



THE WILLOW PROJECT UNDER INTERNATIONAL ENVIRONMENTAL LAW: LEGAL CHALLENGES AND GLOBAL CLIMATE IMPLICATIONS

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ABSTRACT

This study examines the Willow Project, a major oil drilling initiative in Alaska, to assess its compatibility with international environmental law and its implications for global climate change. The research aims to determine whether the project aligns with the United States' obligations under the Paris Agreement and key principles like the precautionary approach and international environmental responsibility. Utilizing a normative and comparative qualitative methodology, the study analyzes legal frameworks, international treaties, and the project's environmental impacts. Findings indicate that the Willow Project significantly increases greenhouse gas emissions, undermining global climate goals and violating the principle of non-harm by risking transboundary environmental damage. These outcomes highlight a conflict between economic interests and environmental obligations, challenging the enforcement of international law. The study advocates for robust global policies, including stricter standards and enhanced monitoring, to ensure large-scale energy projects support climate change mitigation. By addressing these legal and environmental challenges, the research contributes to strengthening international governance to combat climate change effectively.

A. INTRODUCTION

Global climate change has become one of the crucial issues faced by the international community. Various efforts have been made by countries in the world to reduce the negative impacts caused by human activities on the

environment, especially those related to greenhouse gas emissions.¹ One of the major projects that has generated controversy in the context of climate change is the Willow Project, a massive oil drilling project in the Arctic region of the United States. The Willow Project is a decades-long, large-scale oil exploration project on Alaska's North Slope owned by US energy giant ConocoPhillips.² The project will initially include drilling up to five wells totaling 250 wells, including associated infrastructure such as access roads and highways, runways, pipelines, gravel quarries and temporary islands to facilitate shipping modules by sea and operating the platform. The vessel is located in the ice sheet and waters managed by the state of Alaska.³

It was the United States that developed the plan to implement the Willow Project, before delving into why it is so controversial. The emergence of the Willow Project was influenced by the domino effect of Saudi Arabia's cooperation with the BRICS multilateral group (Brazil, Russia, India, China and South Africa). Firstly, Saudi Arabia had been America's most important partner in the oil trade. Instead, Saudi Arabia reversed course and cooperated with the BRICS countries, leaving the United States without a partner that could supply oil. Due to this situation, the United States sought to avoid the instability of oil supply, which had a direct impact on all sectors, through the implementation of the Willow Project. The project is expected to be the US solution by drilling in three locations at different times in 2019. The effort is supported by the President, the US government, and the people of Alaska's North Slope because of its potential to generate revenue for the region.⁴

As a superpower, the United States has great influence over other countries. This cannot be separated from the national interests of sovereign states, including economic, social, cultural and political aspects.⁵ Back in March 2023, the social media world, especially Twitter (X), was abuzz with conversations about a major US project called the Willow Project. The Willow Project is considered a major threat to the global environment, given that the

¹ Her Dianta Mehaga Sebayang and Davilla Prawidya Azaria, "International Response to Urge United States' Carbon Reduction Commitment on Willow Project," *Jurnal Daulat Hukum* 7, no. 4 (2024): 328.

² Ismatius Sholikhah, "Apa Itu Willow Project? Inilah Proyek Yang Banyak Ditentang Oleh Aktivis Lingkungan," *mengerti.id*, 2023, <https://www.mengerti.id/ekonomibisnis/6648105672/apa-itu-willow-project-inilah-proyek-yang-banyak-ditentang-oleh-aktivis-lingkungan>.

³ Ella Nilsen, "The Willow Project Has Been Approved. Here's What to Know about the Controversial Oil-Drilling Venture," *CNN*, 2023, <https://edition.cnn.com/2023/03/14/politics/willow-project-oil-alaska-explained-climate/index.html>.

⁴ Sarah Amanda, Gladys Azalia, and Yesica Berliana, "Willow Project Willow Project Dan Potensi Dampaknya Dalam Lingkup Internasional," *Jurnal Panorama Hukum* 8, no. 1 SE-Articles (July 15, 2023): 24–37.

⁵ Widya Rainnisa Karlina and Abilio Silvino Viana, "Pengaruh Naiknya Permukaan Air Laut Terhadap Perubahan Garis Pangkal Pantai Akibat Perubahan Iklim," *Jurnal Komunikasi Hukum (JKH)* 6, no. 2 SE-Articles (August 30, 2020): 586–757.

Arctic is one of the region's most vulnerable to climate change.⁶ Despite this, the project was authorised by the US government, sparking an international debate about the country's obligations to the global environment.

ConocoPhillips has led the quest for energy in Alaska for more than 50 years. As Alaska's largest oil producer, we are committed to developing the state's resources responsibly, providing economic opportunities for Alaskans, operating to the highest standards of safety and environmental stewardship, and being a good neighbour to our communities. International oil and gas company ConocoPhillips plays a vital role in energy exploration and production in Alaska. One of our most important projects, the Willow Project, is aimed at building and operating oil drilling infrastructure. The project was first approved in 2020 under the Trump administration. On 13 March 2023, the Willow Project was approved by President Joe Biden's administration, but was controversial because it broke Biden's campaign promise not to approve new oil and gas projects.

From an international legal perspective, there are various instruments governing environmental protection, such as the 2015 Paris Agreement that requires countries to participate in climate change mitigation.⁷ However, in the context of the implementation of the Willow Project, there are concerns that its implementation contradicts international obligations agreed in global forums. These agreements are often initiated by developed countries, then by developing countries, and developing countries are often indifferent. This is due to the divergent interests between developed and developing country groups, particularly regarding the prioritisation between environmental protection and economic and industrial development.⁸ Although developed countries are shifting their priorities to environmental protection issues, developing countries still need to consider efforts to promote economic and industrial growth, and of course, in other areas, including the consideration of 'tradeoffs' are also needed.⁹

Respecting the environment is absolutely necessary for living things to survive. Living things on earth must be protected so that they do not damage or pollute the environment. Why we should protect the environment is a fundamental question and not easy to answer. The question of why we should

⁶ Yordan Gunawan, Bagaskara Yonar Farhansyah, and Reksa Fikri Nurhaifa, "Unraveling the Willow Project's Impact on Human Rights: An Inquiry into International Legal Perspectives?," *Jurnal Mercatoria* 16, no. 2 (2023): 209.

⁷ Eve Darian-Smith, "Deadly global alliance: antidemocracy and anti-environmentalism." *Third World Quarterly* 44, no. 2 (2023): 284-299.

⁸ Natalia Yeti Puspita, "Kapasitas Hukum Indonesia Sebagai Anggota Tidak Tetap Dewan Keamanan Pbb Dalam Penanganan Masalah Perubahan Iklim Global," *Jurnal Pendidikan Kewarganegaraan Undiksha* 8, no. 2 (2020): 66-82.

⁹ Melda Kamil A Ariadno, "Prinsip-Prinsip Dalam Hukum Lingkungan Internasional," *Jurnal Hukum Dan Pembangunan* 29, no. 2 (1999): 108.

protect the environment is a question about the purpose of human civilisation on earth.¹⁰ Given this phenomenon, it is essential to analyse how international law views the implementation of projects such as the Willow Project and the extent to which they are in line with international commitments on climate change.¹¹

In light of these dynamics, this research aims to analyze the implementation of the Willow Project through the lens of international environmental law. Specifically, it seeks to assess whether the project aligns with global commitments such as the Paris Agreement and to what extent it reflects or violates principles like the precautionary approach and international environmental responsibility. By critically examining this case, the study contributes to a broader understanding of the effectiveness of international legal instruments in addressing large-scale environmental threats posed by fossil fuel projects. The research ultimately aspires to support the development of more robust and enforceable global environmental governance.

B. RESEARCH METHODS

In this research, the approaches used are statute approach and analytical approach. According to Syamsudin, the statutory approach is carried out by examining all laws and regulations that are related to the legal issues being addressed.¹² The statutory approach is carried out by examining all laws and regulations related to the legal issues being addressed. For research for practical activities, this statutory approach will open up opportunities for researchers to study whether there is consistency and compatibility between a law and other laws or between laws and the Constitution or regulations and laws.¹³ The result of the review is an argument to solve the issue at hand. Furthermore, the main purpose of analysing legal materials is to know the meaning contained by the terms used in the legislation conceptually, as well as to know the application in practice and legal decisions. This is done through two checks. First, the researcher tries to obtain new meanings contained in the legal rules concerned. Secondly, the legal terms are examined in practice through the analysis of legal decisions.¹⁴

The data collection method used in this research is library research. This library study was conducted in order to collect secondary data. Secondary data is data obtained by a researcher indirectly from the source (object of research),

¹⁰ Suparto Wijoyo, *Hukum Lingkungan Internasional* (Sinar Grafika, 2017).

¹¹ Jay, Lemery Kim Knowlton, and Cecilia Sorensen, eds. *"Global climate change and human health: from science to practice."* John Wiley & Sons, 2021.

¹² M. Syamsudin, *Operasionalisasi Penelitian Hukum* (Jakarta: Raja Grafindo Persada, 2007).

¹³ Agus Satory, Yenny Febrianty, Widiyanti Rahayu Budi Astuti, and Aditya Fajri Kurnia Pradana, *Metode Penelitian Hukum* (Penerbit Tahta Media, 2024).

¹⁴ Peter Mahmud Marzuki, *Penelitian Hukum* (Jakarta: Kencana Prenada, 2011).

but through other sources. Researchers get ready-made data collected by other parties in various ways or methods both commercially and non-commercially.¹⁵ Data collection techniques are the means used to collect information or facts in the field. Data collection techniques are the most strategic step in research because the main purpose of research is to get data. Without knowing and mastering data collection techniques, we will not get data that meets the established data standards.¹⁶ This technique is carried out by studying and collecting data from various international legal documents, literature, and related scientific studies. This research uses literature as the main source to analyse the international law perspective on the implementation of the Willow Project.

C. DISCUSSION

1. Implementation of the Willow Project in the Context of International Law

The Willow Project is an oil drilling initiative undertaken in the State of Alaska by the United States. The project has generated controversy regarding its impact on the global environment and human rights violations. In the context of the United States' international obligations to mitigate the effects of global climate change, this analysis will explore how the Willow Project affects United States environmental policy and the implications for the country's international commitments.¹⁷

The United States has international obligations to reduce greenhouse gas emissions in accordance with various international agreements, such as the Paris Agreement. These agreements require countries to take steps necessary to keep global temperature increases below 2 degrees Celsius above pre-industrial levels, and seek to limit temperature increases to 1.5 degrees Celsius. By proceeding with projects like the Willow Project, the United States risks violating these commitments, as the project will significantly increase carbon emissions. The Willow Project is expected to generate significant carbon emissions, contributing to an increase in the Earth's temperature.¹⁸ The carbon emissions resulting from this project could exacerbate global climate change, which is already a serious problem for the international community. Rising temperatures can lead to extreme weather and the emergence of new

¹⁵ Galang Taufani Suteki, *Metodologi Penelitian Hukum: Filsafat, Teori Dan Praktik*, Ed. 1 Cet. (Jakarta: Rajawali Pers, 2018).

¹⁶ Andi Prastowo, *Metode Penelitian Kualitatif Dalam Perspektif Rancangan Penelitian* (M. Sandra (Ed.) (Yogyakarta: Ar-Ruzz Media, 2016).

¹⁷ McKenzie Bennett and Julio C. Postigo, "The impacts of United States politics on the Arctic wilderness in Alaska," *Polar Geography* 47, no. 2 (2024): 90-105.

¹⁸ Her Dianta Mehaga Sebayang and Davilla Prawidya Azaria, "International Response to Urge United States' Carbon Reduction Commitment on Willow Project." *Jurnal Daulat Hukum* 7, no. 4 (2024): 327-345.

diseases, negatively impacting human health and the global ecosystem.¹⁹

From an international law perspective, the Willow Project can be considered a violation of the principles and doctrines of international law governing environmental protection and human rights. States have an obligation not to cause significant environmental harm outside their jurisdiction (the principle of non-harm). By proceeding with this project, the United States risks violating this principle, as the environmental impacts of the project could be felt globally.

The Willow Project poses a serious challenge to the United States' international obligations to mitigate the effects of global climate change. Not only does the project increase carbon emissions that contribute to climate change, but it also creates human rights abuses that impact the international community. To fulfil its international commitments, the United States needs to re-evaluate its energy policies and shift to cleaner, more sustainable energy sources.²⁰

2. The Impact of Willow Project on Global Climate Change

Projects that focus on reducing Greenhouse Gas (GHG) emissions have significant potential to help achieve global emissions reduction targets. One way to measure this contribution is through international co-operation initiatives (ICIs) that involve a range of non-state actors such as cities, regions and businesses.²¹ The analysis shows that if these key initiatives achieve their goals, they could reduce global emissions in 2030 by 18-21 GtCO₂e per year beyond current national policies, which total 60-63 GtCO₂e per year. This means global emissions could fall to 39-44 GtCO₂e per year, close to an emissions pathway consistent with a 2°C warming limit.²² In addition, the contribution of individual commitments by non-state and subnational actors in the ten major economies that accounted for about two-thirds of global GHG emissions in 2016 is also significant. If these commitments are fully implemented, GHG emissions in 2030 could be reduced by 1.2-2.0 GtCO₂e per

¹⁹ Yordan Gunawan, Bagaskara Yonar Farhansyah, and Reksa Fikri Nurhaifa, "Unraveling the Willow Project's Impact on Human Rights: An Inquiry into International Legal Perspectives?," *Jurnal Mercatoria*, 2023, <https://doi.org/10.31289/mercatoria.v16i2.10115>.

²⁰ L Schaffer and Resul Umit, "Public Support for National vs. International Climate Change Obligations," *Journal of European Public Policy* 30 (2022): 537-73, <https://doi.org/10.1080/13501763.2022.2099957>.

²¹ Jørgen Fenhann, Susanne Konrad, Per Harry Wretling, Sofia Kazmi Høgsbro, and Philip Drost. *The Climate Initiatives Platform: Towards Greater Transparency in International Cooperative Climate Initiatives (ICIs)*. Nordic Council of Ministers, 2018.

²² S Lui et al., "Correcting Course: The Emission Reduction Potential of International Cooperative Initiatives," *Climate Policy* 21 (2020): 232-50, <https://doi.org/10.1080/14693062.2020.1806021>.

year or 3.8%-5.5% less than current national policy projections.²³

While the contribution of these projects is significant, they are still not enough to achieve the ambitious targets set out in the Paris Agreement. The analysis shows that despite commitments to achieve net-zero emissions, these targets are still insufficient to achieve the Paris Agreement goal of limiting global warming to below 2°C and preferably 1.5°C by the end of the century.²⁴ In addition, contributions from Nationally Determined Contributions (NDCs) also show that despite a shift in GHG emissions towards developing countries and reduced international inequalities in per capita emissions, current NDCs require greater levels of emission reductions beyond 2030 compared to the 2010-2030 period to meet the long-term temperature goal.

One of the key challenges is to ensure that these projects not only replace or offset emissions, but also contribute to net emission reductions in the host country. Current project-based carbon market mechanisms such as the Clean Development Mechanism (CDM) and Joint Implementation (JI) do not have a direct impact on global GHG emission levels because they only replace or offset emissions.²⁵ Therefore, new approaches are needed that enable the generation of net emission reductions in host countries while maintaining the attractiveness of project initiation. In addition, a sharing effort approach that calculates the required reduction target in the carbon budget and/or takes historical emissions into account when determining the carbon budget may lead to a negative remaining carbon budget for developed countries. This suggests that the cost-optimal approach does not produce an outcome that can be considered fair under most business sharing approaches.^{26,27}

²³ T Kuramochi et al., "Beyond National Climate Action: The Impact of Region, City, and Business Commitments on Global Greenhouse Gas Emissions," *Climate Policy* 20 (2020): 275–91, <https://doi.org/10.1080/14693062.2020.1740150>.

²⁴ I Dafnomilis, M Den Elzen, and D Van Vuuren, "Achieving Net-zero Emissions Targets: An Analysis of Long-term Scenarios Using an Integrated Assessment Model," *Annals of the New York Academy of Sciences* 1522 (2023): 108–98, <https://doi.org/10.1111/nyas.14970>.

²⁵ Warnecke, Carsten, Sina Wartmann, Niklas Höhne, and Kornelis Blok. "Beyond pure offsetting: Assessing options to generate Net-Mitigation-Effects in carbon market mechanisms." *Energy Policy* 68 (2014): 413-422.

²⁶ Nicole Van Den Berg et al., "Implications of Various Effort-Sharing Approaches for National Carbon Budgets and Emission Pathways," *Climatic Change*, 2019, 1–18, <https://doi.org/10.1007/s10584-019-02368-y>.

²⁷ Zbigniew Kowalczyk and Dariusz Kwaśniewski, "Environmental impact of the cultivation of energy willow in Poland." *Scientific Reports* 11, no. 1 (2021): 4571.



Figure 1. ConocoPhillips Alaska

Projects focussed on reducing GHG emissions have great potential to contribute to the global target of reducing emissions. However, to achieve the ambitious goals set out in the Paris Agreement, greater efforts and more innovative approaches are required. This includes ensuring that these projects contribute to net emissions reductions and account for equity in the sharing of emissions reduction efforts.

3. Challenges of International Law in Addressing Climate Change

Climate change is one of the biggest challenges facing international law today. The complexity of this issue requires innovative and creative approaches within the international legal framework.²⁸ One of the key challenges is how international law can respond to large projects that have a significant impact on climate change, such as large infrastructure projects under the China-led Belt and Road Initiative (BRI). These projects often generate significant local friction, which requires legal mechanisms to stabilise and resolve such disputes. Existing international legal tools are often limited in their ability to effectively address climate change issues. For example, the Kyoto Protocol and its carbon market mechanisms have shown some successes, but they still fall short in meaningfully engaging non-state actors.²⁹ This suggests that the current climate law framework is still insufficient to address the challenges faced by large projects that impact climate change.³⁰

International Human Rights Law (IHRL) also faces challenges in responding to climate change impacts. IHRL's focus on territorial jurisdiction and causality-based allocation of obligations is incompatible with the global

²⁸ Alan E. Boyle and Catherine Redgwell, *Birnie, Boyle, and Redgwell's international Law and the environment*, Oxford University Press, 2021.

²⁹ Streck, Charlotte. "Innovativeness and paralysis in international climate policy." *Transnational Environmental Law* 1, no. 1 (2012): 137-152.

³⁰ Margaret A. Young, "Climate change and law: A global challenge for legal education." *The University of Queensland Law Journal* 40, no. 3 (2021): 351-370.

nature of climate change impacts and their indirect causality.³¹ Therefore, a reorientation from territoriality towards international co-operation obligations is required to enable meaningful human rights responses to climate change impacts. Corrective justice approaches in climate litigation also face significant challenges. Identifying perpetrators of climate damage and attempting to repair or reverse that damage often faces obstacles in terms of proving causality and enforcing redress mechanisms. Cases such as the Peruvian farmers' lawsuit against German energy producer RWE and the Philippine Human Rights Commission's investigation into the human rights responsibilities of a large carbon company demonstrate the complexity of climate litigation at the transnational level.³²

International economic law also faces challenges in responding to climate change. The existing architecture of international economic law often requires environmental stability to encourage private investment, which may limit the ability of developing countries to respond to unforeseen environmental damage from climate change.³³ The doctrine of fundamental change of circumstances (*rebus sic stantibus*) can be a basis for exiting an agreement or renegotiating the agreement, but its application still requires a clear illustration of a fundamental change of circumstances. The existing international environmental legal framework is often inadequate to effectively address climate change issues. For example, framing climate change as a traditional environmental law issue can hamper efforts to think more creatively about how to address a problem that defies classification as an environmental issue and requires innovative governance approaches. Therefore, a separation between debates on international environmental law and global climate change is needed to enable more constructive thinking about collective action in the climate context.³⁴

One of the main obstacles in international law is the lack of strong enforcement mechanisms. While there are many international agreements and commitments aimed at addressing climate change, implementation and

³¹ Vincent Bellinkx et al., "Addressing Climate Change through International Human Rights Law: From (Extra)Territoriality to Common Concern of Humankind," *Transnational Environmental Law* 11 (2021): 69–93, <https://doi.org/10.1017/S204710252100011X>.

³² William Nordhaus, "Climate change: The ultimate challenge for economics." *American Economic Review* 109, no. 6 (2019): 1991–2014.

³³ S Baker, "Climate Change and International Economic Law," *Ecology Law Quarterly* 43 (2016): 53, <https://doi.org/10.15779/Z38C57M>.

³⁴ Mingyu Yang, Lin Chen, Jiangjiang Wang, Goodluck Msigwa, Ahmed I. Osman, Samer Fawzy, David W. Rooney, and Pow-Seng Yap. "Circular economy strategies for combating climate change and other environmental issues." *Environmental Chemistry Letters* 21, no. 1 (2023): 55–80.

enforcement of these agreements are often weak.³⁵ This points to the need for stronger and more comprehensive enforcement mechanisms to ensure that countries comply with their commitments to reduce greenhouse gas emissions and address the impacts of climate change. The challenges and obstacles of international law in responding to major projects impacting climate change are complex and multifaceted. From limited international legal tools, challenges in international human rights law, corrective justice in climate litigation, to obstacles in international economic law and international environmental law frameworks, all point to the need for more innovative and comprehensive approaches.³⁶ Strong enforcement mechanisms and better international cooperation are also urgently needed to address these challenges and ensure that large projects do not exacerbate the impacts of climate change.³⁷

D. CONCLUSION

The application of international law in the context of the Willow project has a significant impact on global climate change. The project has sparked a debate between economic interests and environmental protection, given its potential carbon emissions. From an international law perspective, such projects pose a challenge to achieving globally agreed emission reduction targets, such as in the Paris Agreement. Therefore, it is important to balance development interests with legal obligations to protect the environment, so that the implementation of large projects such as Willow does not undermine global efforts to mitigate climate change. Therefore, the environmental impacts of future mega projects, there is a need to implement strict international standards, strengthen monitoring and accountability mechanisms, integrate environmental and social safeguards, promote environmentally friendly technologies, implement EMS, cost-benefit and life cycle analyses, and strengthen international relations. These policies will help ensure that large projects are not only economically successful but also environmentally sustainable.

³⁵ Ojo, Aderonke Abimbola, and Tosin Ezekiel Ayo. "A critical legal appraisal of the international environmental legal response mechanisms to the challenges of climate change in the world." *JL Pol'y & Globalization* 73 (2018): 22.

³⁶ Precious Oluwaseun Okedele, Onoriode Reginald Aziza, Portia Oduro, and Akinwale Omowumi Ishola. "Human rights, climate justice, and environmental law: Bridging international legal standards for social equity." *Human Rights* 20, no. 12 (2024): 232-241.

³⁷ Boyd A. Swinburn, Vivica I. Kraak, Steven Allender, Vincent J. Atkins, Phillip I. Baker, Jessica R. Bogard, Hannah Brinsden et al. "The global syndemic of obesity, undernutrition, and climate change: the Lancet Commission report." *The lancet* 393, no. 10173 (2019): 791-846.

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