.* London: Verso.

Jurema, B., & König, E. (2024). State power and capital in the climate crisis: A theory of fossil imperialism. In *Confronting climate coloniality: Decolonizing pathways for climate justice* (pp. 62–77). London: Routledge.

Malm, A., & Guez, M. (2025, August 21). Colombia Against the Fossil Fuel Age. *Jacobin*.

Oliveira, M. C. (2022, September 21). *Right-Wing Populists and the Global Climate Agenda*. (Verfassungsblog) Retrieved 11 11, 2026, from https://verfassungsblog.de/right-wing-populists-and-the-global-climate-agenda/

Oliveira, M. C. (2026). The Show Must Go On? Revisiting the Script of International Climate Cooperation Ten Years After Paris. *Global Environmental Politics, 26*(3), 1–23.

Oliveira, M. C., Marquardt, J., & Lederer, M. (2022). Same, same but different? How democratically elected right-wing populists shape climate change policymaking. *Environmental politics, 31*(5), 777-800.

Phillips, T. (2026, August 28). Venezuelan opposition up in arms over reports US wants big stake in oil and gas. *The Guardian*.

Reuters. (2026, January 20). *Venezuela has received $300 million in funds from oil sales, acting president says*. Retrieved from Reuters: https://www.reuters.com/business/energy/venezuelas-top-lawmaker-says-oil-reform-will-add-partnership-model-2026-01-20/

Rystad Energy. (2026, October 21). *Venezuela's Oil and Gas Recovery: How Far Can It Go?* (Rystad Energy) Retrieved 11 12, 2026, from https://www.rystadenergy.com/insights/venezuelas-oil-and-gas-recovery-how-far-can-it-go

Rystad Energy Analytics and Advisory Insights. (2026). *Trump and Energy Special Report Series Second Edition.* Rystad Energy Analytics and Advisory Insights.

Stockholm International Peace Research Institute. (2026). SIPRI Military Expenditure Database. Stockholm International Peace Research Institute.

The Economist. (2026, January 4). An American oil empire is a deeply flawed idea. *The Economist*.

U.S. Energy Information Administration (EIA). (2026, November 6). *U.S. Crude Oil Imports from Venezuela in July Were Highest Since 2017*. (U.S. Energy Information Administration (EIA)) Retrieved November 12, 2026, from https://www.eia.gov/todayinenergy/detail.php?id=68425

Vera Bergengruen, D. F. (2026, August 29). Inside Trump's Plan to Give the Pentagon a Stake in Venezuela's Oil Riches. *The Wall Street Journal*.

White House. (2025). *National Security Strategy of the United States.* Washington, DC.

Wolfe, J. (2026, January 9). Venezuela's Oil Industry: A Timeline of Key Events. *The New York Times*.

# Authors

## Dr. Bernardo Jurema

Bernardo Jurema is a political scientist and climate researcher based in Berlin, originally from Recife. He joined the RIFS-Potsdam in 2021 as Research Associate for the Ecopolitics and Just Transformations (EcoPol) research group. His research interests include US foreign policy, critical security studies, transdisciplinary research, environmental justice, and the intersection of geopolitics and ecopolitics.

## Elias König

Elias König is a graduate student at the University of Twente (Netherlands) and a former justice fellow at the Research Institute for Sustainability. Elias works on the political theory of the capitalocene, fossil imperialism and on global Gen Z protests. He is engaged in anti-war and worker solidarity initiatives.

The Research Institute for Sustainability (RIFS) conducts research with the goal of understanding, advancing, and guiding processes of societal change towards sustainable development in Germany and abroad. The Institute is embedded within the GFZ Helmholtz Centre for Geosciences and is thus part of the Helmholtz Association. Its research approach is transdisciplinary, transformative, and co-creative: RIFS cooperates with partners in science, political and administrative institutions, the business community, and civil society to understand the problems of sustainable development, identify appropriate solutions, and support their implementation in cooperation with relevant actors and affected communities. Its central research topics include the energy transition, climate change and socio-technical transformations, as well as sustainable governance and participation. A strong network of national and international partners and a Fellow Programme support the work of the Institute.


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**Contact:**
Bernado Jurema: bernardo.jurema@rifs-potsdam.de
Elias König: elias.konig@utwente.nl

**Address:**
Berliner Straße 130
14467 Potsdam
T: +49 (0) 331–28822–340
media@rifs-potsdam.de
www.rifs-potsdam.de

**ViSdP:**
Prof. Dr. Doris Fuchs,
Scientific Director, Speaker

**Editor:**
Damian Harrison



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