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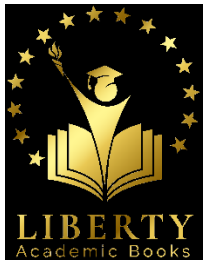

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GEOPOLITICAL LINES: GLOBAL COMPETITION THROUGH ENERGY INFRASTRUCTURE

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PREFACE

In the twenty-first century, the dynamics of global power are increasingly defined by the strategic deployment of energy infrastructure. Pipelines, transmission grids, LNG terminals, and renewable energy corridors have become not only conduits of economic exchange but also instruments of geopolitical influence. Geopolitical Lines: Global Competition Through Energy Infrastructure offers a timely and incisive examination of how states and non-state actors leverage these assets to advance their political, economic, and security agendas.

The chapters in this volume bring together a diverse range of scholarly perspectives, exploring the intersections of energy policy, international political economy, security studies, and environmental governance. From the geopolitics of pipeline diplomacy to the strategic implications of critical mineral supply chains, the contributions illuminate the profound ways in which infrastructure shapes—and is shaped by—global competition. The authors unpack the complex interplay between technological innovation, market dynamics, environmental imperatives, and the enduring realities of state rivalry, offering nuanced analyses grounded in empirical research and theoretical insight.

What emerges from this collection is a recognition that energy infrastructure is more than physical hardware; it is embedded in webs of alliances, dependencies, and contested sovereignties. In an era marked by shifting global power balances, climate imperatives, and technological disruption, the ability to navigate these interdependencies will be a decisive factor in determining future geopolitical stability.

This book will serve as an indispensable resource for policymakers, academics, and industry leaders seeking to understand and anticipate the geopolitical consequences of energy infrastructure development. It not only advances scholarly debate but also offers practical insights for crafting strategies that balance national interests with global sustainability.

I extend my deepest gratitude to all contributing authors for their intellectual rigor and to the editorial team for curating a work of such coherence and relevance. Their efforts exemplify the collaborative spirit necessary to address the multifaceted challenges of global energy politics.

Editor

August 15, 2025

CHAPTER 1

COMPETING CORRIDORS AND MARITIME RIVALRY: THE POLITICAL ECONOMY OF CHABAHAR (I. R. IRAN) AND GWADAR (PAKISTAN) IN REGIONAL ENERGY GEOPOLITICS

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INTRODUCTION

The Indian Ocean Region (IOR) has firmly established itself as a critical theater in global geopolitics, serving as a vital conduit for international trade, energy flows, and strategic influence. At the heart of this evolving geopolitical landscape lies the parallel development of two strategically significant maritime gateways: Iran's Chabahar port and Pakistan's Gwadar port (see Figure 1). These two port cities, located in close proximity along the Makran coast, have ignited extensive academic and policy discourse, primarily due to their perceived potential to reshape regional connectivity and global trade dynamics (Daniels, 2013; Khetran, 2018; Future UAE, 2022). While superficially appearing to offer similar logistical advantages for connecting the resource-rich Central Asian landmass and South Asia to global markets via the Oman (also Arabian) Sea, Chabahar and Gwadar are, in reality, deeply enmeshed in distinct and often conflicting geopolitical frameworks (Tavahodi & Tabatabaei Panah, 2025).

This chapter moves deliberately beyond conventional analytical approaches that primarily focus on mere port efficiency metrics (Ali et al., 2021) or simplistically frame these ports as arenas for great power competition (Khan & Omidi, 2023). Instead, it adopts a critical political economy approach to dissect how these infrastructural developments consolidate divergent models of energy governance, regional integration, and external influence. This analytical lens illuminates the intricate interplay of economic, strategic, socio-political, and logistical factors shaping the trajectories of Chabahar and Gwadar, and their profound implications for regional integration, global energy security, and the broader geopolitical architecture of Eurasia.

The prevailing understanding often casts Chabahar, robustly backed by Indian investment, as a crucial artery for Indo-Pacific connectivity. It is increasingly seen as India's strategic bypass for gaining direct access to Afghanistan and the landlocked Central Asian republics, effectively circumventing traditional transit routes through Pakistan (Roy, 2013; Sayareh, & Fooladi Mehtarkhaleh, 2016; Singh & Singh, 2019; Mozaffari Falarti & Safari Sabet, 2021). This strategic imperative has become particularly pronounced in the evolving geopolitical landscape of Afghanistan following the United States (U.S.) withdrawal in August 2021, where India seeks to bolster

its economic ties and maintain its influence amidst a changing regional power balance (World Scientific Publishing, 2023; Rafiq, 2025).

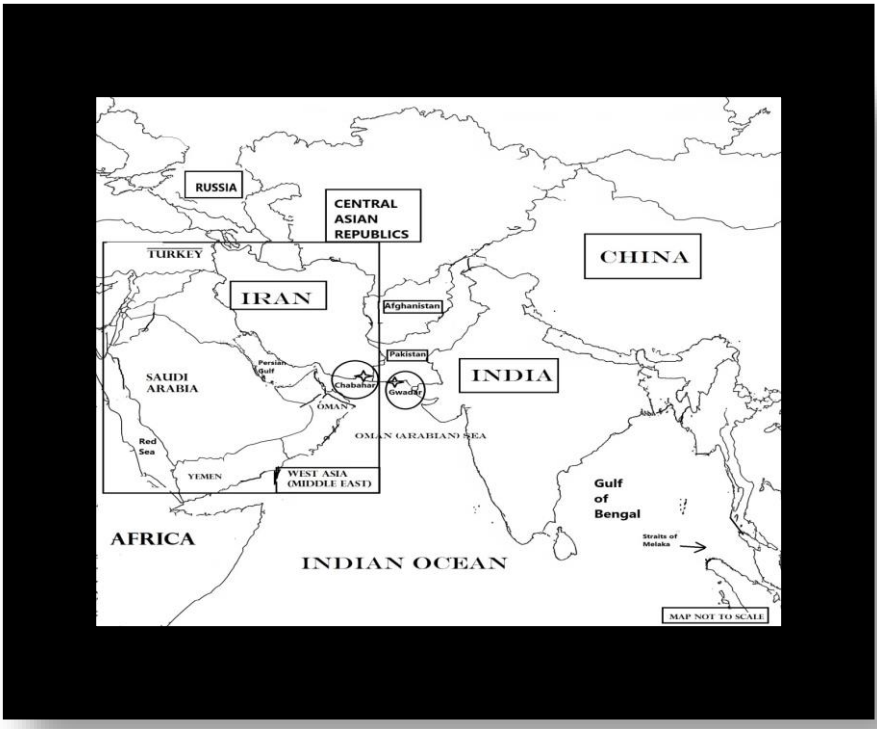

Figure 1: Strategic Location of Chabahar and Gwadar Ports
Source: Author

For India, Central Asia has long been regarded as part of its strategic and extended neighborhood, occupying a pivotal role in its foreign policy and regional vision. India was one of the first countries to recognize the newly independent Central Asian republics in the early 1990s and promptly extended development assistance through credit facilities (Roy, 2013; Sayareh, & Fooladi Mehtarkhaleh, 2016). Since then, India's "Connect Central Asia" policy has sought to strengthen trade, investment, and connectivity with the region (Kothari, 2020). Central Asia's vast energy reserves, particularly oil, natural gas, and uranium, offer India significant opportunities to diversify its energy imports and secure long-term supply chains. Projects like the

International North-South Transport Corridor (INSTC) further elevate the importance of Chabahar as a critical logistical node (see Figure 3), enabling more efficient access to Central Asia via Iran while reducing dependence on conventional sea routes (Daniels, 2013; Raza, 2019; Granger, 2023). The operationalization of the INSTC holds transformative potential for India's economic engagement, although geopolitical complexities, such as instability in Afghanistan and infrastructure bottlenecks, continue to present formidable challenges (Kumar & Kumar, 2022). Moreover, India's engagement with the region is motivated by its deepening energy dependence. The Indian economy is heavily reliant on energy imports from West Asia, particularly crude oil. As of November 2024, nearly 48% of India's total oil imports originated from West Asia (or the Middle East), underscoring the Indian Ocean's continued importance as a lifeline for India's energy security (Reuters, 2024). India's interests in the region are further reinforced by the presence of a significant Indian diaspora across the Persian Gulf states, bolstering socio-economic ties and providing New Delhi with an additional layer of strategic engagement (Sachdeva, 2018; Kothari, 2020). However, the progress of the Chabahar project has been frequently hampered by various external factors, notably the persistent geopolitical challenges arising from successive rounds of U.S. sanctions on Iran (Modern Diplomacy, 2025b). These sanctions often create an environment of considerable uncertainty for potential foreign investors and significantly complicate project timelines, delaying the full realization of Chabahar's strategic potential.

Conversely, Gwadar, a cornerstone of the China-Pakistan Economic Corridor (CPEC), represents a colossal Chinese investment aimed at enhancing its geoeconomic footprint across Central and South Asia (see Figure 2). This 15-year mega-project (initiated around 2015) is considerably larger in scale than the Chabahar initiative and is designed to reinforce Gwadar's role as a strategic gateway for China's ambitious Belt and Road Initiative (BRI) (Future UAE, 2022; Irfan et al., 2023; Kaleji, 2025). CPEC, with Gwadar as its maritime pivot, aims to provide China with a shorter, more secure trade route to West Asia and Africa, significantly reducing its reliance on the vulnerable Strait of Melaka. The development of Gwadar is thus seen as a vital component of China's energy security strategy and its broader geoeconomic expansion.

China's engagement in the Indian Ocean—despite having no direct borders or geographical proximity to the region—is driven by the imperative to safeguard its strategic maritime trade routes and energy supply lines.

China currently imports between 60 to 80% of its energy resources from the Indian Ocean region, including a significant portion from West Asia, while an estimated $1.5 trillion of its maritime trade passes through these waters annually (Holmes & Yoshihara, 2008; Zhang, 2011; Choudhury & Moorthy, 2018; Kumar, 2023). For Beijing, securing uninterrupted access to these trade arteries is paramount to maintaining its economic growth and strategic positioning (Baruah, 2025). Concurrently, India's intensified pursuit of maritime influence as well its ambition to dominate the Indian Ocean Rim Region (considering it as it's backyard) in recent years have triggered growing contestation with China (Sachdeva, 2018; Paul, 2019). The Indian Ocean's strategic location, resource wealth, and pivotal role in global maritime trade have indeed historically attracted the sustained presence of external powers such as the United States, Russia, Japan, and European nations, all vying for influence in this critical arena.

The relationship between these two ports, while frequently portrayed as an entrenched rivalry between India and China for regional supremacy, may also evolve into areas of potential cooperation, influenced by the shifting dynamics between Iran and Pakistan (Daniels, 2013; Tavahodi & Tabatabaei Panah, 2025; Jan et al., 2024). The intense competition between India and China for influence in the Indian Ocean Region, particularly through their respective investments in these ports, remains a defining feature of regional geopolitics, with each nation strategically positioning itself to maximize its economic, strategic and security advantages (Khan & Omidi, 2023; Modern Diplomacy, 2024).

A significant new layer of complexity to these intricate regional dynamics is the resurgence of the Taliban in Afghanistan in mid-2021. This event has profoundly reshaped the calculations of all regional actors, including China, India, Iran, and Pakistan. China's engagement with the Taliban, evolving since 2021, is primarily driven by immediate security concerns, aiming to prevent the proliferation of violent extremism that could destabilize its western borders, particularly Xinjiang, and safeguard its considerable investments in the

region, especially those linked to the BRI (Washington Institute, 2021; Kaleji, 2025). Furthermore, China is actively exploring the extension of CPEC into Afghanistan, a move that could significantly influence the geopolitical standing of both India and Iran by leveraging Afghanistan's rich mineral resources and opening new land corridors for trade (Khan & Omidi, 2023; Red Lantern Analytica, 2023). In response to this evolving scenario, India has pursued a cautious yet pragmatic engagement with the interim Afghan government, seeking to foster bilateral relations, secure access to Central Asian markets, and enhance trade via the Chabahar Port as a strategic alternative to Pakistani transit routes (Daniels, 2013; Rafiq, 2025; Geopolitical Monitor, 2025). This diplomatic thrust is partly motivated by India's strategic efforts to counterbalance escalating Chinese influence in the region and exploit the often strained relations between Pakistan and the Afghan Taliban (ORF, 2024). India is also considering political rapprochement with the Taliban to gain access to critical minerals and to leverage this relationship as a geopolitical tool against Pakistan (World Scientific Publishing, 2025a).

Iran's post-U.S. withdrawal strategy in Afghanistan, initiated after August 2021, centers on asserting control over key transit routes to expand its economic footprint and solidify its role in emerging multilateral logistical frameworks, such as the International North-South Transport Corridor (INSTC) (Pakistan Institute for Peace Studies, 2022). Despite historical tensions and ideological differences, Iran has progressively acknowledged the Taliban's de facto legitimacy as a significant stakeholder in Afghanistan, seeking to secure its extensive eastern borders and manage the substantial influx of Afghan refugees. Discussions around China's potential role in facilitating a connection between Chabahar and Gwadar ports further underscore the intricate and evolving regional power dynamics, with potential implications for U.S. interests and the broader balance of power in West Asia (MEMRI, 2025). The ongoing tensions between Pakistan and the Afghan Taliban, primarily stemming from the cross-border activities of militant groups like the Tehrik-i-Taliban Pakistan (TTP), are actively reshaping regional power dynamics. Pakistan views the Taliban's control as both a security challenge due to potential militant spillover and an opportunity to bolster its influence in Afghanistan, thereby creating a strategic counterbalance to India's regional presence (Middle

East Institute, 2024). This fluid situation necessitates a coordinated and constructive diplomatic approach from both China and Pakistan towards the interim Afghan government, essential for safeguarding their mutual interests and effectively addressing shared security concerns (World Scientific Publishing, 2025b).

This chapter will thus delve into these multifaceted interactions, providing a more complex understanding of their implications for regional stability and global power configurations. The central argument of this chapter is that Chabahar and Gwadar are not merely infrastructure projects but contested arenas of infrastructural power and energy diplomacy. They embody rival models of energy governance and regional influence, shaped by geopolitical competition, economic incentives, and internal socio-political dynamics. The chapter argues that the perceived rivalry encompasses distinct strategic objectives and potential, albeit challenging, complementarity. The flow of the chapter will systematically build this argument, moving from broad contextualization to detailed thematic analyses, ultimately proposing a multilateral path forward. Each subsequent section will delve deeper into specific factors introduced here, drawing extensively from the literature and new insights to provide a comprehensive, evidence-based analysis, leading to a conclusion that advocates for energy governance frameworks that mitigate zero-sum rivalry and foster sustainable regional integration beyond entrenched bilateral interests.

1. A CRITICAL POLITICAL ECONOMY FRAMEWORK: INFRASTRUCTURAL POWER AND ENERGY DIPLOMACY

To thoroughly analyze the geopolitical and geoeconomic implications of Chabahar and Gwadar ports, this chapter employs a critical political economy framework. This approach distinguishes itself from traditional analyses that often focus solely on the technical efficiencies of infrastructure projects or their immediate economic returns (Tanoli, 2016; Ali et al., 2021). Instead, it posits that these ports are not merely logistical nodes but critical components of "infrastructural power" (Khan & Omidi, 2023). Infrastructural power, in this context, refers to the capacity of states and other powerful actors to exert

influence, shape regional dynamics, and control access to strategic resources through the development, ownership, and control of critical physical infrastructure. Given the unique geopolitical context of West Asia, characterized by immense hydrocarbon reserves and vital maritime choke points, infrastructural power becomes particularly salient. The ability to control key trade routes, energy pipelines, and port facilities translates directly into significant leverage in regional and global affairs (see Figure 1).

Energy diplomacy, a core tenet of this critical political economy framework, describes the strategic utilization of energy resources and the infrastructure designed for their transit to achieve broader foreign policy objectives. Both Chabahar and Gwadar are inextricably linked to the energy diplomacy strategies of their respective primary backers: India and China. For India, Chabahar represents more than just a trade gateway; it is critical in its long-term strategy to diversify energy import routes, reduce vulnerability to supply disruptions, and secure direct access to the energy-rich markets of Central Asia (Mozaffari Falarti & Safari Sabet, 2021). This strategic imperative gained renewed urgency following the re-establishment of Taliban control in Afghanistan in 2021, compelling India to seek reliable alternative pathways for trade and engagement with Central Asia that bypass Pakistan. India's investments in Chabahar are a clear manifestation of its energy diplomacy, ensuring a stable supply of resources crucial for its rapidly growing economy while simultaneously bolstering its geopolitical stance in this complex region (Rafiq, 2025).

Conversely, Gwadar is central to China's expansive Belt and Road Initiative (BRI) and its overarching energy security objectives. As a strategic outlet to the Arabian Sea and the broader Indian Ocean, Gwadar provides China with significantly shorter and theoretically more secure routes for transporting crude oil and natural gas from West Asia and Africa back to its western provinces, thereby bypassing the congested and strategically vulnerable Strait of Melaka, a critical chokepoint for China's energy security (Future UAE, 2022; Kaleji, 2025). The China-Pakistan Economic Corridor (CPEC), with Gwadar as its maritime pivot (see Figure 2), is designed to enhance China's infrastructural power throughout the region by facilitating trade and energy transport, while simultaneously projecting China's burgeoning geopolitical

influence deep into South and West Asia, creating a tangible physical manifestation of its strategic vision (Irfan et al., 2023). Therefore, the rivalry between these two ports transcends conventional economic competition; it is fundamentally a contest over the assertion of infrastructural power and the pursuit of complex energy diplomacy goals (Tanoli, 2016; Khetran, 2018; Khan & Omidi, 2023). The imposition of U.S. sanctions on Iran, for instance, has profoundly impacted the development of Chabahar (Modern Diplomacy, 2025b). These sanctions have not only deterred potential international investors, thus slowing down the project's progress, but have also constrained India's ability to fully operationalize Chabahar as a robust energy corridor. Consequently, this situation directly impacts India's energy diplomacy in the region, forcing it to navigate a delicate balance between its strategic interests and compliance with international sanctions regimes. Concurrently, China's extensive and sustained investments in Gwadar continue to expand its infrastructural footprint in the region, often proceeding despite regional instability and persistent security concerns, further solidifying its long-term strategic positioning (MEMRI, 2025).

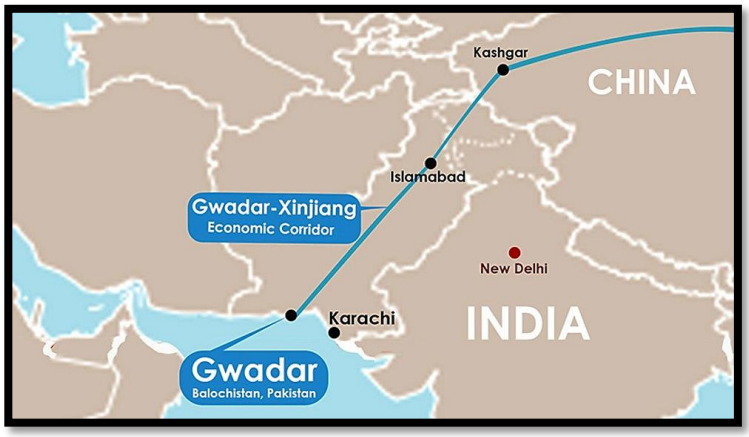

Figure 2: Map depicting the indispensability of CPEC for the One Belt One Road initiative. Adapted from *"How indispensable CPEC is for OBOR,"* by Centre for Strategic & Contemporary Research, July 23, 2016.

This critical political economy framework also necessitates a comprehensive consideration of the roles of regional actors, particularly Iran

and Pakistan, in shaping the intricate dynamics of infrastructural power and energy diplomacy. Iran perceives the development of Chabahar not only as a means to enhance its regional connectivity but also as a crucial step toward reducing its over-reliance on existing, often externally influenced, transit routes (Khetran, 2018; Pakistan Institute for Peace Studies, 2022). This aligns with Iran's broader strategy to position itself as a key transit hub between Central Asia, Afghanistan, and the global maritime trade network. Pakistan views Gwadar as a transformative catalyst for its economic development, particularly for the underdeveloped province of Balochistan, and as a vital tool to strengthen its strategic and economic partnership with China within the framework of CPEC (Jan et al., 2024). The strategic alignment between Islamabad and Beijing through Gwadar underscores a complex interplay of economic incentives, security concerns, and regional geopolitical ambitions. Furthermore, the framework must account for the fluid and often unpredictable nature of regional politics, exemplified by the resurgence of the Taliban in Afghanistan. This event, occurring in August 2021, has compelled all regional players to re-evaluate their strategies regarding both infrastructural development and energy diplomacy. China's evolving approach to the Taliban, driven by concerns over cross-border militancy and the security of its BRI investments, introduces new variables into the regional power calculus. Similarly, India's cautious re-engagement with the Taliban-led government highlights its efforts to secure trade routes through Afghanistan, essential for fully utilizing Chabahar, while countering burgeoning Chinese influence (ORF, 2024). Iran's pragmatic engagement with the Taliban, despite historical grievances, reflects its desire to ensure border stability and secure its economic interests in Afghanistan's reconstruction and transit potential (World Scientific Publishing, 2023). Employing a critical political economy framework, thus provides an understanding of how Chabahar and Gwadar ports are deeply embedded within broader geopolitical and geoeconomic contexts. It highlights the intricate interplay of infrastructural power, driven by the strategic ambitions of India and China, and sophisticated energy diplomacy initiatives. Moreover, it recognizes the pivotal roles played by regional actors such as Iran and Pakistan, whose interests and strategic alignments profoundly influence the ports' trajectories. Analyzing these complex factors reveals that these

infrastructural developments are not merely economic endeavors but fundamental components shaping the strategic trajectories of these ports and carrying profound implications for regional stability, global energy security, and the enduring geopolitical architecture of West Asia.

2. OPERATIONAL DYNAMICS AND GEOPOLITICAL STAKES: CHABAHAR AND GWADAR IN PRACTICE

The strategic trajectories of Iran's Chabahar Port and Pakistan's Gwadar Port, while superficially appearing to converge on the goal of regional connectivity, are underpinned by divergent operational dynamics and entangled in distinct geopolitical stakes. This section delves into the practical realities of their development, scrutinizing the varying scales of investment, the nature of international partnerships, the differing approaches to hinterland connectivity, and the profound influence of internal socio-political factors. Building on the critical political economy framework established earlier, this analysis transcends a mere technical comparison, revealing how these operational disparities reinforce the unique strategic objectives of India, China, Iran, and Pakistan, and how they collectively shape the intricate geopolitical architecture of West Asia. The most striking divergence between Chabahar and Gwadar lies in their scales of investment and operational frameworks, reflecting the distinct capacities and ambitions of their primary backers. Chabahar, largely funded by India, represents a more measured, albeit strategically critical, investment. India committed to developing the Shahid Beheshti terminal at Chabahar, including a multi-purpose cargo terminal and two berths, with an initial investment of approximately $85 million and a credit line of $150 million (Mana.ir, 2024). The operational lease, initially for 18 months, was later extended, with India Ports Global Limited (IPGL) taking over operations of the terminal (Mana.ir, 2024). This phased investment reflects India's cautious yet persistent approach, navigating the complexities of U.S. sanctions on Iran, which have consistently posed significant hurdles for the project's acceleration (Tanoli, 2016; Modern Diplomacy, 2025b). Despite waivers granted by the U.S. for Chabahar's development—acknowledging its humanitarian role in Afghanistan—the uncertainty of sanctions regimes often deters broader international participation and limits the scope of rapid expansion (Mana.ir,

2024; Modern Diplomacy, 2025b). This contributes to a "constrained development" model for Chabahar, where geopolitical considerations frequently dictate the pace and nature of economic progress, illustrating how external political pressures can fundamentally distort otherwise economically viable projects.

In stark contrast, Gwadar Port is the centerpiece of the China-Pakistan Economic Corridor (CPEC), a multi-billion dollar undertaking that dwarfs the scale of investment in Chabahar. CPEC, launched in 2015, represents an estimated $62 billion investment by China in Pakistan's infrastructure, energy, and communication networks, with Gwadar acting as its critical maritime gateway (Future UAE, 2022; Irfan et al., 2021). China Overseas Port Holding Company (COPHC) was granted a 40-year lease to operate Gwadar Port, effectively giving China long-term control over its development and management (Irfan et al., 2021). The operational model for Gwadar is characterized by rapid, large-scale infrastructure development, including new berths, a modern international airport, and extensive road and rail networks designed to integrate the port seamlessly into China's broader Belt and Road Initiative (BRI) (Sardana, 2022). This robust commitment underscores China's strategic objective of securing direct, shorter access to West Asian and African markets, mitigating its reliance on the vulnerable Melaka Strait for energy imports and trade (Sardana, 2022; Khan & Omidi, 2023; Mana.ir, 2024). The operational dynamics of Gwadar thus reflect China's formidable infrastructural power, enabling it to shape economic geographies and exert considerable influence through substantial, often loan-based, investments.

The efficacy of any port is fundamentally determined by its hinterland connectivity. In this regard, Chabahar and Gwadar demonstrate distinct operational priorities that are closely tied to their respective geopolitical objectives. For India, Chabahar's primary strategic value lies in its potential to bypass Pakistan, providing direct sea-land access to Afghanistan, complementing Iran's Bandar Abbas port, and facilitating connectivity to the landlocked Central Asian republics. A key component of this strategy is the development of the Chabahar-Zahedan railway line within Iran, intended to connect the port to Afghanistan's border and beyond into the broader International North-South Transport Corridor (INSTC) (Mana.ir, 2024). The

INSTC is a multi-modal network aimed at facilitating freight movement between India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia, and Europe (see Figure 3). India's commitment to this project extends beyond mere trade, aiming to bolster its economic and political influence in Central Asia and stabilize Afghanistan by providing alternative trade routes (Khetran, 2018; Rafiq, 2025; Geopolitical Monitor, 2025). Operationally, however, the progress on the Chabahar-Zahedan railway has been slow, plagued by the financial and logistical constraints imposed by U.S. sanctions and Iran's limited capacity (Modern Diplomacy, 2025b). This operational friction directly impacts the realization of Chabahar's strategic bypass function, highlighting the challenges of projecting infrastructural power through politically constrained partners. Despite these hurdles, India continues to advocate for Chabahar as a vital artery for Indo-Pacific connectivity, especially in the context of the Central Asian republics as well as a new Taliban-controlled Afghanistan, where direct access remains a critical strategic imperative (Rafiq, 2025).

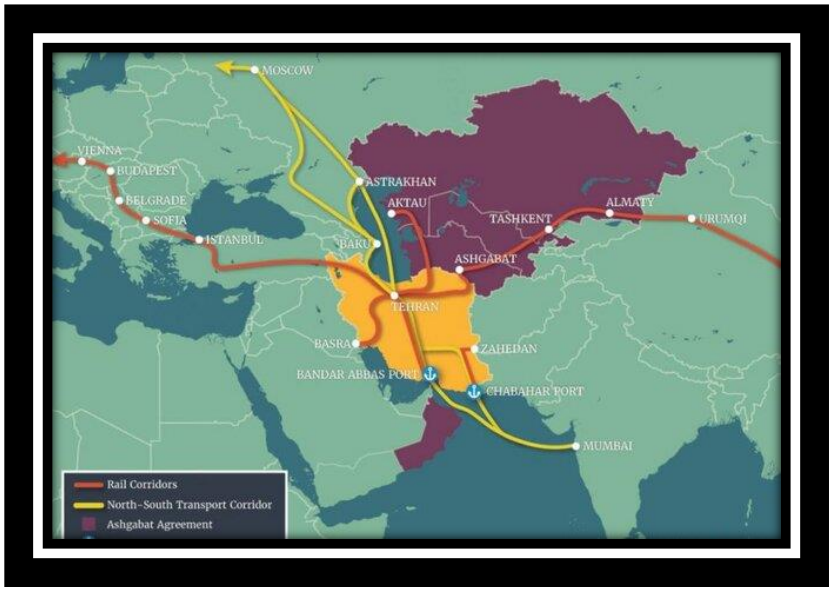

Figure 3: Eastern route of the North-South corridor. Adapted from "Iran to join developing eastern route of North-South corridor," by Mehr News Agency, June 8, 2024.

Gwadar, conversely, is envisioned as the lynchpin of China's "One Belt One Road" initiative, designed to provide a direct overland link from Pakistan's coast to China's western regions, particularly Xinjiang. The CPEC framework encompasses an expansive network of highways, railways, and fiber optic cables connecting Gwadar to Kashgar in China, traversing the entire length of Pakistan (Khetran, 2018). This extensive hinterland infrastructure aims to significantly reduce transit times and costs for Chinese trade and energy imports, enhancing China's energy security and expanding its economic reach into West Asia and Africa (Sardana, 2022). Operationally, the rapid pace of CPEC projects, despite facing security challenges and local resistance, has been remarkable, demonstrating China's capacity for swift, large-scale infrastructure deployment (Irfan et al., 2021). The strategic aim is to create a seamless economic corridor that not only facilitates trade but also fosters deeper economic integration between China and Pakistan, with potential extensions into Afghanistan under the new Taliban regime (Red Lantern Analytica, 2023). This reflects a model of "infrastructural lock-in," where economic engagement creates durable strategic dependencies and shapes regional power dynamics on a grand scale.

The operational dynamics of both ports are profoundly shaped by external geopolitical forces and their strategic implications for regional and global powers. The U.S. approach to Chabahar, marked by periodic sanction waivers, illustrates a complex balancing act. While seeking to isolate Iran economically, Washington has also acknowledged the port's utility for India's strategic access to Afghanistan, thereby tacitly supporting an Indian counterweight to growing Chinese influence in the region (Mana.ir, 2024; Modern Diplomacy, 2025b). However, this intermittent support creates a climate of unpredictability that hampers long-term investment and the full operationalization of Chabahar's potential. Iran, for its part, views Chabahar as a crucial component of its own vision for regional connectivity and economic resilience, particularly in the face of ongoing sanctions and its push for enhanced multilateralism with non-Western powers (Pakistan Institute for Peace Studies, 2022). Its engagement with India, despite historical and ideological differences, underscores a pragmatic approach to leveraging its strategic geography.

For Gwadar, the geopolitical stakes are fundamentally different. China's massive investment in CPEC positions it as a major player in West Asia, with Gwadar serving as a crucial link in its global supply chains and a strategic outpost in the Indian Ocean (Figure 2; Future UAE, 2022). The CPEC framework has been met with both enthusiasm and skepticism, with concerns raised about Pakistan's escalating debt to China and the potential for increased Chinese geopolitical leverage, reminiscent of the Hambantota port deal in Sri Lanka (Mana.ir, 2024). The security of Gwadar and CPEC projects remains a significant concern for China and Pakistan, facing threats from Baloch separatists and various militant groups (Irfan et al., 2021). This vulnerability necessitates substantial security investments, further complicating the operational landscape. Furthermore, the evolving role of Saudi Arabia in West Asia introduces another layer of complexity. With Saudi Arabia's strategic pivot towards East Asian economies and its deepening ties with China and Pakistan, the potential for significant Saudi investment in Gwadar and related CPEC projects has been widely discussed (Saleem et al., 2020). Such investment would not only provide additional capital but also confer a degree of legitimacy and strategic depth to Gwadar, potentially altering the competitive dynamic with Chabahar. This highlights how new financial flows are not merely economic transactions but are embedded with profound geopolitical implications, influencing regional power balances and the trajectories of infrastructural development beyond the conventional India-China rivalry. Beyond the grand geopolitical narratives, the operational realities of both ports are critically shaped by internal socio-political dynamics, often overlooked in analyses focusing solely on state-level strategic competition.

In Pakistan, the development of Gwadar is inextricably linked to the volatile socio-political landscape of Balochistan. The province has a long history of insurgency and strong grievances against the Pakistani state, often centered on perceived economic exploitation, marginalization, and a lack of control over local resources (Irfan et al., 2021). Local populations in Gwadar and surrounding areas have frequently expressed discontent over the CPEC projects, arguing that the benefits do not adequately trickle down to them, leading to increased insecurity and resentment. This has manifested in protests, strikes, and, more significantly, targeted attacks by Baloch separatist groups

against Chinese workers and Pakistani security forces involved in CPEC projects (Irfan et al., 2021). These internal resistances pose significant operational challenges, leading to increased security costs, delays, and questions about the long-term sustainability and local legitimacy of the port's development. The Pakistani government and Chinese developers face the constant imperative to address these grievances and ensure local buy-in, but the deeply entrenched socio-political issues in Balochistan mean that these internal dynamics remain a persistent operational vulnerability for Gwadar.

For Chabahar, while it does not face the same scale of armed insurgency as Gwadar, internal factors within Iran, particularly the economic strains induced by prolonged U.S. sanctions and bureaucratic inefficiencies, significantly impact its operational progress (Modern Diplomacy, 2025b). The Iranian government's capacity to independently finance and manage the extensive hinterland connectivity projects, such as the Chabahar-Zahedan railway, is constrained by these economic pressures. Furthermore, Iran's complex domestic political landscape and its strategic calculations regarding regional alliances also play a role in the pace of development. While India's involvement provides crucial impetus, the overall operationalization of Chabahar ultimately relies on Iran's ability to overcome these internal economic and administrative hurdles, which are exacerbated by its geopolitical isolation. The project's success, therefore, is not solely dependent on India's commitment but also on the internal political economy of infrastructure development within Iran.

The return of the Taliban to power in Afghanistan in August 2021 has profoundly reshaped the operational calculations for both Chabahar and Gwadar, injecting new layers of risk and opportunity into their hinterland connectivity (Daniels, 2013). For Chabahar, the Taliban's ascent initially raised concerns about India's access to Afghanistan and Central Asia, as the security and political stability of land routes through Afghanistan became highly uncertain. However, India has adopted a pragmatic approach, maintaining a cautious engagement with the interim Afghan government and exploring avenues to ensure the continued viability of Chabahar as a trade gateway to Afghanistan (Rafiq, 2025; Geopolitical Monitor, 2025). The operational challenge for India now includes securing transit agreements and ensuring the

safety of goods moving through a Taliban-controlled territory, a task that requires delicate diplomatic maneuvering and a willingness to engage with a regime that many international actors still view with skepticism. Despite these complexities, Chabahar remains strategically vital for India to maintain its influence in Afghanistan and to avoid reliance on Pakistan for regional trade. The potential for India to gain access to Afghanistan's critical mineral resources further underscores the operational imperative to stabilize and utilize this corridor (World Scientific Publishing, 2025a).

For Gwadar, the Taliban's return presents both challenges and potential opportunities within the CPEC framework. On one hand, the instability in Afghanistan can exacerbate existing security concerns for CPEC projects, particularly along the western routes, and potentially provide safe havens for militant groups targeting Pakistani or Chinese interests (Middle East Institute, 2024). On the other hand, China has actively engaged with the Taliban, driven by security concerns related to Xinjiang and the protection of its regional investments (Washington Institute, 2021). Crucially, China is exploring the extension of CPEC into Afghanistan, aiming to leverage Afghanistan's mineral wealth and potentially open new land corridors for trade directly linking Afghanistan to Gwadar (Red Lantern Analytica, 2023). Such an extension would significantly enhance Gwadar's operational reach and strategic importance, further cementing its role as a regional hub. However, this depends heavily on the Taliban's ability to provide security and foster a stable environment for investment, a highly uncertain prospect given the group's internal dynamics and ongoing tensions with Pakistan over cross-border militancy (World Scientific Publishing, 2025b). The operational success of Gwadar’s extended reach into Afghanistan will thus hinge on a complex interplay of security cooperation, economic incentives, and the evolving political stability of the Afghan state. Indeed, the operational dynamics of Chabahar and Gwadar Ports vividly illustrate the complexities of infrastructural development within a highly contested geopolitical landscape. While both ports share a geographical proximity and a common aspiration to connect the resource-rich hinterlands of Central Asia to global maritime trade routes, their practical realities diverge significantly. Chabahar, constrained by the geopolitical realities of U.S. sanctions and India’s more measured investment

strategy, operates on a model of strategic patience and persistent diplomatic efforts to carve out a bypass to Afghanistan and Central Asia. Its operational success relies heavily on overcoming financial hurdles and ensuring the stability of its hinterland connections. Gwadar, on the other hand, represents China's ambitious, large-scale investment in infrastructural power, designed to secure energy routes, expand trade networks, and project its economic and geopolitical influence across Eurasia. Its operational model is characterized by rapid development and extensive hinterland connectivity under the CPEC framework, though it grapples with significant internal socio-political challenges and security concerns in Balochistan.

The return of the Taliban in Afghanistan has introduced a critical, dynamic element, reshaping the operational calculus for both ports. While it presents security challenges for Gwadar, it also opens avenues for China to extend CPEC into Afghanistan, potentially enhancing Gwadar's strategic reach. For Chabahar, the Taliban's return necessitates delicate diplomatic engagement to ensure continued access to Afghanistan and Central Asia, maintaining India's strategic bypass. The interplay of external pressures, internal socio-political factors, and the evolving political landscape in Afghanistan means that the operational trajectories of Chabahar and Gwadar are not predetermined. They are continuously negotiated through complex diplomatic maneuvers, economic investments, and responses to local resistance. Ultimately, these operational dynamics underscore that ports are not merely logistical hubs but are integral to the broader geopolitical and geoeconomic struggles for power and influence in West Asia, with profound implications for regional integration, global energy security, and the future of Eurasian connectivity. The future of competition and potential cooperation between these two pivotal ports will largely depend on how effectively their primary backers navigate these multifaceted operational and geopolitical challenges.

CONCLUSION: TOWARDS INCLUSIVE ENERGY GOVERNANCE IN THE INDIAN OCEAN REGION

This chapter has critically examined the strategic interplay between Iran's Chabahar port and Pakistan's Gwadar port, positioning them as pivotal sites in the evolving political economy of maritime energy corridors and

infrastructural geopolitics across the Indian Ocean Region (IOR) and West Asia (see Figure 1). By moving beyond traditional analyses that prioritize port efficiency (Ali et al., 2024) or narrowly frame these developments within great power competition paradigms (Tanoli, 2016; Abbasi et al., 2021), this study has employed a critical political economy framework to foreground the structural, geopolitical, and localized contestations that shape these infrastructural projects as arenas of power, dependency, and energy diplomacy. The chapter has argued that Chabahar and Gwadar are not merely logistical hubs but are emblematic of broader competing visions of connectivity, energy governance, and regional order. Chabahar, strategically championed by India, represents an alternative connectivity route aimed at bypassing Pakistan and deepening India's access to Afghanistan and Central Asia (Sardana, 2022; Singh & Singh, 2019). However, its development has been persistently constrained by the volatile external environment, most notably the pervasive impact of international sanctions on Iran. Despite targeted U.S. waivers recognizing the port's humanitarian significance (Modern Diplomacy, 2025b), Iran's continued global isolation has relegated Chabahar to a "constrained development" model where geopolitical pressures regularly eclipse economic rationality and operational viability (Tanoli, 2016; Mana.ir, 2024).

On the other hand, Gwadar has emerged as a flagship component of China's Belt and Road Initiative (BRI) and a strategic node in the China-Pakistan Economic Corridor (CPEC), offering China direct overland access to West Asian energy markets while bypassing the Strait of Melaka (Khetran, 2018; Sardana, 2022). Yet, Gwadar's trajectory remains fraught with complex internal challenges, particularly persistent instability and insurgency in Balochistan, which threaten the port's security and legitimacy (Irfan et al., 2021; Future UAE, 2022). Furthermore, Gwadar's alignment with China's state-led model of "energy lock-in" has prompted growing regional anxieties over debt dependency and the erosion of national sovereignty (Mana.ir, 2024), raising critical questions about the long-term sustainability of such infrastructural strategies. The analysis highlights that these ports function within the wider systemic pressures of U.S.-China rivalry, the reconfiguration of global supply chains, and the shifting energy geographies triggered by major external shocks such as the 2014 Russia-Ukraine war and 2022 invasion

(Mana.ir, 2024). The war has intensified the global scramble for energy security and diversified supply routes, amplifying the strategic importance of both Chabahar and Gwadar as critical transit points (Modern Diplomacy, 2025a). In this context, India's proactive pursuit of the "Diamond Necklace" strategy stands as a deliberate counterweight to China's "String of Pearls," solidifying the port competition as a central dimension of IOR geopolitics (Mana.ir, 2024).

Critically, the unpredictable trajectory of U.S. foreign policy remains a structural variable with profound implications for these energy corridors. The Trump administration's (2017–2021) unilateral sanctions on Iran exemplified how infrastructure can be subjected to "negative infrastructural power"—wherein development is actively inhibited for geopolitical ends (Mana.ir, 2024). The potential return of a "Trump 2" administration post-2024 raises the likelihood of renewed maximum pressure campaigns against Iran and China, which could further marginalize Chabahar while strengthening India's strategic convergence with the United States and its allies (Modern Diplomacy, 2025a; Modern Diplomacy, 2025b). Conversely, a recalibration of U.S.-Iran relations—potentially through a revived nuclear accord—could rapidly enhance Chabahar's investment prospects and reposition it as a viable regional connectivity hub. Ultimately, the chapter demonstrates that Gwadar and Chabahar cannot be fully understood through reductive binaries of "competition versus cooperation." They are shaped by a fluid interplay of global, regional, and local forces, including external sanctions regimes, domestic insurgencies, environmental risks, and shifting great power alignments. While official discourses from Iran and Pakistan, and some segments of scholarship (Daniels, 2013; Jan et al., 2024; Tavahodi & Tabatabaei Panah, 2025), advocate for the ports' complementary roles in regional integration, the underlying systemic dynamics continue to drive these corridors toward strategic competition. In response, this chapter calls for the exploration of **inclusive, multilateral energy governance frameworks** that can de-escalate zero-sum rivalries and promote equitable regional development. Specifically, it advocates for:

1. **Transparent Infrastructure Financing:** Establishing rigorous accountability standards to prevent debt dependency and ensure equitable benefits across all stakeholders.

2. **Regional Dialogue Platforms:** Creating collaborative mechanisms that include Afghanistan, Central Asia, and Persian Gulf countries to foster shared ownership and manage competition constructively.
3. **De-securitization of Economic Corridors:** Shifting the narrative from security-centric infrastructure to corridors of economic interdependence and mutual prosperity.
4. **Local Stakeholder Inclusion:** Prioritizing socio-economic upliftment in restive regions like Balochistan to ensure local buy-in and long-term stability.
5. **Collective Resilience to External Pressures:** Developing regional strategies to withstand the impact of unilateral sanctions, trade disruptions, and external coercion.

As the IOR and West Asia remain pivotal theaters in global trade and energy security, the future trajectories of Chabahar and Gwadar will decisively shape the evolving architecture of Eurasian connectivity. Their ultimate success will depend not just on their material infrastructure but on the political will to transcend entrenched rivalries and embrace cooperative, sustainable, and inclusive regional frameworks. Future research should focus on the practical pathways to realizing such frameworks, the resilience of these corridors under continued geopolitical stress, and the potential to reimagine port competition as a platform for regional synergy rather than persistent contestation.

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CHAPTER 2

ENERGY TRANSITION AS AN INSTRUMENT OF GEOPOLITICAL POWER: A COMPARATIVE ANALYSIS OF THE STRATEGIES OF THE UNITED STATES, CHINA AND THE EUROPEAN UNION

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INTRODUCTION

In recent decades, the Eastern Mediterranean has emerged as a pivotal geopolitical arena due to the discovery of significant offshore natural gas reserves. These energy discoveries particularly in the Exclusive Economic Zones (EEZs) of Israel (Leviathan and Tamar fields), Egypt (Zohr field) and Cyprus (Aphrodite field) have introduced new dimensions to regional politics, shifting the strategic calculus of both littoral and external powers (*Tagliapietra, 2013; Stergiou, 2020*).

The newfound energy potential has intensified competition over maritime boundaries and resource control, especially in light of long-standing political disputes such as the Cyprus issue, the Greek-Turkish maritime delimitation conflict and the Israeli-Palestinian question. Turkey's assertive maritime doctrine-known as "Blue Homeland" (Mavi Vatan) - and its contestation of Greek and cypriot EEZ claims have further exacerbated tensions, prompting regional alliances such as the East Mediterranean Gas Forum (EMGF), which includes Egypt, Greece, Israel, Cyprus and others, but notably excludes Turkey (*Lerman, 2020; Kardaş, 2020*).

At the same time, the energy discoveries have created opportunities for regional cooperation, including joint exploration agreements, pipeline projects like the proposed EastMed pipeline and the sharing of liquefied natural gas (LNG) infrastructure. External actors, such as the European Union and the United States, have supported such initiatives, viewing them as a means to enhance european energy security and reduce dependence on russian gas (*European Commission, 2020; U.S. Department of State, 2021*).

The geopolitical implications of these developments are profound. The intersection of energy interests, security concerns and strategic alignments has redefined power relations in the Eastern Mediterranean. This paper aims to analyze these evolving dynamics by examining selected case studies and assessing how energy transition and resource competition are shaping the region's geopolitical architecture.

1. THEORETICAL FRAMEWORK: ENERGY TRANSITION AND GEOPOLITICS

Energy has historically been a foundational element in shaping global geopolitics. The ability to access, control and distribute energy resources primarily fossil fuels has provided states with strategic leverage, influenced the structure of the international system and driven major historical events, from wars to alliances. The geopolitics of oil and gas has revolved around a few key variables: geographic concentration of reserves (notably in the Middle East and Russia), the strategic significance of transport routes (such as the Strait of Hormuz or Suez Canal) and the dominance of multinational oil companies and producer cartels like OPEC (*Yergin, 1991; Klare, 2008*).

However, as the global community moves towards a decarbonized future, this traditional framework is undergoing a fundamental transformation. The shift from fossil-based to renewable energy systems represents not merely a technological change but a structural reconfiguration of power relations in the global energy order (*Goldthau & Westphal, 2019*). Unlike fossil fuels, which are geographically uneven and finite, renewable energy sources-solar, wind and hydropower are more evenly distributed and inexhaustible. This redistribution of potential energy supply challenges existing geopolitical hierarchies and opens new avenues for energy autonomy (*Scholten, 2018*).

Yet, the energy transition brings its own form of concentration and dependency. While sunlight and wind may be ubiquitous, the technologies that harness them - solar panels, wind turbines, and lithium-ion batteries - depend heavily on critical raw materials such as lithium, cobalt, nickel, graphite and rare earth elements. These materials are often sourced from a small number of countries, notably China (which controls over 60% of global rare earth processing), the Democratic Republic of Congo (cobalt) and Chile and Australia (lithium) (*IEA, 2021; Vakulchuk et al., 2020*). As a result, new dependencies and vulnerabilities emerge in the form of mineral supply chains, processing capacity and technological know-how.

Furthermore, the geopolitics of the energy transition is shaped by the competition over green industrial leadership. Countries that can innovate, scale and export clean energy technologies are better positioned to dictate standards and rules in global energy governance. For instance, China's dominance in

photovoltaic manufacturing and battery production gives it significant influence not only in global trade but also in shaping global sustainability norms (*Zhang & Gallagher, 2016*). The United States, through industrial policies like the Inflation Reduction Act, seeks to regain competitive ground and reduce reliance on chinese technologies. Meanwhile, the European Union emphasizes regulatory power, setting environmental standards (e.g., CBAM - Carbon Border Adjustment Mechanism) that can have global ripple effects (*Florini & Sovacool, 2009*).

This evolution also implies a redefinition of energy security. While in the fossil era, energy security meant securing uninterrupted flows of oil and gas, in the renewable era it increasingly means securing access to technology, intellectual property, manufacturing capacity and rare mineral supply chains (*Cherp et al., 2017*). Moreover, the decentralization potential of renewables can alter traditional energy diplomacy, reducing the importance of interdependence via pipelines and increasing the significance of technological alliances and infrastructure investments.

Theoretically, this shift aligns with broader discussions in international political economy about the transition from resource - based to knowledge - based forms of power. The literature on "green geopolitics" and "energy transition geopolitics" thus integrates materialist concerns - control over minerals and technology - with institutional and ideational aspects - standard-setting, climate diplomacy and multilateral governance (*Keating & Kuzemko, 2020; Falkner, 2020*).

In sum, the energy transition is transforming the underlying structures of global power. Rather than eliminating geopolitics, the shift to renewables is reshaping it around new axes: from territory and fossil wealth to critical minerals, technology and regulatory frameworks. This new geopolitics of energy will likely produce winners and losers, depending on how states navigate the complex interplay of industrial strategy, diplomacy and sustainability.

2. THE UNITED STATES: INNOVATION, SECURITY AND REINDUSTRIALIZATION

The United States has positioned itself as a central actor in the global energy transition, viewing the shift to clean energy not only as an environmental imperative but also as a strategic opportunity to revitalize domestic industry, enhance national security and counterbalance the technological rise of geopolitical competitors, particularly China. The U.S. strategy is rooted in a threefold objective: leading in technological innovation, ensuring energy security through supply chain resilience and restoring domestic manufacturing capabilities - what many have termed a "green reindustrialization" (*Mildenberger & Stokes, 2020; Meckling & Nahm, 2018*).

2.1 Policy Foundations: The Inflation Reduction Act and Beyond

At the heart of the U.S. approach lies the Inflation Reduction Act (IRA) of 2022, one of the most ambitious climate and industrial policies in American history. The IRA allocates over $370 billion in tax credits, grants and incentives aimed at accelerating clean energy deployment and innovation across sectors. It supports manufacturing in solar panels, wind turbines, electric vehicles (EVs), heat pumps, hydrogen technologies and grid infrastructure (*White House, 2022*).

Unlike previous policies that emphasized market-based mechanisms (e.g., cap and trade), the IRA adopts a state-led industrial policy approach, using public investment and production subsidies to reshape entire value chains. It also includes domestic content requirements, linking incentives to the use of american-made components and the sourcing of critical minerals from domestic or allied sources, a clear attempt to decouple from chinese supply dominance (*Gersdorf et al., 2022*).

2.2 Energy Security and Strategic Autonomy

Energy security in the american context has evolved from ensuring oil supply resilience to securing access to clean energy technologies and the materials that underpin them.The U.S. Department of Energy has identified critical mineral dependency - notably on lithium, cobalt, rare earths, and nickel

- as a major strategic vulnerability (*DOE, 2021*). In response, the U.S. is investing in new mining projects, recycling technologies and international partnerships (e.g., with Australia, Canada and Chile) to diversify sourcing and promote responsible supply chains.

The U.S. also aims to secure energy independence by scaling up domestic battery production, building gigafactories and integrating the EV supply chain - an area where China currently controls over 70% of global processing and component manufacturing (*IEA, 2021*). The goal is to ensure resilience against geopolitical shocks while simultaneously reducing emissions.

2.3 Technological Leadership and Global Influence

Maintaining leadership in clean energy innovation is central to the U.S. geopolitical calculus. Public agencies like ARPA-E (Advanced Research Projects Agency–Energy) and the National Renewable Energy Laboratory (NREL) are spearheading breakthroughs in grid modernization, advanced nuclear, green hydrogen and carbon capture technologies. Simultaneously, the U.S. private sector - driven by companies such as Tesla, First Solar and General Motors - plays a crucial role in commercializing and scaling these innovations.

This technological edge also supports geopolitical influence. By exporting american clean technologies and establishing interoperability standards, the U.S. seeks to shape global energy systems and reduce the normative influence of chinese state-backed models. Through multilateral initiatives such as the Clean Energy Ministerial, the U.S. promotes best practices in decarbonization and innovation, aligning its allies around shared regulatory frameworks (*Goldthau et al., 2018*).

2.4 Challenges and Geopolitical Implications

Despite its strengths, the U.S. strategy faces significant challenges. Political polarization threatens the durability of climate policies beyond current administrations. Labor shortages, permitting delays and environmental concerns hinder domestic mineral extraction. Additionally, trade tensions with China may complicate efforts to access essential inputs during the transition period (*Steinbuks & Wacek, 2023*).

Geopolitically, the U.S. energy transition strategy is both defensive and assertive: defensive in seeking resilience against supply chain disruptions and assertive in attempting to shape a new global green order. As global competition intensifies, the outcome of U.S. policies will significantly affect the international distribution of clean energy capabilities and the long-term structure of energy geopolitics.

3. CHINA: MANUFACTURING DOMINANCE AND GLOBAL INFRASTRUCTURE

China has emerged as the central actor in the global clean energy supply chain, establishing an industrial ecosystem that spans from upstream extraction and processing of critical minerals to the manufacturing and export of finished technologies such as solar panels, wind turbines and electric vehicle batteries. While the country's rise in the renewable energy sector has been driven in part by domestic environmental and economic imperatives, it also reflects a broader geopolitical strategy aimed at consolidating influence through industrial leadership, infrastructure diplomacy and financial tools (*Zhang & Gallagher, 2016; Economy, 2018*).

3.1 Manufacturing Powerhouse and Strategic Control

China's dominance in the renewable energy sector is underpinned by its comprehensive control of key segments of the global value chain. As of 2023, China is responsible for over 80% of global solar panel manufacturing, over 70% of lithium-ion battery production and more than 90% of rare earth element processing (*IEA, 2023*). These capabilities have been cultivated through a combination of state subsidies, long-term planning, technology transfer agreements and scale-driven cost advantages.

The chinese government has used state-led industrial policies such as the "Made in China 2025" strategy and successive Five-Year Plans to prioritize clean energy technologies as strategic sectors. These policies coordinate investment across state-owned enterprises, local governments, and private firms to maximize competitive advantage in global markets (*Nahm, 2021*). Unlike Western models that rely on market mechanisms, China's top-down

coordination has allowed it to rapidly scale and dominate industries with high capital intensity and long payback periods.

3.2 The Belt and Road Initiative: Exporting infrastructure and influence

China has also externalized its energy capabilities through the Belt and Road Initiative (BRI), a transcontinental infrastructure and investment strategy launched in 2013. Initially focused on fossil fuel pipelines and coal plants, the BRI has increasingly emphasized green development, with significant investments in solar parks, hydroelectric dams and transmission lines in Asia, Africa and Latin America (*Zhou et al., 2022*).

Through the BRI, China offers turnkey energy infrastructure projects - often backed by Chinese financing, labor and technology - thereby deepening its bilateral influence and creating long-term technological dependencies. These projects not only promote China's renewable technologies but also lock partner countries into chinese technical standards and supply chains, reinforcing China's global industrial ecosystem (*Leung & Yeo, 2023*).

3.3 Green Finance and Development Diplomacy

China is a pioneer in green finance, using state-backed development banks like the China Development Bank and the Export-Import Bank of China to fund renewable energy projects abroad. Additionally, Chinese banks dominate global green bond issuance in the Global South, helping shape the contours of sustainable finance governance (*Mathews & Ren, 2021*). These instruments are not purely commercial; they serve diplomatic ends by offering developing countries access to affordable capital in exchange for alignment with China’s technological systems and regulatory norms.

The 2021 commitment to cease financing coal-fired power plants abroad was a turning point in China’s international energy diplomacy, allowing it to reposition itself as a climate leader in the Global South while reorienting BRI projects toward sustainability (*Zhou et al., 2022*).

3.4 Geopolitical Implications and Strategic Leverage

China's dominance in renewable energy manufacturing and infrastructure finance creates new forms of geopolitical leverage. By controlling access to critical technologies and materials, Beijing can shape global energy markets and influence the strategic decisions of energy-importing countries. This position becomes particularly potent during times of geopolitical tension, where technological and resource dependencies can be leveraged for diplomatic or economic concessions (*Overland et al., 2019*).

However, China's strategy also raises concerns among Western powers about economic coercion**,** technological dependency and the lack of transparency in governance standards.

In response, initiatives such as the U.S.-led "Partnership for Global Infrastructure and Investment" (PGII) and the EU's "Global Gateway" seek to offer alternative models of infrastructure development that emphasize transparency, sustainability, and local capacity building.

In sum, China's approach to the energy transition is both deeply industrial and inherently geopolitical, combining domestic developmental goals with international strategic ambitions. Its model of state-led capitalism, technological dominance and infrastructure diplomacy is reshaping the global energy landscape and challenging Western paradigms of liberal energy governance.

4. THE EUROPEAN UNION: NORMATIVE POWER AND REGULATORY LEADERSHIP

The European Union (EU) approaches the energy transition not merely as a technical or economic endeavor, but as part of a broader normative and geopolitical strategy aimed at shaping global governance, promoting environmental sustainability and reinforcing multilateralism. Unlike China's industrial model or the United States' innovation-driven industrial policy, the EU deploys its regulatory power to lead by example and export standards, making it a key architect of global climate norms (*Kelemen & Vogel, 2010; Skovgaard, 2021*).

4.1 The European Green Deal: Internal Transformation with External Reach

Launched in 2019, the European Green Deal (EGD) serves as the cornerstone of the EU's climate and energy policy. Its core objective is to make the EU the first climate-neutral continent by 2050, with intermediate targets such as reducing greenhouse gas emissions by 55% by 2030 compared to 1990 levels. This ambitious transformation includes a sweeping decarbonization of energy, transport, agriculture and industry, as well as substantial investments in digital and sustainable infrastructure (*European Commission, 2020*).

The Green Deal is not just inward-looking - it's designed to extend the EU's normative influence globally, positioning Europe as a standard-setter in sustainable finance, environmental regulation and climate diplomacy.

4.2 Carbon Border Adjustment Mechanism (CBAM): Global regulatory influence

One of the EU's most significant geopolitical tools is the Carbon Border Adjustment Mechanism (CBAM), which imposes carbon tariffs on imports from countries with less stringent climate policies. This mechanism is intended to prevent "carbon leakage" - the relocation of polluting industries outside the EU - but also serves a strategic function: pressuring trade partners to adopt similar climate standards or risk economic penalties (*van Asselt, 2021*).

By externalizing its regulatory preferences, the EU is effectively globalizing its climate norms, using access to the European market as leverage to influence third-country environmental policies. This has prompted concerns from both developing and developed countries but has also triggered discussions about harmonizing carbon pricing internationally.

4.3 Green taxonomy and sustainable finance

The EU has also pioneered the development of a green taxonomy - a classification system defining what qualifies as environmentally sustainable economic activity. Coupled with mandatory environmental, social and governance (ESG) disclosures, these financial regulations are reshaping global capital markets by setting benchmarks for green investment (*European Commission, 2021*).

Many international financial institutions and private investors now align with the EU taxonomy, extending its influence far beyond Europe's borders. This regulatory leadership enhances the EU's soft power and helps consolidate its position as a normative leader in climate finance governance (*Abbas & Cronin, 2022*).

4.4 External Partnerships and Climate Diplomacy

To broaden its geopolitical reach, the EU has forged a network of energy and climate partnerships, particularly with countries in Africa, the Eastern Neighbourhood, and the Southern Mediterranean. Initiatives like the EU - Africa Green Energy Initiative and the Mediterranean Green Hydrogen Partnership aim to foster mutual energy transitions while addressing development goals and security interdependence (*Lema et al., 2021*).

Through trade agreements, such as those with Canada (CETA), Mercosur and others, the EU also promotes environmental and social standards as conditions for market access. This "green conditionality" reflects the EU's belief in regulatory power as a tool for shaping international norms.

4.5 Challenges and Structural Limits

Despite its ambitions, the EU's normative power faces structural constraints. Internal divisions among member states on energy mix, dependency on fossil fuel imports (notably Russian gas before 2022), and the economic disparities between Western and Eastern Europe complicate unified action. Additionally, the rise of protectionist sentiment and the energy crisis following Russia's invasion of Ukraine have tested the resilience of the EU's climate commitments (*Tagliapietra & Zachmann, 2022*).

Nonetheless, the EU remains a global regulatory superpower and its energy transition strategy - grounded in law, diplomacy and sustainable finance continues to exert outsized influence in shaping the global energy future.

5. COMPARATIVE ANALYSIS

The energy transition strategies of the United States, China and the European Union reflect distinct geopolitical paradigms, shaped by their domestic political economies, international roles and strategic cultures. While

all three actors pursue decarbonization and seek global influence through energy policy, they differ significantly in their approaches to industrial organization, value chain control, and norm diffusion.

Table 1: Comparative Overview of Energy Transition Strategies: United States, China, and the European Union

Dimension	United States	China	European Union
Strategic orientation	Innovation-driven; industrial renewal	State-led industrial policy	Regulatory leadership; sustainability norms
Policy instruments	Subsidies (IRA), tax credits, defense production tools	Five-Year Plans, SOE coordination, green BRI	Green Deal, CBAM, green taxonomy, trade conditionality
Value Chain focus	Reshoring of critical manufacturing, mineral access	Full-spectrum dominance in solar, battery, rare earths	Green technology innovation and finance standards
External projection	Technology alliances (e.g., with EU, Japan); reshoring	Infrastructure diplomacy via BRI	Climate diplomacy, trade-based norm export
Geopolitical logic	Strategic autonomy; competitiveness vs China	Global supply chain entrenchment; influence in Global South	Market leverage via regulation; multilateral leadership
Key risks/constraints	Political polarization; dependence on private sector	Overcapacity; backlash to assertive industrial policy	Internal fragmentation; energy security vulnerabilities

5.1 Analytical Insights

Industrial model divergence

The United States relies on public-private innovation ecosystems, using market incentives to catalyze reindustrialization. China, in contrast, follows a top-down model with extensive state intervention to secure global supply chain dominance. The EU emphasizes rule-making, framing decarbonization as a matter of law and governance rather than production scale.

Geopolitical goals and instruments

The U.S. strategy is centered on strategic autonomy, especially in reducing dependency on Chinese technologies. It builds alliances with like-minded democracies and seeks to shape global supply chains through friend-shoring. China, on the other hand, aims to export infrastructure and entrench dependency via its Belt and Road Initiative and green finance. The EU acts through normative power, using market access and regulatory frameworks (e.g., CBAM) to shape external behavior without hard infrastructure export.

Value chain positioning

China has successfully positioned itself across all segments of the clean energy value chain - from raw materials to final products. The U.S. is focused on regaining critical manufacturing and securing upstream inputs. The EU, meanwhile, seeks to set global investment and sustainability standards, even as it remains partly dependent on chinese technology imports.

Strategic influence and projection

The EU's approach is indirect but impactful, relying on regulatory convergence to diffuse standards. The U.S. uses technological leadership and strategic partnerships, while China exercises structural power through long-term industrial and infrastructure entrenchment, especially in the Global South.

Constraints and vulnerabilities

All three actors face structural challenges. U.S. climate action is often constrained by domestic political divisions and short policy cycles. China risks global backlash and overreliance on export-led growth. The EU faces internal

fragmentation and energy dependencies that were exposed during the 2022 energy crisis following Russia's invasion of Ukraine.

5.2 Strategic Convergence and Divergence

Despite differences, some convergence is emerging in areas such as critical mineral security, green technology scaling and climate diplomacy. However, the underlying geopolitical logics diverge sharply: the U.S. and EU increasingly aim to de-risk and decouple from chinese dominance, while China seeks to consolidate its industrial centrality and offer an alternative development model.

The interplay of these strategies suggests that the global energy transition will be as much a geopolitical contest as it is a sustainability imperative. The emerging order is likely to be fragmented, shaped by competing standards, infrastructures and alliances.

6. CHALLENGES AND STRATEGIC IMPLICATIONS

Despite their distinct strategies, the United States, China and the European Union each face structural and geopolitical challenges that may constrain their ability to leverage the energy transition as a durable source of geopolitical power. Moreover, the interplay of their policies is reshaping the international system, introducing both risks of fragmentation and prospects for new cooperative frameworks.

6.1 The United States: Political fragmentation and governance gaps

The U.S. approach is constrained by deep political polarization and the decentralized nature of its governance system. While initiatives like the Inflation Reduction Act (IRA) provide significant federal support for clean energy, their long-term viability is uncertain given shifting political priorities between administrations and the role of state-level autonomy (*Jenkins et al., 2022*). Additionally, the reliance on private sector leadership introduces variability in implementation, particularly in sectors requiring large-scale infrastructure investment and coordination. The challenge for the U.S. lies in

maintaining policy coherence and strategic direction amidst domestic political volatility.

6.2 China: Geopolitical pushback and export dependence

China's energy transition model, although highly effective in terms of industrial scale, faces growing international resistance. Accusations of market distortion, overcapacity, and economic coercion have intensified scrutiny from the U.S. and the EU, leading to calls for de-risking and the diversification of supply chains away from Chinese dominance (*Meckling & Nahm, 2022*). Furthermore, China's economic model remains heavily reliant on export-led growth, making it vulnerable to trade restrictions, sanctions, or shifts in global demand. These dynamics expose Beijing to geopolitical counterbalancing and may force an internal rebalancing toward more sustainable domestic consumption and innovation.

6.3 The European Union: Industrial limitations and strategic dependencies

The EU's normative leadership is underpinned by regulatory sophistication, but its industrial capabilities lag behind those of China and the U.S., particularly in clean tech manufacturing and critical mineral processing. Despite efforts to develop strategic autonomy, the EU remains dependent on external actors for raw materials, solar panels, batteries and other components central to the green transition (*Tagliapietra et al., 2023*). Internal divisions between member states over energy mix, budget priorities and climate ambition further complicate the implementation of a unified strategy. Without reinforcing its industrial base, the EU risks normative influence without material power.

6.4 Global implications: Fragmentation or cooperation?

The competition between major powers in the green transition raises concerns over green protectionism, technological decoupling and regulatory fragmentation. Trade disputes over subsidies, carbon border taxes and supply chain security are already surfacing, potentially undermining the multilateral spirit of climate cooperation (*Rodrik, 2023*). However, this rivalry also creates

strategic openings for new alliances and institutions focused on clean energy security, critical mineral cooperation and climate finance for the Global South.

There is increasing recognition that addressing global challenges like climate change and energy security will require hybrid governance models that blend competition with selective cooperation. Forums such as the G20, the International Renewable Energy Agency (IRENA) and bilateral climate partnerships may serve as platforms for coordination - if geopolitical rivalries do not overwhelm them.

CONCLUSION AND POLICY RECOMMENDATIONS

The global energy transition is not merely a technical or environmental endeavor; it is fundamentally a process of geopolitical reordering. As fossil fuel-based power wanes, new sources of influence emerge - ranging from control over clean energy technologies and critical minerals to leadership in global regulatory standards. The strategies pursued by the United States, China and the European Union reveal a multipolar contest over who will define the contours of the post-carbon world.

Each actor brings unique strengths and limitations. The United States leverages its innovation capacity and alliance networks but remains hindered by political fragmentation and industrial erosion. China wields unparalleled industrial scale and value chain control but faces growing pushback and dependence on external demand. The European Union leads in global norm-setting and climate governance, yet its geopolitical weight is constrained by industrial vulnerabilities and internal divisions.

What emerges is a divergent yet interdependent landscape, where strategic competition coexists with shared interests in global climate stability and energy security. The risk of green protectionism and systemic fragmentation is real - especially if trade barriers, technological decoupling and security rivalries escalate. However, the transition also creates unprecedented opportunities for new forms of international cooperation around clean energy development, critical material stewardship, and sustainable finance.

To navigate this evolving terrain, global stakeholders, including emerging economies, must:

- Promote dialogue through multilateral institutions such as the G20, IRENA and the UNFCCC to prevent normative divergence and trade conflict;
- Invest in resilient and diversified supply chains for critical minerals and clean technologies;
- Build inclusive partnerships, particularly with the Global South, to avoid a green divide and ensure a just transition;
- Align industrial and climate policy, ensuring that the pursuit of strategic autonomy does not undermine collective climate objectives.

In sum, the energy transition is both an arena of power projection and a potential foundation for global cooperation. Understanding the strategic imperatives of the U.S., China and the EU is essential for shaping a world order where green power not only defines leadership, but also delivers shared resilience and sustainability.

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CHAPTER 3

A GRAMSCIAN ANALYSIS OF GREEN DEAL IN EUROPEAN UNION COUNTRIES

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INTRODUCTION

Concern for the environment has become a key part of politics all over the world. We are instilled with ideological values regarding preserving our environment and not destroying it to the point where we can say that our entire culture promoted environmental care values. Part of these environmental care values that are part of our present-world mindset in societies from all over the globe is the European Green Deal (Fetting, 2020). This refers to a strategy belonging to the European Union, which leads to the transformation of economy and society in order to achieve climate-neutrality by the year 2050 (Bäckstrand, 2020). What does the European Green Deal have as a purpose? Its aim is to reduce greenhouse gas emmissions until they are gone, reaching net zero level. In the meantime, economic growth, social includion, and environmental protection are expected to be ensured by the same European Green Deal.

We can define the European Green Deal as a policy roadmap, which was introduced in December 2019 (Fetting, 2020) by the European Commission. Among its aims, we can mention, in detail, the following ones: to fight against climate change, to protect the environment, together with biodiversity, to promote sustainable economy, to improve the health and the quality of life for the citizens.

In this way, we imply that environmental and human health go hand in hand. Our health as human beings can be directly influenced by the health of our environment. If we consider climate change, we are dealing with extreme weather phenomena, such as frequent and also intense floods, droughts, heatwaves, and storms. The effects of these on human health can be: heat-related health issues such as heat stroke and dehidration, injuries which can be fatal during natural disasters, as well as psychological issues such as trauma after natural disasters, which bring along losses of both possessions and dear persons. Other effects of extreme weather changes can be related to increased temperatures which in turn increase ground-level ozone, as well as risks for wildfires, which cause, in their turn, release of pollutants. Due to the air quality degradation presented in these cases, the impact n human health can be the following: asthma, respiratory diseases, cardiovascular diseases, lung cancers, and the increased risks for all of these. Another example of environmental

impact on human health is the one related to warmer climates leading to increased frequence of the presence of mosquitoes and other insects which transmit diseases such as malaria, dengue, Lyme, and Zika virus. With respect to water quality and the availability of water, the connection between environmental and human health is a clear and well-known one. The water sources are clearly affected by droughts, floods, warm temperatures, and as a human health impact we can mention the spread of diseases such as cholera and diarrhea, dehydration, and presence of contaminated drinking water by chenicals and pathogens. The environment is a well-known source of food, and, what is more, a source of healthy food, or not, function of the various influencing factors. Crops can be reduced, due to various conditions, just as much as fish stocks can be reduced due to conditions such as heat and drought. For human health, these have a negative impact, such as malnutrition, food prices that are too high, as well as exposure to toxins, such as the mold from floods. Allergens and pollen are also agents having environmental impact, due to longer growing seasons for plants which produce pollen. Human health faces the following consequenced: seasonal allergies occuring at a higher rate, as well as a heightened incidence of respiratory problems such as hay fever and asthma. Mental health can also be a consequence of the environment we live in, due to anxiety about climate change, problems encountered due to natural disasters, such as displacement, and loss of human lives. Depression and anxiety can be related to the state of the world environment or to the consequences of natural hazards, as well as to conflicts between resources which mean conflicts in the community. Loss of crops can also be a source of anxieties and depression, function of whether or not the well-being of individuals and communities depends on them.

We can see, based on the above, how much climate change can influence our well-being, psychological and physical health, based on elements such as clear air, safe water, food, and shelter which should be the minimum available for a good life.

We become aware that the European Green Deal is a subject of high importance and relevance to today's world, and which, as a result, is worth investigating and analysing.

The subject of the Green Deal is not restricted to the European Union only. The green transition is discussed by plans all over the world (Meyer, 2015). As an example, in the United States (Galvin & Healy, 2020) it was introduced in 2019 as a resolution in Congress in order to deal with issues such as climate change and economic inequality. In Canada (MacArthur et al, 2020), the green transition plan has in view renewable energy, zero-emission vehicle incentives, as well as carbon pricing. In China (Sun et al, 2018), Green Development Policies are meant to achieve by 2060 carbon neutrality and to make investments in renewables, electric vehicles and green infrastructure. In Korea (Lee & Woo, 2020), the Green Deal was part of a COVID-19 recovery plan in 2020, with a focus on digital transformation, green energy, as well as carbon reduction by the year 2050. Japan has set as a target to achieve carbon neutrality by 2050 (Ohta, 2021; Ozawa et al, 2022), through investments in alternative energies and green innovation. We can notice a global tendency for climate action which relies on common principles, such as the following: to reduce emissions, to transition to clean energy, and to create a sustainable economy.

What are the consequences of the Green Deal actions? The present paper focuses on Europe, as the country in which the author of the present chapter lives, Romania, is part of the European Union. It is clearly more easily to observe phenomena in a space with which we are familiar and our experience and observations can benefit the analysis in a research work. Direct observation can combine with tools that can bring further insight into understanding the phenomenon under research.

1. MATERIALS AND METHODS

We can start the analysis from the data provided by the main goals of the European Green Deal. We can notice here goals such as the following: to achieve climate neutrality by the year 2050, which means net-zero greenhouse gas emissions; to reduce emissions by the year 2030 by at least 55% compared to the leves in 1990; to make the transition to clean energy, by replacing fossil fuels with renewable energy sources, e.g. wind and solar energy; to use fewer resource and to rely more on recycling, which is called circular economy and which is supposed to make the designed products to last for a longer time; to

rely on sustainable agriculture and food systems in order to promote food production that is healthy and also environmentally friendly; to use clean transport, which means electric vehicles and increased reliance on rail travel, in order to reduce air pollution; to rely on building renovation by improving energy efficiency in homes, as well as in public buildings; to protect nature and biodiversity, which means to restore the ecosystems that have been damages and to rely more on protected natural areas; to reduce all the types of pollution from air, water, and soil in order to protect the environment and human health; and, last but not least, to maintain equality regarding the change, so that poorer regions receive financial support.

A significant feature of the European Green Deal lies in the way it is funded. The European Union invests an amount over 1 trillion euro in green projects (Fetting, 2020), through the following means, and, as a matter of fact, through a combination of them: the EU budget, national funds, private investment, as well as recovery funds, e.g. NextGenerationEU. In this case, the European Union takes over its role related to welfare, as it tries to make all member countries to benefit from equal opportunities for financing in view of their citizens' well-being. The implied benefit of the Green Deal is related, after all, paying attention to the health and resources of the Earth, the way our health can benefit from managing all the resources, and from taking care of the Earth's health itself, as well as from being independent regarding energy resources from other countries.

Why is the European Green Deal important? One first reason is that it deals with the climate crisis (Banister, 2019), a subject of actuality and of intense debates. In addition, the European Green Deal encourages innovation, green jobs, it protects nature and human health. In addition, it allows the European Union to be in a position of global climate change leader and to strengthen Europe's energy independence. The EU attempts to become a global example for climate action, such as green diplomacy, climate finance for the developing countries, as well as to achieve leadership during various events relate to climate summits.

While the Green Deal may have common features for world countries, it proves to have specific ones for different countries. In the case of EU member countries, we can examine the cases of France (Leondard et al, 2021), Germany

(Hafner & Raimondi, 2020), Poland (Hafner & Raimondi, 2020), and the Nordic countries (Nagel et al, 2023). For France, the major focus is on the nuclear power, which makes up 70% of the electricity mix and which should meet low-carbon goals. In addition, France has investments in public transport, green agriculture, building renovation. Fuel prices have been the subject of protests, since these prices were rising, showing conlficts between the climate policy and social equity. In the case of Germany, the goals are to rely on renewables and this means giving up coal by 2038 and nuclear energy by 2023. Germany is the leader in wind and solar eenrgy, as well as in electric vehicles. For Germany, the energy transition strated long time before the EU Green Deal. Among the challenges faced by Germany, we can find the need to balance energy demand after giving up nuclear energy. Germany is also confronted with the challenge of high electricity prices and industrial concerns over competitiveness. Poland shows a heavy reliance on coal, which makes up about 70% of electricity, yet, at the same time, renewable investments are on their way to growing. Poland faces challenges such as political resistance to the fast rate of decarbonization, as well as tensions with the EU over the issues of the rule of law and of the environmental policy implementation. Nordin countries such as Denmark, Sweden, Finland and Norway have as strengths strong public support for their green policies, together with an advanced position with respect to renewables, green technology, circular economy, as well as carbon pricing. For Sweden, we notice a high use of hidropower and bioenergy. For Denmark, we notice that it is the leader in wind energy. For Finland, we notice that it is heavily focused on forest management, bioeconomy, as well as clean technology. For Norway, we notice that ut is the country where we witness how over 80% of the new are sales are electric car sales, making this country the electric vehicle leader. In addition, Noway is a country rich in hydropower, as well as in green finance. France, Germnay and the Nordinc countries ar highly alligne to the Green Deal, while Poland is medium alligned. Poland faces the challenge of coal dependence and political resistance.

Until now, for EU countries such as France, Germany, Poland, and the Nordic countries which are the focus of this chapter, but not only, the Green Deal until now can be understood as a set of environmental policies. However, once we consider a Gramscian analysis, then we can view the Green Deal as a

hegemonic project, which finds a way to reshape economic, political, as well as cultural life in oder to create the consent for a new order, which is a new social and economic one.

A Gramscian analysis (Böhm, 2018; Hall et al, 2013) relies on certain key concepts. The first one is hegemony, which implies that dominance can be achieved by cultural and ideological leadership, and not though force only. Within civil society, we witness struggles in order to shape and to create the dominant worlview. In addition, we can notice the way in which classes and social groups form alliances to stabilize a certain social and economic system. The concept of pasisve revolution refers to the idea that there is a top-down change which absorbs the opposition, yet no radical transformation takes place. We can notice the visible conflict between civil and politica societies. Civil society represents consent, and the state, the representative of the political society, represents coercion.

Based on this grid of analysis, we can identify, in France, a hegemonic crisis, as the Gilets Jaunes protests showed that there was a crisis of consent over the topic of climate policy, making the Green Deal to be seen as elitist and, therefore, imposed by authorities. With respect to civil society reisstance, we could notice a very strong mobilisation for the working-class and rural population who allied against the fuel taxes, an action which showed that ecological goals and social justice where in conflict with one another. As for a passive revolutionn we can mention how the Macron governent attempted to combine criticism with the idea of a just transition, and this was supposed to happen without completely altering the neoliberal framework. A top-down ecological modernization is illustrated by the Green Deal in France, which is also an attempt to build a new historic bloc. However, this top-down ecological modernization in France is struggling to win the consent from those who are exluded from the green capital accumulation. With respect to Germany, we can say that this country has a hegemonic role in the EU's green transformation, since its green industrial strategy is the one shaping the new European common sense about sustainability and economic competitiveness. German civil society is sustaining the climate rationality and economic innovation narrative. NGOs, the Green Party, climate litigation, and youth movements represent German civil society. Industrial capital formed a rather stable green-capitalist bloc for

Germany, as Germany's transition aligned industrial capital represented by automotive and energy technology with state policy, as well as with sections of labour, such as the ones in renewable energy. Regions which rely on coal, such as Lusatia retain tension, as in these region hegemony is incomplete, and alternative narrative gain power, such as the ones about AfD climate skepticism. In the case of Poland, this country represents a site of hegemonic contestation, as the Green Deal is seen as an internal imposition by Brussels elites, which makes it to clash with domestic, economic, as well as cultural structures. The polish civil society is divided, as environmental NGOs support the Green Deal, yet conservative-nationalist discourses in media and politics frame climate policy as a threat to sovereignty and to jobs. With repsect to the concept of passive revolution, the Polish elites accept the EU funds meant for the green transition, yet they ofyen resist a deeper ideological change, thus preserving coal and nationalist narratives. With respect to the concept of hegemony from above, the EU makes use of financial tools, such as the Just Transition Mechanism, to discipline national resistance, which is a technocratic form of control that has no grassroots legitimacy. Furthermore, as we consider the Nordic states to be examples of consensual hegemony in climate policy, we notice that there is a general political and societal agreement on the green transformation effects. Thus, there is a hegemonic allignment between state, civil society, and capital. As part of the historic bloc, in Northern countries, Green capitalism is compatible with social justice. With repsect ot the war of position, in Nordic countries, there is little organized resistance to the Green Deal. There are, howeevr, critiques from the Indigenous Sami communities related to wind farms on traditionals lands, which show that soft hegemonities have their weak points when it comes to racial and cultural justice.

Based on the Green State theory (Paterson et al, 2006), various cultures belonging to this topic claim that there are occasions where there should be a tranformation of the state as a response to his ecolopogical crisis, of which climate change, biodiversity loss, and environmnetal degradation could be the ecological crises.

The Green State theory claims that the modern liberal-capitalist state, which focuses in economic growth, individual property rights, as well as market competition, is mostly unsustainable and badly equipped to address the issue of

ecological collapse. A green state us sypposed to place ecological integruty at the centre of its values, to reorient institutions and laws towards sustainability and interdependence, and also to ensure environmental justice.

The Green Deal can be understood as an attempt to create a hegemonic project, which is based on green capitalism, which in turn unites capital, state, as well as civil society. Narrative in this case has the role secure legitimacy of the transition that is driven by the elites. We speak, in this way, of just transition or of climate neutrality. The Gramscian and Green State Theory approaches rely on ideology, consent, as well as class alliances. The European Green Deal is about active state involvement in the lives of the citizens, relying on social justice. The EGD can be seen as infrastructure state-building. Social consent decides whether or not the EGD can be successful.

The EGD is the result of capitalist institutions, and it is also an attempt to reshape capitalism in answer to ecological crises. The EGD is a policy framework which was launched in 2019 by the European Commission, which is supposed to make the EU climate-neutral by 2050. The EGD is an attempt at green transformation within the capitalist system. Environmental goals are supposed to be alligned with market mechanisms and economic growth.

If we consider political economy as exploring how economic systems are present in political institutions, power relations, and social structures, then understanding EGD from this perspective means asking questions regarding who benefits, who pays, and how is the transition to sustainability governed? The EGD represents a strategic alliance betwee the European Union state apparatus and the green-oriented segments of capital. In this respect we have in view the green industrial policy, which is subsidized by the EU, the carbon markets which allighn with neoliberal governance tools, and the way public funds are used for investments in green technology.

The EGD therefore, refers to the way in which the system of policies can be accepted and negociated by the citizens and by the state. The way in which we live is a matter of politics and culturally isntilled values, which also have in view economic interests. The EGD shows the way in which European Union member countries needs to allign with EU goals. Environmental care values are more than just a matter of ethics and current standards of living, once we become aware of the complex interdepencies at political and economic levels.

2. RESULTS

Based on a Gramscian analysis, we become aware of the power of political and economic structures such as the European Union, and the way in which member countries are dependent on it. EU member countries struggle to adapt to its policies, and the EGD is just one such examples. We become aware how our cultural values in the World in which we live today, such as concern for the environment and renewable energy use, depends on politics and political economy, due to the intricate structure of power and the dependencies of the member countries on supranational organizations such as the EU. We can notice that there are common goals regarding the Green Deal all over the world, regarding the way in which we can reduce emissions, transition towards clean energy, and create a sustainable economy. For EU countries, we notice that there are some opposing forces regarding the use of Green Deal, due to prices or rule of law tensions. As key strengths, EU member countries such as France rely on nuclear energy, on renewables (wind and solar energies) such as Germany, on coal such as Poland, or on renewables such as wind and hydroenergy, which is the case of the Nordic countries. Therefore, next to the interrelations among countries and power structures, we aşsp have specific energies specific countries can rely on.

DISCUSSION AND CONCLUSIONS

A Gramscian analysis helps us become aware of the structures of power present in the world. Why we see renewable energy as such an important matter is part of the dominant worldview. The Green Deal is a world phenomenon, and the EU is not the only supranational organization needing to take it into consideration. The various countries members of various supranational structures need to allign with the general views and practices with respect to the general values of environmental care. The way our values are shaped, in this case related to environmental care and concern, are not only emotional and ethical, or even only philosophical and cultural. They rely on a strong structure of power, which is ideological and, for this matter, related to political studies as a framework. We can understand certain values circulating in society at certain times as strongly rooted in polics and in the structure of power present at world level. In this way, when we see certain values, we can consider the

entire political history behind them, as well as the entire political structures of power and various interrelationships between them. We can conclude that the political side of the European Green deal is interconnected with the everyday life aspects and values, as well as overall mindset related to environmental care and ethical concerns. As EU citizens, we internalize the values we are taught based on ideology. The ideology starts from the European Green Deal being more than a simple climate-related policy, or environmental care related one. The European Green Deal is a geopolitical strategy, which is about restructuring the external relations, trade policies, energy alliances, as well as overall global influence of the EU. Diplomacy on the world stage is related to the European Green Deal. We can consider the Green Deal as a common, shared practice in the world countries which leads to these countries' world influence on the economic and political stage.

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CHAPTER 4

THE LEGAL BATTLEFIELD OF ENERGY DOMINANCE AMONG CHINA, THE US, AND ASEAN

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INTRODUCTION

The race for energy dominance in Southeast Asia has become a key front in the escalating rivalry between China and the United States. ASEAN member countries are deftly navigating a complex landscape of legal and strategic hurdles to safeguard their growth and independence. Energy infrastructure, supply chains, and transition pathways have evolved into significant geopolitical tools, transforming technical sectors into competitive battlegrounds. China's ambitious Belt and Road Initiative (BRI) investments in hydropower, solar manufacturing, and grid infrastructure, coupled with its assertive maritime claims in the South China Sea, underscore its commitment to establishing hierarchical ties in the region (Feingold, 2023). On the other hand, the United States is pushing forward with its Indo-Pacific Strategy through initiatives like the Indo-Pacific Economic Framework (IPEF) and the U.S.-ASEAN Comprehensive Strategic Partnership (CSP), emphasizing a rules-based order, climate resilience, and security cooperation (U.S. Department of Commerce, 2022). This three-way competition unfolds against the urgent backdrop of Southeast Asia's energy transition needs, where increasing demand, climate risks, and developmental inequalities necessitate massive investments projected to reach exceed 1800 million metric tons of oil equivalent or increase by 2.8 times by 2050, creating a fertile ground for external influence (Bai et al., 2023).

China's energy strategy, which is heavily influenced by the state, combines legal innovation, economic strategies, and a firm territorial approach to bolster its dominance. With the rollout of its first Energy Law in January 2025, China is establishing a dual-control system that prioritizes carbon emissions rather than merely focusing on energy consumption (Tian & Zhong, 2025). This initiative not only accelerates the adoption of renewable energy but also ensures that coal remains a vital "system regulator." The strategy highlights a preference for centralized control over decentralized systems, aligning with China's aim to position ASEAN countries in a "subordinate status." A clear illustration of this is China's hydro-hegemony in the Mekong River, where it controls upstream water flows through large dams, enabling it to exert influence over downstream nations like Thailand and Vietnam by manipulating water resources. Simultaneously, China is leveraging its industrial overcapacity to

flood ASEAN markets with low-cost solar panels, capitalizing on U.S. tariffs that can reach as high as 17%, which disrupts Southeast Asia's re-export model (Conteduca, Mancini & Borin, 2025). These strategies often tread into legal gray areas, as seen in joint development agreements with Indonesia and Brunei that challenge exclusive economic zone (EEZ) jurisdictions under the guise of resource cooperation.

The United States is adopting a rules-based strategy to counter China's growing influence in the region. They're stepping up with technical support, market incentives, and security partnerships to strengthen ASEAN's pivotal role. Through initiatives like the U.S.-ASEAN Energy Cooperation Work Plan and the Japan-U.S. Mekong Power Partnership, Washington is pushing for renewable energy integration, enhancing grid resilience, and promoting decarbonization, all while channeling over $3,5 billion in aid between 2009-2020 (DeSombre, 2020). However, their tendency to frame ASEAN as a "prize" in the U.S.-China rivalry has hurt their credibility, leading to resentment over perceived manipulation and double standards. The limited market access and tariff cuts in the IPEF further weaken economic ties, especially when you compare it to China's impressive US$248.3 billion in 19,701 projects in the country for the 2017-2023 period (Lel, 2024). Even with ambitious climate commitments, like the $15.5 billion G7 Just Energy Transition Partnership with Vietnam, U.S. investment remains scattered and falls short in key sectors where Chinese influence is firmly established.

ASEAN's fragmentation among frontline states like the Philippines and Vietnam, hedging powers such as Indonesia and Thailand, and China-aligned nations like Cambodia and Laos makes collective energy governance quite tricky. Each member state is pursuing its own foreign policy direction: for instance, Vietnam is actively seeking U.S. investment in semiconductors but is also putting the brakes on offshore wind projects due to security worries about seabed mapping. Meanwhile, Thailand is on board with Chinese high-speed rail but is pushing for sustainable standards.

This fragmentation plays right into China’s "divide and condition" strategy, as they use the ASEAN-China Code of Conduct negotiations to keep diplomatic momentum slow while pushing their own claims. Still, ASEAN is not completely sidelined. Countries are using the competition to tap into

affordable renewable energy sources like solar panels that have been redirected from U.S. export targets—and are calling for co-investment in local initiatives. The big question remains: can legal and market frameworks turn the rivalry between great powers into a path toward sustainable energy independence, or will it just deepen dependency as tensions rise?

1. CHINA LEGAL EXPANSION THROUGH INFRASTRUCTURE AND INVESTMENT LAW

China's rapid ascent in the realm of global geopolitics is closely tied to its clever use of infrastructure development and investment law as essential tools for expanding its legal influence. Since the early 2000s, China has embraced a diverse strategy for exerting international legal influence, stepping beyond traditional diplomacy and soft power to leverage economic and legal mechanisms for its geopolitical goals. Initiatives like the Belt and Road Initiative (BRI), backed by a growing body of Chinese domestic and international investment law, have enabled China to weave its legal and regulatory standards into various regions, effectively shaping international legal norms. This chapter delves into the relationship between Chinese investment law, global infrastructure strategy, and legal expansionism, placing the discussion within a wider context of global legal pluralism and power dynamics. While the drive for legal expansion through infrastructure may stem from economic needs, its effects on international law, sovereignty, and regional legal alignment are significant and warrant thorough examination.

The Belt and Road Initiative, which President Xi Jinping kicked off in 2013, acts as a cornerstone for China’s approach to infrastructural diplomacy. It involves significant investments in transportation, energy, and digital infrastructure spanning Asia, Africa, and Europe. By forming bilateral agreements, Memoranda of Understanding (MoUs), and utilizing Chinese-funded development banks, China establishes legally binding commitments that align the host countries with its regulatory framework (Jorgensen, 2024). These legal setups often favor Chinese construction firms, lenders, and arbitration bodies, effectively exporting Chinese legal standards and dispute resolution practices. In contrast to Western development programs, which often come with strings attached like requirements for democratic governance or

adherence to environmental standards, China's infrastructure investments are typically framed as partnerships for mutual development and respect for sovereignty. However, this legal imbalance paves the way for the introduction of Chinese legal norms in areas where regulatory oversight might be lacking, resulting in a kind of extraterritorial legal influence that resembles, yet differs from, historical forms of legal imperialism.

China's recent legal reforms in investment law have significantly influenced its international legal interactions. The introduction of the Foreign Investment Law in 2020 marks a major shift in how China approaches foreign investment, bringing together various laws into a unified framework that prioritizes transparency, equal treatment, and protection for investors (Zhang, 2022). While this law seems to create a fairer environment for foreign investors in China, it also serves as a legal model that can be shared through China's global economic activities. For example, Chinese Model Investment Treaties are increasingly mirroring the principles of the Foreign Investment Law, highlighting investor rights while also respecting state regulatory authority. This dual focus safeguarding investors while upholding state sovereignty appeals to many developing nations looking for alternatives to Western investment models. Therefore, China's legal expansion is not just about building infrastructure; it is also about spreading a regulatory framework that combines development with sovereignty, standing in contrast to the neoliberal foundations of Western investment law.

One interesting aspect of China's growing influence in the legal arena is its increasing use of Chinese arbitration institutions for cross-border investment disputes. Organizations like the China International Economic and Trade Arbitration Commission (CIETAC) and the Shenzhen Court of International Arbitration (SCIA) are becoming the go-to places for resolving disputes in projects backed by the Belt and Road Initiative (BRI). This growth is supported by legal reforms designed to boost the international standing of Chinese arbitration bodies, such as offering bilingual proceedings, adopting international standards, and recognizing foreign arbitral awards in line with the New York Convention (Lin, 2025). While these arbitration methods seem to promote fairness and efficiency, they also strengthen China's position as a legal center for global infrastructure investments, reinforcing its own legal norms and

procedures. As a result, host countries and foreign companies are finding themselves navigating a legal landscape increasingly influenced by Chinese practices, which creates a strong pull towards aligning with China's legal framework.

Regional legal harmonization efforts really highlight China's approach to expanding its legal influence. By engaging in regional trade and investment agreements like the Regional Comprehensive Economic Partnership (RCEP), China is able to shape the creation and application of legal frameworks that oversee cross-border trade (Zhang, 2025). As the largest free trade agreement in the world, RCEP includes several ASEAN countries and showcases legal standards that align more closely with Chinese legal principles than with Western liberal ideals. This encompasses areas like e-commerce, intellectual property, and investment, all of which emphasize state-led growth and regulatory flexibility. The alignment of RCEP's norms with China's own laws indicates a strategic move towards legal expansion through regional collaboration, effectively embedding Chinese regulatory practices within international frameworks. This kind of legal integration is subtle yet impactful, as it does not directly confront Western legal systems but gradually alters the foundational norms in international economic law.

While China's push for legal expansion through infrastructure and investment has its merits, it certainly stirs up some debate. Critics point out that this legal growth can weaken local legal systems, increase debt reliance, and limit the policy options available to host governments (Dinlersoz & Fu, 2022). Concerns about unclear contracting practices, neglect of environmental and labor standards, and biased arbitration clauses have sparked doubts about the long-term advantages of projects funded by China. Additionally, the spread of Chinese legal standards might reinforce authoritarian legal practices, particularly in nations with fragile democratic frameworks. These criticisms highlight a larger issue regarding the underlying principles of China's legal expansion and what it means for global legal governance. As legal experts and policymakers navigate China's rise, they need to reflect on whether its legal approach encourages diversity or simply maintains unequal power dynamics under the pretense of development.

Despite the criticisms, China's approach marks a significant shift in how it engages with legal globalization. Instead of directly challenging the international legal framework, China opts for what could be called "constructive legal revisionism." This means it weaves its legal standards into global practices through infrastructure projects and investments, all while still respecting the core principles of international law (Williams, 2020). By doing this, China is able to subtly reshape global legal norms from the inside out, making its influence more lasting and harder to push back against. This strategy also underscores the role of legal frameworks in geopolitical maneuvering: legal documents, dispute resolution bodies, and regulatory systems become vital tools of statecraft. In this light, China's legal expansion isn't just a side effect of economic globalization; it is a thoughtful and strategic effort that shows a deep understanding of law as a means of global influence.

To wrap things up, China's legal growth through its infrastructure and investment laws signals a significant shift in the landscape of international legal development. By taking advantage of the Belt and Road Initiative (BRI), overhauling its domestic legal system, championing Chinese arbitration platforms, and weaving its legal norms into regional agreements, China is reshaping the very fabric of legal globalization. While we're still figuring out the long-term effects of this expansion, its influence on international law, national sovereignty, and global regulatory standards is clear. As we move through a world with multiple legal powers, grasping China's legal approach is crucial for scholars, practitioners, and policymakers alike. This transformation not only challenges the current legal power structures but also prompts a fresh look at the role of law in the shifting dynamics of global power.

2. UNITED STATES LEGAL EXCEPTIONALISM AND EXTRATERRITORIAL POWER

The unique legal landscape of the United States, especially in the area of energy law, really stands out in how it uses legal tools to assert its global influence. While many countries tend to separate energy law from environmental, economic, or industrial policies, the U.S. takes a different approach by weaving energy regulation into its national security strategy. A prime example of this is the Foreign Investment Risk Review Modernization

Act (FIRRMA), which was enacted in 2018. This law expanded the authority and reach of the Committee on Foreign Investment in the United States (CFIUS), a group that evaluates foreign investments for any potential national security threats. With FIRRMA, the U.S. has effectively limited Chinese investments in vital energy infrastructure, creating a legal framework that links economic openness directly to national security. This blended approach highlights the evolution of U.S. legal exceptionalism, which is based on the idea that law reflects sovereign interests rather than just a set of rules (Jackson & Cimino-Isaacs, 2018).

A key example of how U.S. law extends beyond its borders is seen in the work of the Office of Foreign Assets Control (OFAC). This agency is in charge of managing and enforcing economic and trade sanctions, and its rules reach far beyond the United States. By implementing secondary sanctions, OFAC can penalize third-party companies that do business with nations or firms that are already sanctioned, even if those transactions do not involve U.S. citizens or take place on American soil. This broad authority has had a significant impact on infrastructure and energy investments by Chinese companies, especially in areas like Africa, Southeast Asia, and Latin America. Essentially, OFAC's ability to enforce these rules acts as a powerful legal tool, shaping global energy markets and supply chains to align with U.S. strategic goals (Pismisoglu & Falsone, 2023).

In the U.S., the energy legal landscape has seen a significant transformation, moving towards deregulation and a more market-friendly approach. The 2015 repeal of the crude oil export ban was a game changer for American energy law, shifting the country from being a self-sufficient energy consumer to a proactive global exporter. According to U.S. Department of Energy (2025), both the Trump and Biden administrations have focused on boosting liquefied natural gas (LNG) terminals, pipelines, and trade agreements, incorporating legal measures that speed up permitting processes and encourage private investment. This push for deregulation aligns with a broader belief in economic liberalism and energy independence, where legal structures are designed to enhance export capabilities and geopolitical influence (Gardner & Renshaw, 2025).

On the global stage, the U.S. uses energy law as a tool for geopolitical rivalry, especially in maritime conflicts with China. By actively engaging in the United Nations Convention on the Law of the Sea (UNCLOS) tribunals and advocating in multilateral settings like the World Trade Organization (WTO), the United States has persistently contested China's claims in the South China Sea. Even though the U.S. has not ratified UNCLOS, it still references its principles to back freedom of navigation operations (FONOPs), which are designed to protect energy transit routes and counter China's efforts to gain exclusive control over resource-rich maritime areas. This somewhat contradictory dependence on international legal standards that the U.S. has not officially accepted highlights its exceptionalist stance, favoring strategic advantage over consistent adherence to norms (Cho & Chao, 2024).

In addition, U.S. legal diplomacy plays a crucial role in building capacity in Southeast Asia, aiming to balance out China's legal and economic sway. Initiatives like the U.S.-ASEAN Smart Cities Partnership and the Indo-Pacific Strategy weave in legal training, regulatory alignment, and technical support as part of their broader development objectives. These efforts help instill legal norms and practices that align with U.S. interests into the institutional frameworks of partner countries, effectively promoting a model of legal order that fosters liberal economic governance and security cooperation with the U.S. (Martinus, 2020). In this way, legal diplomacy serves as a subtle yet powerful means of influence, embedding American legal principles into the foundational governance of strategically important regions.

In addition, the U.S. utilizes bilateral investment treaties (BITs) and free trade agreements (FTAs) as strategic tools to push forward its energy and legal objectives. These agreements typically include sections on energy collaboration, protection of intellectual property, investor-state dispute settlement (ISDS), and regulatory transparency. By incorporating strict legal standards into these deals, the U.S. boosts the predictability and security of its investments while influencing the legal frameworks of its partner countries. This kind of legal maneuvering not only promotes U.S. energy exports but also limits the policy options available to partner nations, effectively nudging them to align with U.S.-favored legal standards and dispute resolution processes (McCown, 2024).

To strengthen its legal framework beyond its borders, the U.S. has built a strong network of export control laws, including the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR). These laws limit the transfer of essential technologies and energy-related equipment to hostile nations or unauthorized groups. Often, these regulations come into play with Chinese companies, especially those involved in dual-use technologies and infrastructure projects. By enforcing these export controls outside its borders, the U.S. not only aims to prevent the spread of dangerous technologies but also influences the global energy market, favoring those who align with U.S. security standards (Awati, 2023).

Despite its bold stance, the U.S. legal approach to energy and extraterritoriality has faced criticism for being inconsistent and overly unilateral. Detractors argue that the selective use of international legal norms weakens the credibility of the rules-based order that the U.S. claims to support. Additionally, the broad application of domestic laws overseas like OFAC sanctions and export controls raises concerns about sovereignty, legal legitimacy, and the decline of multilateralism. Still, these criticisms haven't significantly swayed the U.S. from following a legal strategy that merges national interests with normative authority, reinforcing its exceptionalist position in global legal matters (U.S. Department of Commerce, U.S. Department of the Treasury, & U.S. Department of Justice, 2024).

At the crossroads of law, strategy, and energy, the United States has crafted a complex legal framework to uphold its dominant position. Through tools like investment screening, sanctions, trade agreements, and legal diplomacy, the U.S. effectively extends its legal standards and regulatory preferences beyond its own borders. This approach helps create a global legal landscape that aligns with its strategic goals, often sidelining the idea of legal pluralism. This model of legal exceptionalism characterized by selective compliance, extraterritorial influence, and the shaping of norms continues to shape how the U.S. interacts with the global energy landscape.

As we look ahead, the strength of U.S. legal exceptionalism will hinge on its ability to balance unilateral actions with the rising call for multipolar legal governance. With emerging powers like China and regional groups such as the European Union pushing forward alternative legal frameworks, the U.S. might

face growing pushback against its extraterritorial claims. Still, the depth and influence of American legal institutions equip it with lasting tools to shape the landscape of international energy relations. The real challenge is to maintain this influence while adapting to a changing global order that increasingly demands legal accountability and collaborative norm-building.

3. ASEAN LEGAL PLURALISM IN THE MIDST OF POWER RIVALRIES

The Association of Southeast Asian Nations (ASEAN) stands out as a fascinating example of regional cooperation, marked by its blend of legal diversity and a diplomatic approach that prioritizes consensus. Unlike the more centralized legal systems found in the United States and China, ASEAN is made up of ten member countries, Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, each bringing its own unique legal traditions to the table, such as common law, civil law, Islamic law, and various mixed systems. This rich tapestry of legal backgrounds shapes the region's legal framework but also complicates the creation of a strong, enforceable supranational legal order. The challenges are particularly evident in the energy sector, where effective cross-border collaboration demands legal compatibility.

Despite these hurdles, ASEAN is making strides toward greater unity through initiatives like the ASEAN Plan of Action for Energy Cooperation (APAEC), which aims to align policies and boost the use of renewable energy and energy efficiency. The ASEAN Power Grid (APG) project is another ambitious effort, envisioning a network for electricity that spans across nations. However, bringing these initiatives to life will require not just investment in infrastructure but also a concerted effort to harmonize laws in areas like contract law, regulatory standards, and investor protections (APAEC Drafting Committee (ADC), n.d.). While these efforts showcase a practical approach to regional integration, they highlight the ongoing challenge of balancing national legal autonomy with the goals of regional energy governance.

Given the structural challenges that ASEAN faces, particularly its absence of supranational enforcement mechanisms like those found in the European Union, the organization has relied significantly on non-binding legal

tools to promote coordination. These soft law instruments such as declarations, guidelines, and Memorandums of Understanding (MoUs) serve more as frameworks for norms rather than as tools of coercion. They help shape national policies by outlining common goals in areas like energy investment, infrastructure, and the transition to renewable energy.

This approach aligns with ASEAN's core principles of non-interference, mutual respect for sovereignty, and decision-making based on consensus. While these principles help maintain regional unity amidst diversity, they also limit the establishment of legally binding commitments. Legal disputes involving foreign investors, especially those from major powers like China and the United States are often settled through international arbitration bodies like the International Centre for Settlement of Investment Disputes (ICSID) or under the rules of the United Nations Commission on International Trade Law (UNCITRAL) (Li & Bian, 2020; Aceris Law, 2018). Although these mechanisms offer procedural fairness and legal certainty, their use highlights ASEAN's still-developing regional dispute resolution capabilities. Additionally, differences in legal capacity, administrative resources, and political willingness among member states lead to uneven legal outcomes, often putting weaker members at a disadvantage in international arbitration contexts.

The legal landscape of ASEAN is quite complex, especially with the ongoing geopolitical tensions in the South China Sea, a hotspot filled with disputed maritime boundaries and valuable energy resources. Countries like Vietnam, Malaysia, the Philippines, and Brunei all have overlapping claims with China, which has laid out its own extensive "nine-dash line" that clashes with international law. The Philippines took a significant step by bringing a case to the Permanent Court of Arbitration under the United Nations Convention on the Law of the Sea (UNCLOS), leading to a landmark 2016 ruling that dismissed a large portion of China's maritime claims (Medina, 2017).

Yet, despite this legal victory, ASEAN has not rallied together in a unified response. Vietnam has been diplomatically assertive but has avoided direct legal battles, while nations like Cambodia and Laos lean towards pro-China stances, mainly because of their economic ties. These differing approaches highlight the internal divisions within ASEAN, where individual national interests often overshadow regional unity. This lack of legal cohesion

undermines ASEAN's ability to collectively enforce international maritime law, putting its members at a disadvantage when it comes to securing energy rights in these contested waters.

This internal conflict highlights a larger conversation about the balance between regional integration and national sovereignty within ASEAN's legal culture. The bloc's reluctance to embrace supranationalism provides its members with political flexibility, enabling them to follow their own legal paths while still engaging in regional initiatives. However, this very flexibility can hinder ASEAN's ability to respond consistently to external legal challenges. As foreign investors and geopolitical players increasingly shape regional energy dynamics, ASEAN's decentralized legal structure becomes susceptible to the influence of more centralized systems, like those of China and the United States. In cross-border energy transactions, this imbalance often shows up in investor-state dispute settlement mechanisms that tend to favor well-funded legal entities. The lack of a unified legal approach not only restricts ASEAN's influence but also puts member states at risk of issues like regulatory capture and legal fragmentation. To tackle these challenges, it is essential to pursue both domestic legal reforms and efforts to build regional legal capacity.

To tackle these challenges, ASEAN needs to boost its institutional resilience by crafting a coordinated legal strategy that strikes a balance between national sovereignty and regional unity. This means enhancing domestic legal frameworks, sharpening administrative skills, and standardizing legal processes related to energy trade and investment. Initiatives like capacity-building workshops, legal technical support, and regional peer review systems can really help member states with less robust legal systems. Additionally, ASEAN might want to consider setting up regional dispute resolution bodies specifically designed for energy governance. While this idea could encounter some political pushback, it fits well with the larger goal of strengthening ASEAN's legal independence and lessening reliance on outside arbitration. Creating model laws and harmonized regulatory frameworks for energy collaboration, drawing inspiration from the best practices in international law, could also guide national legal reforms and encourage alignment.

The journey toward deeper legal integration is filled with both structural and ideological challenges. Unlike the European Union, which achieves legal

unity through binding treaties and a centralized judiciary, ASEAN relies on consensus and voluntary compliance. As a result, any steps toward greater legal integration need to be gradual and mindful of each nation's unique context. One practical way forward is to establish soft law frameworks that can gradually transform into binding norms through consistent practice and political commitment. For instance, initiatives like APAEC and APG could be enhanced with model contracts, arbitration guidelines, and regulatory templates to promote harmonized legal operations without requiring constitutional changes in member states. Over time, these tools could solidify into customary regional legal standards, laying the groundwork for a more unified legal framework.

One key aspect of ASEAN's legal journey is how it interacts with global legal standards and institutions. ASEAN needs to not just adapt to these norms but also play an active role in shaping international legal discussions, especially in areas like energy and environmental law. With its rich renewable energy resources like solar power in the Philippines, geothermal energy in Indonesia, and hydropower in Laos, ASEAN has a fantastic opportunity to get involved in global climate governance and the clean energy market. By aligning its regional legal frameworks with international sustainability objectives, ASEAN can draw in green investments and boost its legal influence in global talks. Collaborating with organizations such as the United Nations Framework Convention on Climate Change (UNFCCC), the International Renewable Energy Agency (IRENA), and the Energy Charter Treaty (ECT) could provide ASEAN with pathways to strengthen its legal strategies while reaffirming its dedication to global energy justice.

ASEAN's legal pluralism presents ongoing challenges when it comes to putting international norms into practice at the domestic level. The diverse legal traditions across the region lead to different levels of compatibility with international legal frameworks. For example, common law jurisdictions might easily adopt international arbitral awards, while civil law or religious law jurisdictions could need changes in statutes or new interpretations from the judiciary. This gap not only slows down the process of legal harmonization but also makes it harder for foreign investors to find the clarity and predictability they seek. To tackle this, ASEAN should encourage discussions among legal experts, policymakers, and academics within the region to pinpoint where legal

systems align and where they differ. Creating regional academic networks, legal research centers, and facilitating cross-border judicial exchanges could lay the groundwork for ongoing legal integration.

The success of ASEAN's legal integration in the energy sector really hinges on political will and the involvement of civil society. Sure, having solid legal frameworks is important, but how well they work in practice relies on political accountability, public transparency, and the active participation of stakeholders. Energy law touches on vital issues like land rights, environmental protection, and the sovereignty of indigenous peoples. If legal processes aren't inclusive, there's a real risk that regional policies will leave vulnerable communities behind and worsen social inequalities. That's why it is crucial for ASEAN to build participatory mechanisms like public consultations, impact assessments, and access to justice provisions into its legal frameworks. These steps not only boost the credibility of regional law but also strengthen its ability to withstand both domestic and international legal challenges.

To wrap things up, ASEAN finds itself in a tricky yet crucial spot in the global legal scene. Its legal pluralism reflects the rich historical and cultural tapestry of Southeast Asia, but it also brings some real challenges to regional legal consistency, especially in the energy sector. Still, ASEAN's practical approach leaning on soft law, multilateral memorandums of understanding, and a shared set of norms has set the stage for a forward-thinking legal framework that honors national sovereignty while encouraging integration. As it faces the shifting tides of global energy governance, geopolitical rivalries, and the push for sustainable development, ASEAN needs to boost its domestic legal capabilities, foster a sense of regional legal unity, and engage more actively with international legal bodies. The bloc's success in balancing flexibility with coherence, and sovereignty with solidarity, will shape its role as a key player in the legal landscape of the 21st century. While ASEAN might not achieve the same level of legal centralization as the European Union or the United States, it can certainly carve out its own unique path in regional legalism one that is adaptable, diverse, and impactful.

4. CLIMATE LAW, ENERGY JUSTICE, AND THE LEGAL FUTURE

The ever-changing relationship between climate law and energy justice is quickly becoming a key battleground in the global fight for energy governance. While the geopolitical tensions among China, the United States, and ASEAN shape the usual discussions around energy security and investment law, the urgent need to address climate change adds new legal complexities that go beyond traditional notions of sovereignty. Each of these players, China, the US, and ASEAN—has either ratified or made commitments under the 2015 Paris Agreement, but the nature and extent of these commitments are far from equal. The Biden administration in the United States has rejoined the Paris Accord and made a significant legal move by passing the Inflation Reduction Act (IRA) in 2022. This is not just an economic boost; it is a thorough legal framework aimed at decarbonizing the US energy sector through tax incentives, grants, and partnerships between public and private sectors (Institute for Energy Research, 2021).

On the other hand, China, while publicly aiming to peak its emissions by 2030 and reach carbon neutrality by 2060, follows a dual-track legal strategy that supports both renewable energy development and coal-based energy security. Meanwhile, ASEAN is caught in a tough spot, struggling with limited legal and financial resources as it deals with increasing climate vulnerability while trying to navigate a patchwork of national legal systems and investor-state relationships.

Legal definitions surrounding sustainability and green investments are quickly becoming key areas of focus in climate-related law. The European Union's 2020 Taxonomy Regulation, which outlines what qualifies as an environmentally sustainable economic activity, has far-reaching effects worldwide. Its criteria for green energy investments are essentially setting international standards that other countries, like China and the United States, feel pressured to follow. This push encourages them to tweak their regulatory systems to build investor trust and keep trade flowing smoothly. For instance, China's green bond catalogs and the proposed climate-related disclosure rules from the US Securities and Exchange Commission show a gradual alignment with the EU's taxonomy principles, even though each country is making its own

adjustments. Meanwhile, ASEAN faces unique challenges due to its diversity and legal complexities as it tries to keep up with these evolving standards. Initiatives like the ASEAN Taxonomy for Sustainable Finance suggest a budding but strategic move towards regional consistency in climate finance law (United Nations Environment Programme, 2025). However, differing views especially regarding natural gas and nuclear energy highlight significant legal and political divides that are likely to become central issues in international legal battles over subsidies, cross-border energy trade, and environmental compliance.

At the same time, the legal debates around carbon border adjustment mechanisms (CBAMs), intellectual property rights in clean technologies, and technology transfers are heating up. The EU's proposed CBAM, which essentially imposes taxes on imports based on their carbon footprint, has drawn criticism from China and ASEAN countries, who see it as a form of "green protectionism." This mechanism raises some tricky legal questions under the WTO framework, particularly regarding non-discrimination principles and the legality of environmental exceptions outlined in Article XX of the General Agreement on Tariffs and Trade (GATT). While the United States has shown some tentative support for CBAM-like measures, its legal landscape remains fragmented, with state-level jurisdictions creating more comprehensive frameworks than the federal government.

In contrast, China views CBAM as a threat to the energy sovereignty of developing nations and has hinted at possible retaliation through multilateral channels. The stakes are high when it comes to who controls global energy lawmaking, especially regarding the governance of technological knowledge. The overlap of intellectual property (IP) law with climate goals adds another layer of complexity to legal negotiations, as developed countries often lean on TRIPS protections while developing nations push for greater access to green technologies (Chen, Zhao, Cheng & Qiu, 2025). These challenges highlight the intricate legal landscape of climate cooperation and reveal the tensions between energy justice and trade law.

The conversation about energy justice brings in important principles like equity, access, and procedural fairness into a field that is usually all about technical and economic factors. In the Global South, especially among ASEAN

member states, energy transitions are closely linked to socio-economic growth, rural electrification, and the rights of Indigenous peoples. More and more, we are seeing legal challenges coming from local and civil society groups. Courts in Indonesia, Malaysia, and the Philippines have recently dealt with cases where local communities and environmental NGOs are pushing back against energy projects based on constitutional and legal arguments. For instance, in the Philippines, climate litigation has leveraged the constitutional "right to a balanced and healthful ecology" to contest coal-fired projects involving foreign companies (Lin, 2021). In Indonesia, issues around environmental impact assessments and the legality of land acquisition are frequently popping up in lawsuits against Chinese-backed hydropower and mining ventures. These developments indicate a shift where legal pluralism is not just empowering national governments but also giving non-state actors a voice in shaping energy governance through litigation, advocacy, and international partnerships.

A key aspect of the legal landscape we're stepping into revolves around the function of international environmental tribunals and quasi-judicial bodies in handling climate-related disputes. Even though the UNFCCC does not have its own enforcement mechanism, other entities like the International Court of Justice (ICJ), the Permanent Court of Arbitration (PCA), and the International Tribunal for the Law of the Sea (ITLOS) are being looked at for their ability to offer binding or advisory opinions on climate responsibilities. Small island nations, facing the threat of rising sea levels, have started to turn to the legal precedents set by these forums to hold high-emission countries accountable.

This situation is particularly relevant for ASEAN, where nations like the Philippines and Vietnam might think about using these legal avenues to seek justice for climate-related damages, especially when these damages overlap with illegal maritime activities or harmful investments. The increasing body of climate litigation could very well extend into transnational and intergovernmental arenas, reshaping the legal landscape in which states and investors operate (Buan, 2024; Phương Anh, 2024).

The changing landscape of laws surrounding Indigenous rights and environmental issues highlights a crucial point where energy law meets climate justice. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) serves as a soft law framework that is increasingly referenced in

domestic courts, helping Indigenous communities assert their legal rights and block extractive projects. China's Belt and Road Initiative (BRI) has come under fire for its social and environmental consequences, particularly in ASEAN nations with significant Indigenous populations.

Legal discussions are surfacing about the lack of Free, Prior and Informed Consent (FPIC) and breaches of customary land rights, which are often enshrined in national constitutions or laws. In Malaysia, Indigenous groups have effectively used their native title rights to contest hydroelectric projects, paving the way for climate-related legal actions by Indigenous peoples. These developments challenge the conventional investment law principles that tend to favor investor rights over community interests, signaling a significant shift in legal thought and practice (Wook, 2019). Additionally, the acknowledgment of environmental defenders as human rights defenders by various UN entities creates new opportunities for international legal protection and accountability.

When it comes to legal doctrine and teaching methods, bringing climate law and energy justice into the core of legal education is not just important, it is long overdue. Traditionally, legal programs in China, the United States, and ASEAN countries have treated environmental law as a side note. Yet, because climate law intersects with various fields like administrative, constitutional, trade, and human rights law, it calls for a fresh approach to legal training. For example, some US law schools are now offering specialized courses on topics like climate litigation, carbon markets, and environmental justice, showing that institutions are starting to recognize the vital role of law in the green transition.

In China, legal institutions are slowly rolling out climate-related courses, especially in areas like environmental administrative law and ecological civilization, guided by state initiatives. Meanwhile, in ASEAN, capacity-building programs backed by international organizations such as UNDP and GIZ are working to weave energy and environmental law into national judicial training systems (Gui, Overland, Suryadi & Yurnaidi, 2024). These changes in legal education are set to influence the future of law, preparing practitioners and scholars to effectively navigate and shape the legal frameworks of the Anthropocene.

The global push for legal harmonization is leading us toward a new, polycentric climate legal framework. Organizations like the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA), and the Climate Disclosure Standards Board (CDSB) are helping to shape soft law norms that impact national regulations. Take the Task Force on Climate-related Financial Disclosures (TCFD), for instance; it has sparked significant changes in how corporations govern themselves and report their finances.

Although these tools do not have the power to enforce compliance, the way national regulators and private entities are adopting them indicates a spread of climate norms through a mix of legal systems and regulatory imitation. China, for example, has woven elements of the TCFD into its green finance guidelines, while the US Securities and Exchange Commission (SEC) and ASEAN regulators are looking into requirements for climate-related disclosures. The legal landscape ahead will probably be marked by interconnected legal frameworks, where global standards interact with local laws in complex and sometimes conflicting ways. Grasping these intricate relationships will be essential for developing legal strategies that are both attuned to local needs and aligned with global principles (U.S. Securities and Exchange Commission, 2024).

At its core, the emergence of climate law and energy justice is transforming how we think about and structure the global energy system. What used to be a realm dominated by bilateral treaties and investor-state arbitration is now alive with discussions about fairness, transparency, and sustainability. Countries like China, the United States, and ASEAN showcase different legal approaches to the climate-energy connection, yet they are increasingly finding common ground due to shared challenges, global standards, and market dynamics. The legal environment is becoming more diverse and contested, with civil society, Indigenous groups, and local governments stepping up to claim legal authority alongside traditional state actors. Climate law has moved from the sidelines to the center stage; energy justice is more than just a buzzword; it is a legal reality. And the future of law is not set in stone; it is a battleground for change and creativity.

CONCLUSION

In today's world, where we see a mix of multipolar competition and the pressing need for energy transition, the law has taken on a role that goes beyond being a simple referee. Instead, it has become the main stage where geopolitical ambitions are defined, challenged, and solidified. This shift is both structural and strategic: legal tools now form the backbone of energy diplomacy, stepping in to replace and enhance traditional power plays like military might and economic sanctions. Take China, for example; it pushes forward its Belt and Road Initiative by carefully using bilateral investment treaties, regulatory alignment clauses, and dispute resolution mechanisms woven into both commercial and state contracts. Its legal framework is not just confined to its borders; it is transnational, shaping energy agreements that shift regional power dynamics across Asia, Africa, and Latin America.

On the other hand, the United States uses law as a means of extending its influence beyond its borders employing sanctions, anti-corruption laws like the Foreign Corrupt Practices Act, and international trade regulations to keep competitors in check and strengthen its regulatory grip. ASEAN finds itself in a more delicate position within this legal-political landscape, opting for a mixed approach: it leans into soft law frameworks, non-binding guidelines, and multilateral legal interactions to maneuver through dominant legal systems. Regional initiatives like the ASEAN Taxonomy for Sustainable Finance and a growing involvement with investor-state dispute settlement (ISDS) mechanisms show how legal instruments are not just about compliance and risk management, but also about strategically positioning themselves within a fragmented global energy governance framework.

As legal norms and frameworks adapt alongside geopolitical and technological changes, the way we approach energy politics is set to shape the future of both regional stability and global order. The race for energy supremacy is increasingly framed through legal tools like contracts, arbitration processes, environmental regulations, intellectual property rights, and climate laws. This legal embedding of power is evident in the growth of multi-jurisdictional legal platforms, the surge in climate-related lawsuits, and the strategic use of human rights and Indigenous legal systems to challenge energy infrastructures.

In this context, law is not just a mirror of power; it is a means of reproducing and expanding it. The legal structuring of energy strategies reshapes sovereignty, creates regulatory imbalances, and influences how risk and responsibility are distributed. As a result, the balance of power in international energy governance will be influenced not just by material strength or market control, but by how effectively states and non-state actors can shape, interpret, and implement legal norms across different jurisdictions. In this light, law is no longer a side issue, it is the central point around which the next chapter of global energy politics will turn. The consequences for international order are significant: as the legal frameworks of China, the United States, and ASEAN continue to take shape, the future of energy security will depend on which legal approach cooperative, dominant, or diverse comes out on top.

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