

# EMBEDDED SPATIAL PLANNING INSTRUMENTS OF COLONIAL HERITAGE IN HONDURAS

An exploration of how colonial legacies continue to shape contemporary spatial planning in Honduras, reinforcing historical inequalities and influencing current infrastructural solutions and mechanisms

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## Acknowledgements

Completing this thesis has been both a challenging and transformative journey. Academic writing has never come naturally to me, and the thought of crafting something so extensive felt daunting. Despite these challenges, I found value in my research, particularly as I discovered methods like autoethnography that allowed me to infuse a personal touch into the study of spatial planning. This approach connected me deeply with places that have been part of my life for years, but that I had never formally studied until now. Writing about Honduras while living in the Netherlands brought me closer to my roots and offered new insights into a country often misunderstood by others and even by myself. It was an immense privilege to conduct interviews with people who reside in my birth country and being able to gather their knowledge for this thesis.

I am grateful to my thesis supervisor, Dr. Francesca Pilo', for your patience and encouragement, which were crucial in helping me follow through. I also want to thank Dr. Patrick Witte, my thesis and programme coordinator, for your genuine support from the very beginning.

This journey was not just academic but deeply personal and, at times, painfully real. The support of my leaf Rox, who kept cheering me on with words of encouragement and care for Kookie, my 14-year-old furry familiar—who accompanied me to the library—made this journey possible and bearable. Special thanks to Zoochi, whose guidance helped me shape my research into something meaningful, and to Teri, my best friend since childhood, whose insights made my work clearer and more cohesive. Additionally, I want to thank AF for lending me the tools to create the graphics for this thesis.

Writing this thesis felt deeply unsettling as I watched people around the world endure unimaginable oppression, violence, and genocide—aware that it's sheer chance of birth that separates my reality from theirs. The absurdity of pouring energy into academic work while others fight for their survival served as a powerful reminder of the profound injustices that rule the world, which, in turn, fuelled my determination to finish this thesis, as it seeks to address those very issues.

I am appalled that 'european' countries, institutions, and even this university continue to support oppressive systems imposed by imperialist nations like the U.S. and Israel. Through direct ties and funding of weapons and surveillance manufacturers, they actively aid genocide and the brutal displacement of countless people. This complicity demands to be called out.

## Abstract

This thesis addresses the continued influence of colonial legacies on spatial planning practices in Honduras. It demonstrates how these deeply ingrained systems maintain inequality and marginalisation under the guise of ‘modern development’. By breaking down the historical development and institutionalisation of colonial instruments, particularly in the context of enclave developments such as the “Zones for Employment and Economic Development” (ZEDEs), the research draws attention to the profound contrast between the prioritisation of foreign exploitation and the needs and rights of local communities.

The research employs a qualitative approach, drawing on a deeply personal connection to Honduras and a commitment to decolonial justice. This includes semi-structured interviews, autoethnography, and a case study of Crawfish Rock, Roatán. The findings are deeply troubling, as they reveal a pattern of (normalised) infrastructural violence that continues to disenfranchise the most vulnerable, while elites and transnational corporations profit. My own journey through this research has served to reinforce my conviction that these oppressive systems must be resisted and dismantled.

In conclusion, this thesis is not merely an academic exercise; instead, it serves a practical purpose as a call to action. This entails a radical rethinking of spatial planning in Honduras, one that prioritises the voices and rights of those who have been silenced for too long. It was my intention to make a contribution to the decolonial movement through this work, advocating for spatial justice and the dismantling of the colonial structures that still haunt the landscapes of the Global South.

In this thesis, the terms “development”, “solution”, “improvement”, “prosperity” and “progress” will be used despite their colonial connotations. These terms, often perceived as positive, have historically been used to justify exploitation and the imposition of foreign values on indigenous and marginalised local communities. While these terms are employed for the sake of clarity, it is with a critical awareness that their impacts are complex and frequently harmful, especially within colonial and postcolonial contexts.

## Key concepts

Embedded Colonial Legacies, Spatial Planning, Honduras, Enclave Developments, Zones for Employment and Economic Development (ZEDEs), Infrastructural Violence, Decolonial Justice

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# 1. Introduction

Spatial planning and its associated practices have been a tool for ordering and demarcating space for centuries (Erakat, 2023). It has evolved into an integral instrument of ‘modern’ governance on a global scale (Ablo, 2022). Arguably, spatial planning can be seen as a tool of equity, aimed at ensuring a safe and improved quality of life for all (Interviewee #1, personal communication, December 8, 2023). However, its inherent “dark side” is being increasingly exposed, particularly in our ever more technologised and connected world (Yiftachel, 1998). The history and progression of spatial planning are closely intertwined with colonial agendas of conquest and division, which have shaped the fate of many colonised nations and continents for centuries (De Leeuw & Hunt, 2018).

Over the past 500 years, spatial planning has manifested in various forms across the globe (Baffoe & Roy, 2023). In some countries, it is referred to as “territorial” or “regional” planning (Almeida et al., n.d.), with a fully embedded position within the institutional and policy framework. In others, it lacks an official position within governance or is integrated into another institutional sector (C. Ferrufino, 2016). To gain insight into the workings of spatial planning practices and their impacts, particularly in Honduras, it is crucial to explore the geopolitical forces that have shaped the region (Maddrell et al., 2021). Spatial Planning did not emerge as a ‘modern’ discipline but as a result of hegemonic forces that divided the world into patterns for the so-called “common good” (Porter & Yiftachel, 2017). The canon of knowledge production in spatial planning often reproduces Western thought, thereby perpetuating white supremacy (Ortiz, 2023).

Recent critical studies have revealed that spatial planning approaches, presented as improvements or protections for local communities, have often intensified climate risks and increased community vulnerability, leading to ‘maladaptation’—where solutions meant to improve something end up making it worse (Gonçalves, 2023; C. A. Loperena, 2016). This is particularly evident in Honduras, where this occurs through the “dark side” of spatial planning, or territorial planning as it is known locally, characterised by a fragmented and inconsistent structure (Corrales Andino & Mondragón, 2016; Yiftachel, 1998). The lack of a cohesive framework has facilitated the instrumentalization of ‘enclaves as infrastructural solutions’ and their ‘enclaved infrastructures’, as I term them—driven by foreign influence and extractive practices (C. Loperena, 2022). Such enclaves are exclusive spaces with exclusive, mostly gated and monitored infrastructure, based on economic model cities, or charter cities like Hong Kong—that aim to bring prosperity and stability to “underdeveloped regions” (Ebner & Peck, 2022). This thesis explores how enclaves are instrumentalised in spatial planning as tools for prosperity, focusing on ‘enclaves as infrastructural solutions’ and their ‘enclaved infrastructures’ and how they affect their surroundings. Enclave logics and



developments are deeply tied to the country's colonial legacy and the persistence of concession and extractive enclaves as a primary approach to spatial deficiencies (Caldeira, 1996; Kenney-Lazar, 2020).

Historically, concessions have constituted a pivotal legal instrument through which external powers have been able to exert control over territory, thereby enabling the establishment of mining and banana enclaves (Urbonavičius, 2010). This legal framework, which has its roots in colonial practices, continues to shape the development of Spatial Planning strategies in Honduras today, particularly in the context of 'enclave as infrastructural solutions' like the ZEDEs (Palma-Herrera, 2019).

The importation of spatial planning strategies in Honduras has been significantly shaped by external forces, continuing a cycle of dependency that can be traced back to the legacy of settler colonialism (Fash, 2022). This internalised dependency, or internal colonialism (Fash, 2022; Pinderhughes, 2011), serves to perpetuate the embrace of spatial planning strategies and mechanisms inspired by extractive or utopian ideologies that would not be permissible under stricter regulations in the West (Perdomo, 2024). This research examines the impact of these imported and internalised strategies on the Honduran territory, with a particular focus on 'enclaves as infrastructural solutions'.

Like Fash (2022), I connect extractivism with settler colonialist logics and practices of domination, which are deeply embedded in the spatial strategies employed in Honduras. This thesis examines the neocolonial manifestations of the controversial "Zones for Employment and Economic Development" (ZEDEs), which exemplify extractive strategies through their 'enclaved infrastructure' (C. A. Loperena, 2017a). By drawing on decolonial theory, this thesis analyses the ways in which these spatial strategies perpetuate colonialist logics at different levels (Wijsman & Feagan, 2019), namely the macro, meso and micro levels.

The macro level addresses the broader historical and geopolitical context of spatial planning in Honduras, situating these 'enclaves as infrastructural solutions' within the larger framework of national spatial strategies (Interviewee #1, personal communication, December 8, 2023). At the meso level, the focus is on the emergence and impact of 'enclaved infrastructures' of ZEDEs as materialisations and instruments of colonial heritage, with an examination of how these zones are shaped by and contribute to ongoing patterns of domination and extraction (Interviewee #4, personal communication, March 26, 2024). Finally, the micro level provides an in-depth case study of the ZEDE Próspera in Crawfish Rock, Roatán, exploring its direct impacts on the local community and how it exemplifies the broader trends discussed (Interviewee #2, personal communication, April 4, 2024).

Drawing on autoethnography (Erakat, 2023), this thesis is enriched with personal observations and experiences gained during my visits to Honduras over the past thirty years. As a person born in Honduras but raised in the Czech Republic, I offer a different perspective on this research. This research is imbued with a personal dimension, reflecting both my professional interest in spatial justice and my connection to my Honduran roots. The objective of this research is to shed a light on ebbs and flows of spatial planning strategies and instruments in Honduras and to promote the implementation of more coherent and non-oppressive spatial planning practices. Spatial planners must deconstruct the ‘master narrative’ of Western urban thought and the infrastructures that reproduce it (Ortiz, 2023, p. 180).

## 1.1 Research questions

This research addresses the existing knowledge gap regarding the impact of ‘enclaves as infrastructural solutions’ and ‘enclaved infrastructures’, with a specific focus on the Honduran context. Here, spatial planning practices, or the lack thereof, have enabled the proliferation of enclave approaches in spatial planning (Palma-Herrera, 2019). Furthermore, the thesis analyses the role of legal instruments, such as concessions, in enabling the development of these enclaves as colonial spatial planning instruments in a new coat, with a particular focus on the ZEDE Próspera in Crawfish Rock (C. E. Ferrufino & Grande, 2013). The objective is to gain insight into the wider implications of these ‘solutions’ within the Honduran spatial planning framework and their impact on local communities.

To explore this, the research is structured around the following main question and sub-questions:

Main research question:

**What are the effects of an ‘enclaved infrastructure’ on an indigenous island community in Honduras, specifically in the case of Crawfish Rock and the ZEDE Próspera?**

Sub-questions:

- 1. What are the principles and dynamics that have shaped Spatial Planning in Honduras since colonial times, and how have concessions played a role in this process?**
  - This question explores the historical and geopolitical context of Spatial Planning in Honduras, focusing on how legal mechanisms like concessions have influenced the trajectory of instruments and mechanism embedded in Spatial Planning in Honduras.

**2. How does Honduran Spatial Planning contribute to territorial fragmentation, and how does this fragmentation facilitate the development of ‘enclaves as infrastructural solutions’ like ZEDE Próspera?**

- This question investigates the structural aspects of Honduran Spatial Planning as an institution that enables the emergence of such developments, linking past colonial practices to present-day outcomes.

**3. How does the community of Crawfish Rock perceive and cope with the impact stemming from the ZEDE Próspera enclave?**

- This question focuses on the community’s responses and adaptations to the presence of the ZEDE, based on interviews or testimonies from local residents.

The following research questions aim to guide a multi-faceted analysis of the role of ‘enclaves as infrastructural solutions’ in Honduran spatial planning, and the extent to which concessions facilitate these developments. By addressing these questions, the thesis aims to provide a nuanced understanding of the dynamics at play and to contribute to the discourse on non-oppressive spatial planning practices.

## 1.2 Scientific relevance

The scientific relevance of this thesis lies in its critical examination of spatial planning practices and their impacts on local communities, with a specific focus on Honduras. By investigating the effects of neoliberal enclave developments, particularly the ZEDE Próspera, on the indigenous community of Crawfish Rock, this thesis addresses a significant gap in existing academic literature. This thesis makes a contribution to the discourse on spatial planning by demonstrating how historical colonial dynamics and contemporary neoliberal policies have perpetuated territorial fragmentation, inequality and infrastructural violence, as addressed in-depth in sub-chapter 2.2 (Maddrell et al., 2021).

A significant aspect of this research is its investigation of the role of concessions, which are typically applied in sectors such as economics and natural resource extraction (Ullah et al., 2016), as a previously overlooked but pivotal lens in spatial planning (Kenney-Lazar, 2020). Historically, concessions have been granted to private entities, allowing them extensive rights to extract and exploit (non-renewable) natural resources, particularly in the context of enclaves such as those established for banana plantations and mining operations (Palma-Herrera, 2019). Despite their pervasive use in a range of fields, the implications of concessions as a legal mechanism within spatial planning remain under-explored (Kenney-Lazar, 2020). This thesis seeks to bridge that

gap by examining how such legal instruments continue to shape ‘modern’ infrastructural developments like the ZEDEs.

Methodologically, this thesis is grounded in a case study approach, employing semi-structured online interviews with members of the Crawfish Rock community to gain insights into their experiences and perceptions of the ZEDE Próspera enclave (Bennett & Elman, 2006). The integration of autoethnography provides a valuable additional dimension to the research, offering insights derived from the researcher's personal observations and reflections, informed by their unique perspective as someone with roots in Honduras (Erakat, 2023). This combination of methods enhances the qualitative depth of the thesis, offering valuable contributions to the fields of spatial planning, political geography, and governance studies (Porter, 2010; Smiet, 2022).

Moreover, this thesis makes a contribution to geopolitical studies and governance research by examining how spatial planning practices are manipulated by elite interests in order to reinforce existing power structures and socio-economic dependencies (Gutiérrez, 2024). By examining these intersections in the context of the Global South, the thesis offers new insights into the complex relationships between spatial planning, legal mechanisms such as concessions, and governance (Interviewee #5, personal communication, December 13, 2023).

### 1.3 Societal relevance

This thesis addresses a critical societal issue, namely the impact of spatial planning practices on vulnerable communities, with a particular focus on Honduras. By examining the ZEDE Próspera enclave and its impact on the indigenous community of Crawfish Rock, this thesis draws attention to the frequently overlooked consequences of neoliberal development strategies (Davoudi, 2017). It stresses the necessity for planning processes that are equitable and inclusive—in other words, non-oppressive—with a focus on the well-being and rights of local populations, rather than on the interests of elites and global trends (Calderón & Servén, 2004).

The findings of this research have the potential to inform policymakers, planners, and activists about the ill effects of top-down, extractive spatial planning approaches. The thesis advocates for the adoption of more sustainable and community-centered ‘solutions’ that can better serve the needs of those most affected by such (Tellman et al., 2018). Furthermore, this work contributes to the broader discourse on decolonial governance and the ongoing struggles of communities in the Global South as they contend with the enduring impacts of colonialism and neoliberalism (Clements et al., 2022).

By emphasising the importance of protecting local rights and promoting sustainable ‘solutions’, this thesis aims to inspire a shift towards non-oppressive urban and spatial planning practices. In conclusion, the objective is to make a contribution to the creation of planning frameworks that not only address the current challenges but also build long-term resilience for communities facing similar threats worldwide (Majoor, 2015).

## 1.4 Reading guide

This thesis is structured to provide a comprehensive exploration of spatial planning practices and their impacts in Honduras. **Chapter 2** synthesises existing literature and presents the conceptual framework that underpins the research, thereby establishing the theoretical foundations for subsequent analysis.

**Chapter 3** outlines the research methodology, detailing the strategies for data collection and analysis employed to investigate the subject matter effectively. **Chapter 4** builds on this foundation by examining the intricacies of spatial planning in Honduras, focusing on the mechanisms behind key spatial planning instruments such as extractivism, concessions, and enclaves. **Chapter 5** builds on these insights by examining how enclaves function as ‘infrastructural solutions’ and investigating the evolution of ‘enclaved infrastructures’ that have developed from historical extractivist and concession-based practices. This is illustrated through an in-depth case study of Crawfish Rock. **Chapter 6** presents a comprehensive discussion of the findings. Concluding with **Chapter 7** by reflecting on the research questions and offering recommendations that highlight the implications of this research for future spatial planning and policy development.

## 2. Literature review

This thesis brings together insights from three distinct fields—spatial planning, political geography, and governance studies—to examine the key concepts of colonial legacy, extractivism, concessions, and ‘enclaved infrastructures’. The literature review initially examines the manner in which spatial planning, particularly in the context of postcolonialism, continues to be significantly shaped by historical colonial practices (Chigudu, 2021; Hoffmann, 2014; Mahoney, 2001; Santos et al., 2022). This reveals the intricate interweaving of past ideologies and contemporary planning approaches (Baffoe & Roy, 2023).

Sub-chapter 2.1 examines spatial planning in the current postcolonial context, exploring how these legacies continue to inform and shape ‘modern’ governance and spatial planning (Santos et al., 2022). It examines the role of extractivism and concessions as instruments that perpetuate socio-spatial inequities, particularly in the Global South (Prunier, 2021).

In sub-chapter 2.2, the focus is shifted to the evolution of ‘enclaved infrastructures’, identifying their roots in colonial planning and examining their ‘modern’ manifestations in “Special Economic Zones” (SEZs) and “Zones for Employment and Economic Development” (ZEDs) (Amoah & Tampah-Naah, 2023; Sumich, 2023). These ‘modern’ enclaves, frequently characterised as “spaces of exception”—as Loperena (2017a) terms them—are examined for their role in reinforcing socio-technical hierarchies and contributing to infrastructural violence (Amoah & Tampah-Naah, 2023).

Subsequently, sub-chapter 2.3 integrates these insights into a conceptual framework that will inform the thesis, offering a structured approach to understanding the ongoing influence of colonial and neoliberal planning ideologies in contemporary spatial planning practices.

### 2.1 Spatial planning in postcolonial contexts

Colonialism and spatial planning share a deeply intertwined history (Porter & Yiftachel, 2017). This thesis aims to explore how past colonial planning ideologies continue to significantly influence contemporary planning practices. A multi-layered literature analysis on the relationship between the oppressive rule of colonialism rooted in white-supremacist ideologies and today’s planning practices reveals a reciprocally fed cycle touching on politics, geography, cultural and ethnic hegemonies, and the need to control territory and the societies living on it (Yiftachel, 1998).

Spatial planning is often portrayed as progressive and reformist, beneficial to urban and regional growth and development (Geertman, 2022). However, its inherent "dark side" is being increasingly exposed, particularly in our increasingly technologised and connected world (Yiftachel, 1998).

While academic and public discourse often presents spatial planning as a tool capable of being a catalyst for positive societal transformation (Beebeejaun, 2022; Geertman, 2022; LaFleur, 2021; Nursey-Bray et al., 2022; Porter, 2010; Yiftachel, 1998), this interpretation overlooks the regressive elements inherited from colonial practices, resulting in the implementation of universal planning tools in decision-making about public spaces, land development, (tourist) infrastructure, and urban and rural environments (Harris & Moore, 2013; Porter, 2010; Wijsman & Feagan, 2019).

It is important to also highlight another prominent characteristic that the spatial planning practice promises to deliver—specifically the promise “of overcoming market failures, by providing public goods, internalising externalities maximising economic growth, facilitating capital accumulation, coordinating development, and minimising transaction costs” (as cited in Yiftachel, 1998, p. 4), this is supported by further literature as seen in Alexander (1992), Andersson (2016), Baffoe & Roy (2023), Chapin (1965), De Leeuw & Hunt (2018), Hall (1975), Legg & McFarlane (2008), Porter (2010).

Spatial planning has shaped our environments long before it was formalised as a discipline known as ‘spatial planning,’ ‘urban planning,’ ‘regional planning,’ or ‘territorial ordering,’ etc (Porter, 2010). Despite popular claims within spatial planning theory and practice that spatial planning mitigates social disadvantage through democratic and public discourse (Geertman, 2022), there is growing recognition of its coercive aspects (Davoudi, 2017). Addressing these myths within planning and governance epistemologies requires acknowledging that planning practices often lack nuance and care due to their failure to incorporate decolonial and therefore also intersectional perspectives, in particular those informed by feminist, socio-political, and geo-political lenses (Weisman, 1994; Wijsman & Feagan, 2019). Ignoring the historical context in which spatial planning and governance have served as a tool of social control and oppression by elites perpetuates this injustice (Baffoe & Roy, 2023; Dorries, 2022; Erakat, 2023; Frankema, 2010; C. Loperena, 2022; C. A. Loperena, 2016; Porter, 2010).

The power imbalances that have often rendered spatial planning a tool of oppression, segregation, and control are well documented (Blatman-Thomas & Porter, 2019; Lang, 2018; Porter, 2010; Yiftachel, 1998). While spatial planning can afford either progression or regression, the persistent social inequalities across inhabited spaces undeniably demonstrate the powerful role planning plays through governmental institutions, their governance, and internal processes (Frankema, 2010). The colonial

roots of spatial planning are informed by the omnipresent patriarchal systems that have shaped our planetary geographies (Forde, 2022; Yiftachel, 1998). These systems have historically prioritised male-dominated control of land and natural resources, designed public spaces that often neglect the needs of marginalised groups, i.e. people who are not cisgender heterosexual white men, leading to the exclusion of these groups from decision-making processes (Gauger, 2020; Noxolo, 2024; Weisman, 1994; Wijsman & Feagan, 2019). As a result, spatial planning has frequently reinforced gender inequalities and prioritised economic interests over social needs, effects that persist in contemporary practices (Datta & Ahmed, 2020; Lyra, 2023; Murrey & Mollett, 2023). Scholars like Wajcman (1991) and Weisman (1994) have articulated the connection between the built environment and patriarchal structures, reinforcing this perspective (Yiftachel, 1998).

Porter (2010), along with Baffoe & Roy (2023) sheds a light on the ongoing impact of colonialism on contemporary planning practices and the governance of territory, particularly in former colonies of the global South. These authors highlight the need for further exploration of how colonial legacies continue to influence contemporary planning practices. Porter (2010) argues that spatial planning is to be seen as a social practice of spatial ordering, rooted in western state-based land use planning. This perspective is supported by examples from postcolonial cities and landscapes, especially in the Global South (Baffoe & Roy, 2023), such as Tegucigalpa, Dhaka, Paramaribo and Jakarta.

The colonial project, historically characterised as a military occupation of a territory by capitalist powers, continues to influence contemporary spatial planning through the accumulation of wealth by means of (non-renewable) natural resource extraction and land theft (Baffoe & Roy, 2023; Sorensen, 2015; Yiftachel, 1998). The accumulation of wealth through extraction of (non-renewable) natural resources and land perpetuates the violent logic of elimination it is rooted in (Erakat, 2023; Fash, 2022; Forde, 2022; C. Loperena, 2022). This logic of elimination seeks to erase indigenous peoples and their knowledge systems, asserting sovereignty over territory under the guise of universal prosperity (Beebeejaun, 2022; Forde, 2022; C. A. Loperena, 2017a; Nursey-Bray et al., 2022). Furthermore, this elimination of difference and maintenance of imposed power structures often disregards the rightful stewards and owners of the land (Hildebrand, 2012; C. A. Loperena, 2017b).

Analysing these violent logics underscores the economic motivations behind colonial and neocolonial expansion, which continue to impact urban and regional spatial planning practices in today's so-called postcolonial era (Ibrahim et al., 2021; Legg & McFarlane, 2008). Moreover, the entanglement of spatial planning with colonialism extends beyond physical space. In settler colonial societies, planning has become a cultural artifact of colonialism, a signifier of dominance and oppression (Blatman-



Thomas & Porter, 2019; Porter, 2010). For instance, in settler colonies like Australia, spatial planning has been implemented as a powerful tool by past and present governance regimes to dispossess indigenous peoples, rendering the planning practice inherently anti-BIPOC and oppressive (Nurse-Bray et al., 2022; Porter, 2010).

The global dissemination of spatial planning ideas, ideologies, and techniques from the Global North to the Global South, and from the West to the East, further illustrates the imperialist project of exporting/transplanting planning expertise to facilitate capitalist expansion under the guise of innovative formats of neocolonial projects in an assumed postcolonial period (Harris & Moore, 2013; Monstadt, 2022). Generating new exchanges between research on spatial planning and the circulation of planning policies within current geo-political contexts is “key to distinguishing the salient characteristics of ‘urban borrowings’ in the current era” (Harris & Moore, 2013, p. 1501).

As a whole, the internalised logics and approaches, employed by governments and spatial practitioners, perpetuate socio-spatial and socio-technical inequalities related to the built environment (J. Berg & Shearing, 2024; Dorries, 2022; Graham & Marvin, 2001; Harris & Moore, 2013; Neuman & Smith, 2010).

The inherently political nature of spatial planning is deeply intertwined with the exercise of power and control over territory and populations, facilitating economic growth and physical and social domination by the privileged (Andersson, 2016; LaFleur, 2021).

That is why contemporary spatial planning practices need to be understood as part of the historical context of colonialism and its ongoing impacts (MacNeill, 2017).

Recognizing and questioning these colonial legacies, which underlie the power dynamics shaping our natural and built environment, can inform strategies for resisting and decolonising the inequalities and injustices perpetuated by spatial planning epistemologies and practices (Jin & Schulze, 2024). The following sub-chapter, will explore the specific colonial legacies most relevant to this thesis, examining how they continue to influence and shape ‘modern’ spatial planning practices.

### 2.1.1 Colonial heritage as an instrument embedded in spatial planning

The colonial legacy embedded in spatial planning is deeply intertwined with the practices of extractivism and concessions, both of which serve as powerful instruments of control, exploitation, and socio-spatial fragmentation that enable exclusionary infrastructural developments/projects (Murrey & Mollett, 2023; Prunier, 2021). These practices, rooted in colonial ideologies, have evolved over time, but continue to influence contemporary spatial planning, particularly in the Global South (Dorries, 2022). This sub-chapter will discuss these dynamics in detail, drawing on existing literature to explore how these colonial legacies persist and shape ‘modern’ spatial planning practices.

Extractivism as a foundational practice, as explored by Acosta (2013), Arnett (2021), Castellanos (2021), Fash (2022), C. A. Loperena (2016, 2017a), Picq (2020), Prunier (2021), Roux & Gaglia (2019), Svampa (2015), Talavera (2024), refers to the profit-driven economic model of large-scale natural resource extraction, often for export, that has significant environmental, spatial, and social impacts. This practice predates the formal use of concessions, being rooted in pre-colonial and early colonial periods when various civilizations engaged in natural resource extraction for trade (Svampa, 2015). However, extractivism became more systematic and pronounced during the colonial era, during the 15<sup>th</sup> and 16<sup>th</sup> centuries, as European powers established extractive economies in their colonies, drawing on resources like gold, silver, and rubber to fuel their own economies (Prunier, 2021; Talavera, 2024).

The colonial period marked the establishment of extractivism as a cornerstone of exploitation, where colonisers controlled the land and labour of indigenous populations to extract and export resources, often involving the appropriation and extraction of natural resources without restoration or care for the regions or socio-natural relations previously maintained by local communities (Fash, 2022). This process laid the groundwork for 'modern' extractivism, which remains a dominant economic model in many countries, particularly in Latin America, Africa, and parts of Asia (Murrey & Mollett, 2023). Extractivism has continued to evolve, now encompassing not only natural resources, but also cultural appropriation and human exploitation within a global techno-capitalist system (Acosta, 2013).

In many cases, extractivism is deeply rooted in settler colonialism, where white settlers seek to eliminate and replace indigenous populations to gain control of territory (Wolfe, 2006). This entails building new socio-economic structures on top of pre-existing ones, often through both occupation and exploitation (Erakat, 2023; Speed, 2017; Wolfe, 2006). However, in certain contexts, particularly in non-indigenous territories, extractivism may also align with theories of internal colonialism (González Casanova, 2006). Here, the exploitative practices typically associated with external colonial powers are carried out by domestic elites who internalised colonial ideologies, leading to a domestic form of extractive colonialism (González Casanova, 2006; Hechter, 1975; Pinderhughes, 2011).

Fash (2022) argues that not all forms of extractivism fit neatly within the framework of settler colonialism, as many endeavours are characterised by temporary appropriation of natural resources rather than permanent occupation, and do not necessarily involve the removal of indigenous people but rather the extraction of natural resources or the displacement of non-indigenous communities. It is crucial to link these colonial, settler colonial, and internal colonial elements of extractivism to the 'modern' day, where the belief in perpetual improvement and natural resource extraction stems from a colonial

mindset, justifying contemporary extractive projects while disregarding local socio-ecological impacts (Mignolo, 2008).

As extractivism became a more embedded and normalised practice, the need to regulate and control natural resource extraction grew, particularly with the involvement of private companies (Brand et al., 2016). This led to the formalisation of concessions—a legal tool and mechanism that grants private entities the right to exploit specific state-owned natural resources or infrastructure for a certain period of time, often in exchange for financial compensation or other benefits (Kenney-Lazar, 2020; Nwankwo & Kifordu, 2020). Concessions became more prominent during the colonial period, when they were used by the European hegemony to systematise and legalise extraction processes, often involving foreign companies (Frankema, 2010; Jin & Schulze, 2024; Kenney-Lazar, 2020; Njoh & Bigon, 2015).

In the postcolonial era, many newly independent states continued to use concessions as a way to attract foreign investment and generate revenue, often perpetuating the extractive practices established during colonial times (Palma-Herrera, 2019). The establishment of territorial concessions, which were often reluctantly granted after violent battles over land and power, provided a means for imperial powers such as Europe and the United States to grant land and natural resource rights to international investors (Laínez & Meza, 1974). These investors would then set up plantations, log forests, and extract minerals, typically after colonial territories had been firmly established (Frankema, 2010; Interviewee #6, personal communication, May 25, 2024). These postcolonial concessions facilitated the continued exploitation of natural resources, reinforcing the colonial legacies embedded in spatial planning (Kenney-Lazar, 2020). Concessions became an indispensable mechanism through which space for extraction is produced and contested, reflecting the ongoing political and relational dynamics that shape spatial planning practices (Urbonavičius, 2010).

Ullah et al. (2016) and Xiong et al. (2020) conceptualise concessions as a form of public-private partnership, where the concessionaire is granted the right to utilise specific land infrastructure or provide infrastructure services over a long period while collecting revenue from it. Concessions are further characterised by a “higher degree of private-sector participation and a lower degree of public-sector control” (Xiong et al., 2020, p. 4).

Kenney-Lazar (2020) emphasises that concessions, particularly in the context of land, are not merely rational and objective planning endeavours, as they are often presented, but rather emerge from relational and political dynamics. This perspective aligns with Castellanos’ (2021) critical understanding of concessions, which highlights the intricate interactions among government officials, business representatives, and local land users, illustrating how political interests, priorities, and power dynamics shape the

outcomes. Consequently, attributing issues such as illegal land use or opaque land allocations, commonly known as land grabbing, to a mere lack of planning is insufficient and overlooks the deeply political nature of spatial planning (Kenney-Lazar et al., 2022).

Contrary to normative beliefs, spatial planning is a highly political process, shaped by a multifaceted and multi-layered pool of actors, rather than a technocratic and unbiased rational practice. Kenney-Lazar et al. (2022) uses the term 'spatial politics' to describe how political relationships and interactions among the involved entities—such as the priorities of powerful actors, the relations between state investment versus environmental ministries, and the nature of interactions between state actors and investors—are crucial for understanding the complexities of spatial planning.

This perspective suggests that problems in the sectors of spatial planning, territory, and economy cannot be resolved through technical solutions alone, especially if they fail to acknowledge the larger political dynamics at play (Benson et al., 2023; Kenney-Lazar, 2020; Kenney-Lazar et al., 2022). Spatial planning is arguably an indispensable tool that allows for territory to be politicised, transforming abstract governmental visions into a physical and comprehensible form within society (Kenney-Lazar & Mark, 2021; Yiftachel, 1998). Kenney-Lazar's (2020) relational and political understanding of concessions complements Castellanos' (2021) historical critique, both of which underscore how contemporary spatial planning practices remain deeply rooted in colonial legacies.

A number of postcolonial states continue to use concessions as a preferred tool to seemingly restrict foreign investment to specific, designated areas (Kiesel & Dannenberg, 2023; Palma-Herrera, 2019; Roux & Geglia, 2019; Sumich, 2023; Titilayo, 2023). This practice highlights how the colonial legacy of concessions continues to shape the political and economic landscapes of postcolonial nations, perpetuating the patterns of exploitation and control established during the colonial era (Sidaway, 1992).

The relationship between extractivism and concessions is characterised by a high degree of interdependence (Svampa, 2015). While extractivism is the overarching economic and social practice of natural resource extraction, concessions provide the legal and institutional framework that facilitates these activities (Talavera, 2024; Urbonavičius, 2010). The creation of enclaves and their 'enclaved infrastructures', which are isolated areas where natural resources are intensively extracted for export and are disconnected from the local economy, mirrors historical colonial practices and continues to reinforce socio-spatial, socio-technical and socio-economic inequalities (Acosta, 2013).

Such ‘enclaved infrastructures’ are not just a byproduct of the extractivist model, they are rather central to its operation (Titilayo, 2023). A closer examination of these enclaves reveals that their formation and governance are driven by a neoliberal capitalist agenda (Araya Pocher, 1979). This agenda prioritises economic gains for transnational corporations and local elites, perpetuating cycles of spatial injustice and environmental degradation (Harrison & Croese, 2023; Picq, 2020; Sidaway, 1992).

The following sub-chapter will provide a more detailed examination of the infrastructure of these enclaves and the mechanisms through which they exert control over both territories and communities (Graham & Marvin, 2001; Yiftachel, 1998). By analysing the spatial planning practices that underpin these structures, the deep-rooted inequalities that continue to shape these landscapes can be identified. This examination will reveal not only how enclave urbanism has been re-implemented under the guise of environmentally beneficial developments/projects not rarely leading to ‘maladaptation’, but also how it serves to reinforce the colonial logic of natural resource exploitation and land appropriation (Erakat, 2023; Porter, 2023; Schipper, 2020). This approach allows us to gain a deeper understanding of the significant influence these ‘enclaved infrastructures’ have on local economies and their susceptibility to how the global market fluctuates (Kallianos et al., 2023; Martinez et al., 2021).

## 2.2 Enclaves as infrastructural solutions

The development and evolution of ‘enclaves as infrastructural solutions’ represent a complex interplay of historical, economic, and geopolitical forces, deeply rooted in colonial and postcolonial planning ideologies (Araya Pocher, 1979; Palma-Herrera, 2019). Historically, enclaves were strategically created as isolated pockets for natural resource extraction, serving the interests of colonial powers while often excluding and marginalising the local populations (Caldeira, 1996; Palma-Herrera, 2019). Early enclaves were characterised by their physical isolation, economic disconnection from surrounding regions, and a focus on extracting natural resources for export, with little to no benefit long-term benefit for the local economies (Kadir, 2010).

Enclaves have appeared in various forms across the globe, each adapting to the specific colonial or economic needs of the time (Kadir, 2010; Sumich, 2023). In Africa and Latin America, for example, colonial powers established mining enclaves that exploited rich natural resources with little regard for the indigenous populations (Araya Pocher, 1979; Chigudu, 2021). These enclaves were connected to the global economy primarily through infrastructure designed to facilitate extractivism, such as railways and ports, but remained largely disconnected from local economies and societies (Palma-Herrera, 2019).

In Asia, particularly in China and India, the concept of enclaves evolved in the postcolonial era with the introduction of “Special Economic Zones” (SEZs) (Kiesel & Dannenberg, 2023). China’s SEZs, like those in Shenzhen, were initially established as experimental zones for economic liberalisation and have since evolved into major urban and economic hubs (Douglass et al., 2012). Despite their proclaimed economic success, these zones often maintain characteristics reminiscent of their colonial predecessors—such as economic segregation and limited integration with local economies (Galonnier, 2015). These enclaves, particularly in the Global South, have been described as exclusionary spaces or spaces that cater primarily to elites, offering preferential access to amenities and services like water, electricity, and security, while surrounding areas suffer from neglect (Baumann, 2016).

The evolution of these enclaves into SEZs and, more recently, “Zones for Employment and Economic Development” (ZEDEs, discussed in detail in Chapter 5) in countries like Honduras represents a continuation of the enclave model under new guises (Buonocore et al., 2023). ZEDEs, for instance, are promoted as vehicles for economic development and prosperity, offering liberalised regulatory environments to attract foreign investment (Martinez et al., 2021). These zones operate under unique legal and regulatory frameworks that often exempt them from national laws, effectively making them “spaces of exception” where normal legal and social rules do not apply (C. A. Loperena, 2017a; Palma-Herrera, 2019). However, these “spaces of exception” often ignore the specific historical, environmental, and social contexts of the regions in which they are established, leading to outcomes that replicate the extractive and exclusionary practices of earlier enclaves (CNA, 2021). Central to this model is the concept of rent-capture, where economic elites and foreign investors capitalise on the value generated within these zones, capturing economic rents while contributing minimally to the local economy, thus exacerbating socio-economic inequalities (C. Loperena, 2022).

Infrastructure plays a crucial role in developing and sustaining these enclaves, both historically and in contemporary times (Araya Pocher, 1979). The promise of infrastructure development is often used to justify the creation of SEZs and ZEDEs, with the argument that improved infrastructure will lead to regional and economic development (R. C. Berg & Carusi, 2022; Mason et al., 2021). However, the reality is often more complex. While infrastructure within these zones may be highly developed, it is frequently disconnected from broader regional infrastructure, limiting its positive impact on surrounding areas (CNA, 2021). Moreover, the models of infrastructure development often borrow from other countries where SEZs have been successful, but these models do not always translate effectively due to differing local contexts (Buonocore et al., 2023).

‘Enclaved infrastructure’ extends beyond the mere physical presence of roads, electricity, and water systems (Graham & McFarlane, 2015). It encompasses the socio-political, socio-technical processes and historical patterns that shape these infrastructures (Pilo’ & Jaffe, 2020), often rooted in colonial and neoliberal planning ideologies (Addie, 2024; Cousins, 2019; Graham & Marvin, 2001; Sumich, 2023). These infrastructures are not just about providing services; they are also about maintaining socio-economic hierarchies and control (Graham & Marvin, 2001).

The notion of infrastructural violence further complicates the role of infrastructure in these enclaves (Titilayo, 2023). Infrastructural violence refers to the ways in which infrastructure perpetuates inequality and marginalisation, particularly through exclusionary practices (Boehmer & Davies, 2018; Datta & Ahmed, 2020; Erakat, 2023; Rodgers & O’Neill, 2012). This violence is not only physical but also symbolic, serving to reinforce social hierarchies and territorial control, often at the expense of marginalised communities (Cousins, 2019; Nixon, 2011; Thomas, 2021). As Sumich (2023) asserts, “Rather than solely acting as an outgrowth of the most exclusionary aspects of contemporary capitalism, I argue that enclaving is a highly malleable strategy of enacting power despite its enduring failure” (p. 1(p. 137). This observation demonstrates the malleability of enclave practices as instruments of socio-political control, despite their continued production of exclusionary outcomes.

Erakat (2023) highlights the “eliminary nature” of ‘enclaved infrastructure’, which leads to the deterioration or withdrawal of services in surrounding areas, widening socio-economic divides. This process is deeply embedded in the historical and political contexts of the regions where these enclaves are established, continuing the legacy of colonial exploitation and control (Baumann, 2016; Filčák & Škobla, 2021).

In contextualizing ‘enclaved infrastructure’ within the symbolic and palpable value of land appropriation through settler colonial logic, its role in reinforcing territorial claims and the segregation of indigenous and economically and socially marginalised populations becomes evident (Caldeira, 1996; Mones, 2023). For instance, the construction of roads and other infrastructures in Palestine paradoxically serves to create and reinforce settler spaces while dispossessing and segregating Palestinian communities (Baumann, 2016; Desille & Sa’di-Ibraheem, 2021; Erakat, 2023; Feldman, 2015; Yacobi & Milner, 2022). Israeli settlers control the movement and mobility of Palestinian populations by constructing segregated road networks that limit Palestinian access and connect only Israeli settlements (Fúnez-Flores, 2023). This restriction of movement is compounded by the control over vital resources, such as water (Yacobi & Milner, 2022). In Gaza, Israeli authorities tightly control water resources, severely limiting the water intake of the Palestinian population (McKee, 2019). This combination of restricted mobility and resource control exemplifies infrastructural violence, as it systematically undermines the daily lives and well-being of Palestinians (Boehmer &

Davies, 2018). This process, described as “planned violence” or “destructive creation,” involves the material and symbolic erasure of indigenous geographies to make way for new settler societies and spaces (Boehmer & Davies, 2018; Graham & McFarlane, 2015). This aimed violence exerted by control over infrastructure goes beyond ‘maladaptation’, being utilised in the most vile ways to ethnically cleanse an entire nation (Nijim, 2023).

The concept of “toxic geographies”, as discussed by Davies (2022), highlights the disproportionate impact of environmental hazards linked to infrastructural development and infrastructural violence, exemplified by war-fare or genocidal acts on marginalised communities (Baumann, 2016). The use of spatial planning as a tool for power and control reveals its regressive origins (Balletto et al., 2022, 2022; Vardanyan, 2023; Weizman, 2003; Yiftachel, 1998).

The epistemologies surrounding infrastructural violence emphasise the necessity for a critical and inclusive approach that is grounded in non-oppressive thought (Boehmer & Davies, 2018; Fúnez-Flores, 2023). It is imperative to expand the social, spatial, and temporal horizons of infrastructural developments/projects in order to mitigate the creeping injustices inherent in such developments (Anand et al., 2018).

The legacy of extractivist and concession practices continues to shape contemporary spatial planning and infrastructural development (Anand et al., 2018). This is evidenced by the creation of ‘modern’ day enclaves, such as “Special Economic Zones” (SEZs) and “Zones for Employment and Economic Development” (ZEDEs) (Palma-Herrera, 2019). To analyse the patterns of the discussed literature a conceptual framework is presented in the following sub-chapter.

## 2.3 Conceptual framework

This conceptual framework draws on the insights synthesised from Chapters 2.1 and 2.2 to provide a coherent structure for analysing the ongoing influence of colonial planning ideologies and instruments embedded within the context of spatial planning. The framework is anchored in decolonial theory (Mendoza, 2020) and serves as the primary lens through which this research examines ‘colonial heritage as an instrument embedded in spatial planning’ (macro scale) and ‘enclaves as infrastructural solutions’ (meso scale), their manifestation in the built environment, and the identification of their impact on a local level (micro scale).

While this thesis focuses on the persistence of colonial legacies in spatial planning, these legacies are embedded within broader systems of oppression (Wijsman & Feagan, 2019). The confluence of race, gender, and class under colonial rule has resulted in a world where marginalised groups continue to confront a multitude of challenges, underscoring the



necessity for decolonial theory to encompass a nuanced comprehension of these intersections (Scauso, 2020). While gender is not the primary focus of this research, it is undeniably linked to the colonial framework that underlies the historically exclusionary practices examined in this thesis (Noxolo, 2024; Velez, 2019).

By integrating insights from intersectional black geographies (Noxolo, 2024), trans\* feminism (Salas-SantaCruz, 2024), and theories of spatial justice and relationality (Massey et al., 2009; Soja, 2010), the framework emphasises the significance of recognising the interconnections between forms of oppression and their continued influence on spatial planning. This holistic approach acknowledges the specific challenges faced by marginalised communities and provides a deeper understanding of the foundational issues that perpetuate spatial injustices (Fainstein, 2015).

### 2.3.1 Decolonial and postcolonial theory

Theories of decolonisation and postcolonialism are fundamental to an understanding of the persistence of colonial legacies in contemporary spatial planning practices (Legg & McFarlane, 2008; Mignolo, 2008). Postcolonial theory, as articulated by scholars such as Edward Said and Gayatri Spivak (Hamadi, 2014), critique the cultural and discursive power structures established during the colonial era, particularly in regions such as Africa, Asia, and the Middle East (Smiet, 2022). This perspective has been instrumental in amplifying the voices and experiences of marginalised communities, in alignment with the principles of Black Geographies and Trans\* Feminism, which critiques the intersecting oppressions of race, gender, and class (Emejulu, 2019; Noxolo, 2024).

Nevertheless, decolonial theory, which is rooted in the Latin American 'Modernity'/'Coloniality' School, provides a more appropriate framework for analysing the manifestation of the aforementioned embedded instruments in the built environment (Smiet, 2022). Decolonial theory emphasises that 'modernity' is inextricably linked with colonial structures of power and knowledge, thereby perpetuating systemic oppression (Mignolo, 2008; Porter, 2023). This perspective is particularly relevant for the examination of land and resource control within the context of spatial planning, as it permits a critical analysis of the 'colonial heritage embedded as an instrument in spatial planning', shaped by geo-politics, manifest/materialise in the built environment and infrastructures surrounding us (P. Harvey & Knox, 2014).



Figure 1: Decolonial theory enriched by other theories

### 2.3.4 The role of decolonisation and spatial justice in spatial planning

As Tuck and Yang (2012) argue, the process of decolonisation requires concrete actions, including the repatriation of land and the restoration of sovereignty to Indigenous peoples. This framework advocates for a decolonial approach to spatial planning that goes beyond mere symbolic gestures, addressing the manifested/materialised realities of dispossession and inequality.

In addition, the concept of spatial justice, as put forth by scholars such as Harvey (1996) and Soja (2010), is an integral aspect of this framework, serving as a crucial means of addressing the injustices perpetuated by colonial, capitalist and neoliberal policies. The objective is to guarantee that all communities, especially those that have been historically marginalised, are provided with equal access to resources and opportunities within spatial and built environments (Salas-SantaCruz, 2024). By challenging the capitalist and colonial structures that produce uneven development and spatial inequity, decolonial theory acknowledging the conceptual stream of spatial justice—which advocates for very similar non-oppressive approaches as decolonial theory—becomes a crucial lens for analysing and reconfiguring ‘modern’ planning practices (Icaza, 2022; Porter, 2023).

In conclusion, the integration of spatial justice within a decolonial framework serves to enhance our comprehension of the spatial and material manifestations of ‘colonial heritage embedded as an instrument in spatial planning’ (P. Harvey & Knox, 2014; Noxolo, 2024).

### 2.3.5 Linking concepts: colonial heritage as an instrument embedded in spatial planning, enclaves as infrastructural solutions, enclaved infrastructure and infrastructural violence

This framework situates decolonial theory at the core of an analytical approach that aims to shed light on the interconnections between four key themes ‘colonial heritage as an Instrument embedded in spatial planning’, ‘enclaves as infrastructural solutions’, ‘enclaved infrastructure’ and ‘infrastructural violence’ through examining legal mechanism such as concessions. By combining and adapting decolonial theory with the contextual non-oppressive theories grown out of resistance movements— discussed in the introduction of this sub-chapter— the framework sets out to investigate how historically conventional and neoliberal approaches and patterns continue to shape our built environment (Davoudi, 2017). To reiterate spatial planning can afford progression or regression, the same goes for the planning infrastructure that is an inherent part of spatial planning practice (Yiftachel, 1998).

As emphasised by Interviewee #5, it is important to identify and know how to understand the patterns of oppression within planning practices; however, it is not necessary to understand them internally—what is crucial is to know how to identify, intercept and challenge them effectively. By applying this conceptual framework I am curious to examine how these themes manifest and materialise within spatial planning practices in Honduras, particularly in the affected community of Crawfish Rock (P. Harvey & Knox, 2014).

Having established this theoretical foundation, I will describe the methodological approach in the following chapter used to investigate these concepts and phenomena, ensuring that the research is grounded in the critical insights developed here.

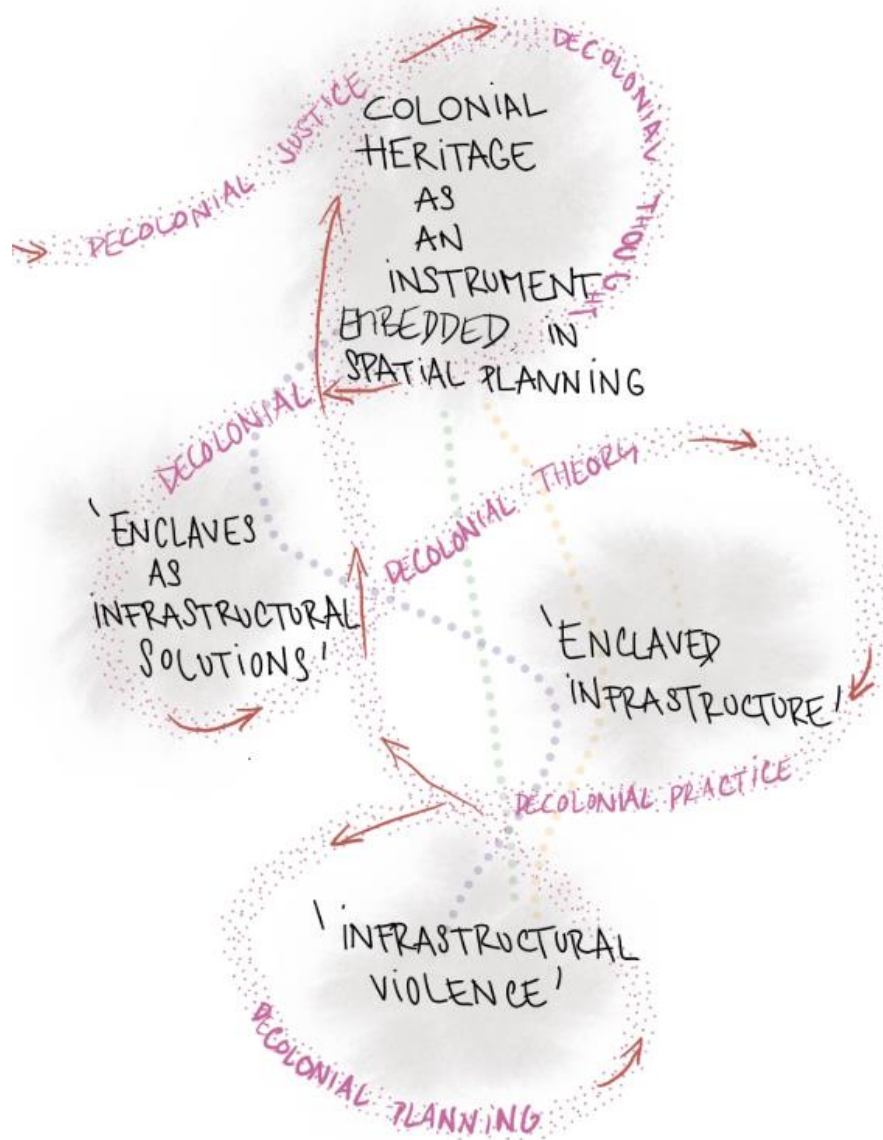


Figure 2: Delinking through decolonial theory: a pathway

## 3. Methodology

### 3.1 General research strategy

This thesis employs a qualitative research strategy, which is particularly effective for exploring complex and under-researched issues (Jamshed, 2014). This approach is particularly well-suited to investigating the evolution and impact of ‘enclaves as infrastructural solutions’ within specific geographic and socio-political contexts. The case study of Crawfish Rock in Roatán, Honduras, provides an illustrative example. A case study design, as outlined by (Bryman, 2012), is applied to facilitate an in-depth examination of these complexities.

#### 3.1.1 Qualitative approach

A qualitative strategy allows for a comprehensive exploration of the complex interrelationships between historical, geographical, political, economic, spatial and decision-making processes (Yin, 2009). This approach is particularly suited to investigations into the ways in which historical forces continue to shape contemporary socio-political and spatial dynamics (Yin, 2009). The utilisation of a qualitative methodology in this thesis allows an inductive relationship between theory and research, enabling insights to emerge organically while still accommodating deductive outcomes (Beardsworth & Keil’s, 1992, as cited in Bryman, 2012, p.69). This is particularly pertinent in the case of Crawfish Rock, where the complex interplay of historical and contemporary forces calls for a nuanced understanding.

#### 3.1.2 Case study – choice and justification

The case study of Crawfish Rock was selected due to its representative nature concerning broader issues in Honduras, particularly the persistent influence of colonial spatial practices within contemporary spatial planning instruments and policies. The “Special Economic and Development Zone” ZEDE Próspera, situated in Crawfish Rock on the Bay Island of Roatán, represents an ‘enclaved infrastructure’ that is firmly rooted in Honduras’ colonial history. This case study not only illustrates the immediate impacts on the local English-speaking Afro-descendant community but also provides insights into the wider socio-political, environmental, and spatial consequences of such planning instruments across Honduras and potentially other regions in the Global South.

The value of case studies lies in their ability to offer insights into the ‘how’ and ‘why’ of a phenomenon, as well as the contextual conditions that are crucial for its comprehension (Yin, 2009). In general, case studies enable researchers to explore a phenomenon in a holistic manner, whereby an issue is researched through the

application of multiple lenses (Baxter & Jack, 2008). In selecting this case study, I employed a combination of representative, critical, and descriptive case study types (Bryman, 2012). The representative aspect permits an examination of typical socio-spatial processes within a 'common' context, while the critical aspect challenges existing theories on spatial injustice and colonial legacies. The historical elements embedded within the case study design provide a dynamic and realistic view of the evolution of processes over time, thus enhancing the analytical depth (Yin, 2009).

This case study is of particular value in understanding the socio-spatial dynamics of enclave planning and its long-term effects on local communities. A comprehensive three-phase literature review was indispensable in refining the research questions and identifying deficiencies in existing studies, particularly with regard to the spatial impacts of ZEDEs in Honduras. This further justified the selection of Crawfish Rock as a critical case study for this research.

## 3.2 Methods

### 3.2.1 Semi-structured interviews

Semi-structured interviews were the principal method of data collection, selected for their flexibility and capacity to generate detailed, context-rich data (Jamshed, 2014). As Shackleton et al. (2021) argue, semi-structured interviews are an effective method for incorporating culturally derived understandings into the assessment of long-term social, ecological, economic, and cultural changes. The interview guide employed in this study was semi-structured, enabling the incorporation of open-ended questions focusing on specific topics essential to the research, including the impact of the ZEDE Prósperas' 'enclaved infrastructure' on local communities, the role of institutionalised neoliberal policies informed by 'colonial heritage embedded as an instrument' in spatial planning, and the historical context of 'enclaves as infrastructural solutions' in Honduras.

The interviewees were selected using purposive sampling, a method that allows researchers to gather in-depth information from individuals who have direct experience or specialised knowledge related to the ZEDE Próspera enclave (Patton, 2014). This sampling strategy ensured the capture of a diverse range of perspectives, including those of former governmental spatial planners, policymakers, journalists, and experts working with communities impacted by enclave planning practices. The interviewees provided insights into the planning and implementation of spatial planning instruments and policies, as well as the advocacy efforts aimed at protecting the rights of affected communities.

In light of the limitations imposed by the necessity of conducting research remotely, six out of eight interviews were conducted online. Despite the absence of direct engagement with the Crawfish Rock community, the interviews yielded invaluable insights into the far-reaching implications of the ZEDE Próspera enclave. While the questions posed to each respondent were tailored to their specific circumstances, a consistent approach was maintained across all interviews to ensure the reliability of the data collected.

The following table provides an overview of the interviewees, their backgrounds, and the focus of their interviews. In order to ensure anonymity in accordance with ethical considerations, the interviewees are identified by a code number.

*Table 1: List of interviewees*

<b>Interviewee</b>	<b>Position/Background</b>	<b>Date of Interview</b>	<b>Focus of Interview</b>
Interviewee #1	Spatial Planner, Honduras and Central America	07.12.2023	Governmental spatial planning strategies, ZEDE Próspera's impact on policy
Interviewee #2	Journalist, Honduras	15.12.2023	Media coverage of ZEDE Próspera, local community responses
Interviewee #3	Member of PBI, Accompaniment of Communities Against Extractive Planning, Honduras	11.04.2024	Community resistance, impacts of enclaves planning on local populations
Interviewee #4	Lawyer, National Anticorruption Council (CNA), Honduras	26.03.2024	Legal aspects of ZEDE implementation, transparency, and governance issues

Interviewee #5	Decolonial Urban Collective, Global South	13.12.2023	Decolonial spatial practices, global south perspectives on enclave planning
Interviewee #6	Participant in Usufructuaries of Earth Convention, The Netherlands	25.05.2024	Displacement and resistance in Latin America, comparison with ZEDE Próspera
Interviewee #7	Resident of Crawfish Rock, Honduras	16.03.2024	Personal impact of ZEDE Próspera, community fears of displacement
Interviewee #8	Resident of Roatan, Honduras	22.06.2024	Local resistance strategies, experiences of community advocacy

### 3.2.2 Document analysis

Document analysis was conducted to provide broader context and support the triangulation of data sources, including semi-structured interviews and autoethnography. Bowen (2009) defines document analysis as “a systematic procedure for reviewing or evaluating documents — both printed and electronic” (p. 1). This method was crucial for understanding the legal and policy frameworks governing the establishment and operation of ZEDEs, and for identifying the discourse surrounding these ‘enclaves infrastructure’ in Honduras.

The strengths of document analysis lie in its cost-effectiveness and the stability of documents as sources not influenced by the research process (Bowen, 2009). However, challenges include the potential lack of detail in documents not intended for research purposes, as well as possible accessibility issues (Bowen, 2009; Yin, 2009). Despite these limitations, document analysis provided valuable insights that complemented the data obtained from interviews, contributing to a more comprehensive understanding of the topic (Bryman, 2012).



### 3.2.3 Autoethnography and personal reflection

Incorporating an autoethnographic approach, this research reflects on personal experiences and encounters with real-life situations and with spatial practitioners in the Global South (Erakat, 2023). My profound personal connections to Honduras, cultivated through regular visits over the past 34 years, inform this research. Despite my lack of affiliation with the community of Crawfish Rock, my objective is to provide assistance to this community by gathering data that underscores the injustices being perpetrated through a spatial lens. The autoethnographic method enables a critical examination of the researcher's position as an outsider and the influence of this positionality on the research process.

This retrospective element, informed by historical analysis, represents a personal journey towards understanding the impact of 'enclaved infrastructure' on community lives. This commitment to spatial justice through decolonial theory aligns with the broader objectives of this thesis.

### 3.3 Data collection and analysis

The interviews are recorded, with permission of the respondents. The transcripts from the interviews are analysed thematically by using codes. Firstly, these codes were created by reading the transcripts and looking for similar subjects, so-called 'open coding' (Boeije & Bleijenbergh, 2016). The goal was to gain more insight into the obtained data and to get a first overview. The second round of coding consisted of 'axial coding'. This means codes found during the first round of coding were compared and coordinating codes were created (Boeije & Bleijenbergh, 2016). The third round of coding followed from the concepts from the conceptual framework (sub-chapter 2.3), the so-called 'selective coding'. During this phase, the most important themes were discovered (Boeije & Bleijenbergh, 2016). By doing this, the results were analysed in a structured and scientifically responsible way (Bryman, 2012). The themes provide a better insight into the difference in perspective between citizens and planners. Directly after each interview, the transcripts were written. By doing this, a better understanding of the information provided in the interviews is gathered already during the data collection. This helps the interviewer to jump in during the following interviews.

### 3.4 Ethics and limitations

Ethical considerations were of paramount importance in this research, particularly given the sensitivity of the topic and the vulnerabilities the Crawfish Rock community is subjected to. Prior to the interview's, informed consent was obtained from all participants, and confidentiality was assured throughout the process. This is in accordance with the ethical and legal requirements for research involving human

participants (Bryman, 2012). The participants were introduced to the research via email, and the research objectives were reiterated at the beginning of each interview. Explicit consent was sought out for the recording of the interview. In instances where the interviewee did not wish for the interview to be recorded, detailed notes were taken. Participation was entirely voluntary, and only the participants' full names were used in instances where explicit consent had been provided for the purposes of protecting their privacy.

My position as a Honduran raised in Western cultures was subjected to critical reflection in order to mitigate potential biases and power dynamics. This was done to ensure that the findings were handled carefully and with sensitivity, in order to avoid increasing existing tensions within the community. The objective was to gain an understanding of the community's ongoing struggle against neoliberal and colonial instruments embedded in spatial planning practices, with a commitment to making positive contributions to this struggle. The research was conducted with the utmost transparency and accountability, with the final findings made accessible to all participants.

Despite the inherent limitations of the single-case study design, particularly with regard to the generalisability of the findings – a common issue in case study research (Yin, 2009)–it remains a valuable approach for gaining insight into specific, complex phenomena. The focus on Crawfish Rock permitted an in-depth examination of specific dynamics occurring within a global context, as evidenced by the literature review. It should be noted that my personal background and reliance on secondary data may have influenced the interpretation of the findings, despite efforts to maintain objectivity (Berger, 2015). The use of semi-structured interviews with experts and secondary data sources, without more direct community engagement, may result in an incomplete understanding of the community's lived experiences. This gap in the existing research highlights the need for further studies that engage more deeply with the civic society (Creswell, 2013).

As previously stated, multiple data sources were triangulated to ensure the reliability and validity of the research. These included semi-structured interviews, document analysis, and insights gained from the Usufructuaries of Earth convention. The triangulation process ensured the consistency, stability, and repeatability of the research findings (Brink, 1993; Denzin, 2012; Patton, 2015). The application of open coding facilitated an impartial analysis, allowing themes to emerge naturally from the data (Bryman, 2012). The theoretical framework provided an interconnected foundation for the analysis of the data, ensuring the reliability and meaningfulness of the findings (Mahoney, 2001; Mignolo, 2008; Noxolo, 2024; Smiet, 2022; Soja, 2010).

While the single-case study design inherently restricts the external validity of the findings, the insights gained in this case study offer valuable insights into similar infrastructural enclaves in other regions of the Global South. However, it should be noted that the findings may not be universally applicable (Yin, 2009).

By addressing these ethical and methodological considerations, this thesis makes a contribution to the body of knowledge on 'colonial heritage embedded as an instrument in spatial planning', 'enclaves as infrastructural solutions' 'enclaved infrastructure' and their impact. It offers a nuanced perspective that considers both historical and contemporary dynamics.

## 4. From strategy to embeddedness: the institutionalization of enclaves as infrastructural solutions in Honduran spatial planning

This chapter examines the historical and contemporary trajectory of ‘enclaves as infrastructural solutions’ or ‘enclaved infrastructure’ in Honduras, focusing on how these developments have normalised spatial exclusion and economic dependence. As synthesised in the literature review in Chapter 2, these spatial practices are rooted in settler colonial ideologies, where extractivism and concessions laid the groundwork for ‘modern’ enclaves, such as “Special Economic Zones” (SEZs) and “Special Economic Development Zones” (ZEDEs) (Iqbal, 2023; Laínez & Meza, 1974; Palma-Herrera, 2019). These enclaves are more than economic model; they are embedded colonial instruments shaping spatial planning in Honduras (Benson et al., 2023; Porter & Yiftachel, 2017).

Honduras, with its rich natural resources and cultural diversity, has a history marked by colonial exploitation, which has deeply influenced its trajectory (Davidson, 1994). The country’s spatial planning practices, particularly concerning ‘enclaved infrastructure’, reflect these colonial legacies (Araya Pocher, 1979). Politically, the 2009 coup d’état—backed by U.S. imperial power—marked a significant shift, leading to renewed neoliberal policies that weakened public institutions and locked-in vulnerabilities, driving internal displacement and mass migration, primarily to the so-called United States (Interviewee #1, personal communication, December 8, 2023). These trends highlight the need for a critical examination of how contemporary spatial planning instrumentalises colonial heritage (Mahoney, 2001; Porter & Yiftachel, 2017).

The involvement of imperial powers in Honduran spatial planning reflects the country’s dependency on the United States (MacNeill, 2017). The alignment with global resistance movements, such as recognizing Palestine in 2011, shows Honduras’ solidarity against colonial, neoliberal and fascist forces.

Sub-chapters 4.1 and 4.2 provide a detailed historical account of the spatial planning practices that have shaped Honduras’ trajectory toward enclave logic as a “space of exception” and as a spatial planning instrument. This section will examine how these historical processes continue to influence spatial planning and socio-spatial structures in Honduras (Davidson, 1994; Erakat, 2023).

## 4.1 Historical background of spatial planning in Honduras from the point of colonial settling to independence

Honduras' spatial planning, known as 'Ordenamiento Territorial', was shaped by Spanish colonial policies that prioritised natural resource extraction and the establishment of administrative centres, setting a pattern of spatial exclusion and control that traces back to 1524 and persists today (C. E. Ferrufino & Grande, 2013). The strategic importance of the Caribbean Bay influenced early Spanish settlements, leading to the creation of ports like Puerto Caballos (Davidson, 1994). The Spanish Crown's land allocation systems, such as *encomiendas* and *repartimientos*—a repressive system granting Spanish conquistadors a divinely sanctioned right to claim New World territories, subjugate and exploit Indigenous communities, and demand labour and tribute, even waging war when deemed necessary—embedded a spatial logic of exploitation that has endured for centuries (Davidson, 1994; Hoffmann, 2014).

Colonial roads like the Camino Real facilitated quicker trade routes, further entrenching colonial ambitions (Brady, 1996; Re.h Colectivo, 2021). The urban planning of cities followed a European grid pattern, prioritizing settler needs over indigenous practices, leading to the erasure of pre-existing landscapes and knowledge (Benson et al., 2023). The colonial spatial order became a standardised form in Honduras and other Central American countries, continuing to influence spatial planning for centuries.

The economic situation remained dire during the republican period after independence in 1821, with internalization of Spanish spatial planning methods perpetuating governance and territorial control that marginalised local populations (Almeyra et al., 2014). The state's reliance on private companies to fulfil housing and infrastructure needs, driven by a lack of public capital, continued the colonial legacy of exploitation through which 'concessions' and 'extractivism' were established (Brady, 1996).

In the 20th century, Honduras's spatial planning was marked by neoliberal reforms that favoured foreign investment, reinforcing an enclave economy similar to the colonial era (Davidson, 1994; Talavera, 2024).

The lack of state funding and liberal reforms led to significant concessions granted to foreign industries, particularly in mining and agriculture, reinforcing an enclave economy (Araya Pocher, 1979). Companies like United Fruit and Standard Fruit dominated vast areas of land, prioritizing infrastructure that served foreign interests over national development (Interviewee #3, personal communication, April 11, 2024; Palma-Herrera, 2019). As Burgos (2018) noted, "Honduras was the quintessential banana republic", where the rapid development around enclaves left little for the local population.

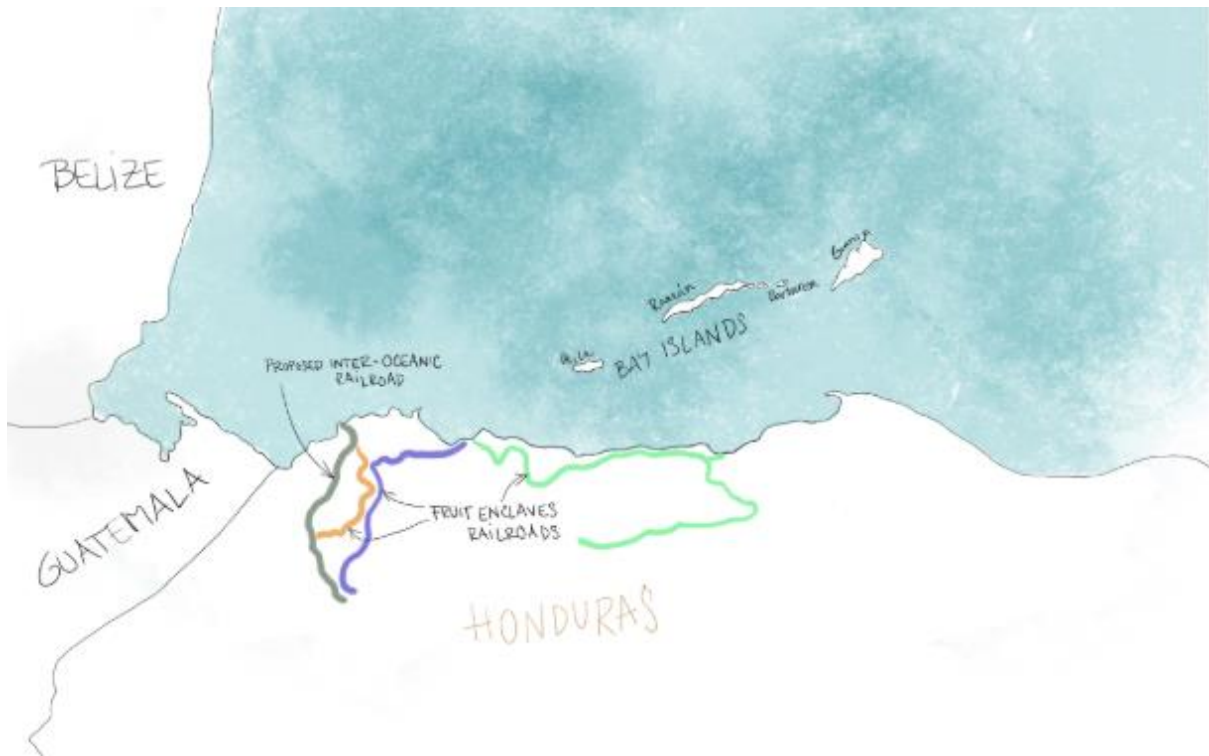


Figure 3: Fruit enclaves and their infrastructure

This dynamic of exploitation fostered a reliance on foreign corporations, shaping Honduras’s spatial and economic landscape (Laínez & Meza, 1974). Despite efforts to revitalise infrastructure, as seen during Xiomara Castro’s current presidency, the consequences of these extractive, concession-based practices remain evident, with infrastructure reflecting colonial priorities rather than the population's needs (Re.h Colectivo, 2024).

Mid-20th century spatial planning further prioritised urbanization and industrial concentration, perpetuating economic exploitation over inclusive development. The reliance on private companies for housing and infrastructure continued the legacy of concessions and extractivism (Interviewee #3, personal communication, April 11, 2024). Neoliberal policies, exemplified by the “Free Zones Law” and the “Agricultural Modernization Law”, exacerbated land disputes and consolidated control among an elite agro-industrial class (Prunier, 2021).

Post-Hurricane Mitch reforms under the guise of disaster recovery, such as the “Territorial Planning Law”, continued neoliberal agendas—such as “disaster capitalism” — favouring land sales to foreign investors even in protected areas (Interviewee #3, personal communication, April 11, 2024; C. A. Loperena, 2017a). The establishment of “Special Development Regions” (RED) and their rebranding as “Special Economic Development Zones” (ZEDE) following the 2009 coup further empowered the colonial legacy of spatial exclusion and resource extraction (Roux &

Geglia, 2019). These developments underscore how deeply colonial legacies have shaped and continue to influence Honduran spatial planning.

*Table 2: Common criteria between enclaves and “Special Economic and Development Zones”*

<b>Criteria</b>	<b>Description</b>
Independent locations	Authorized by the government with the liberty to establish their own politics and regulations
Participation in the global market	Facilitation of conditions permitting the country’s participation in the global market
Adoption of new technologies	The adoption of new technologies and the attraction of new national and international investments
Economic development and employment creation	Alternatives of economic development, improvement of the population's livelihood-conditions, and the creation of sources of employment

*Source: Compiled by the author from various legal planning documents and historical sources*

## 4.2 Recent spatial planning developments

In the aftermath of Hurricane Mitch in 1998, spatial practitioners initiated the “National Plan for Territorial Planning”, but political instability following the 2009 coup halted these efforts. The subsequent government shifted focus to restructuring the country into regions, inspired once again by eurocentric spatial planning approaches (Interviewee #1, personal communication, December 8, 2023).

An EU collaboration in Honduras initiated a critical review of municipal Spatial Planning plans, revealing a disconnect between proposed projects and the specific land-use characteristics of municipalities. This misalignment, such as social housing in steep areas and agricultural projects in protected zones, highlighted the inapplicability of imported strategic planning tools used (Interviewee #1, personal communication, December 8, 2023).

The results led to the creation of the PMOT (Municipal Plans of Territorial Planning), but the lack of urban-level guidelines and transparent regulatory frameworks continues to hinder effective implementation, deepening the historical patterns of exclusion and exploitation in Honduran spatial planning (Interviewee #1, personal communication, December 8, 2023)

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**“If the plans, methodologies, and tools end at the municipal level without extending to urban areas, all efforts within spatial planning will fall short.”**

Interviewee #1, personal communication, December 8, 2023

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The presence of informal settlements and migrant caravans highlights the failure to implement effective urban spatial planning, reflecting the enduring influence of colonial and neoliberal frameworks (Interviewee #1, personal communication, December 8, 2023)

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**"In this context, progress would mean improving the overall quality of life, which is ultimately the goal of the planning process, specifically in Spatial Planning."**

Interviewee #1, personal communication, December 8, 2023

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### 4.3. Legal and institutional framework

Honduran spatial planning is plagued by inefficiencies, multiplicities and fragmentation due to a lack of transparency and coordination among institutions (Corrales Andino & Mondragón, 2016). The DGOT (General Directory for Territorial Planning), responsible for managing 763 plans across 298 municipalities, struggles with its effectiveness due to the absence of a centralised spatial planning authority, leading to an inconsistent application of development initiatives (Interviewee #1, personal communication, December 8, 2023). Efforts to support planning through tools like risk management and participatory urban zoning have been intercepted by the DGOT’s shifting affiliations with various government bodies, further complicating its role (Interviewee #1, personal communication, December 8, 2023)

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**“The error we are committing time and time again is that we treat Spatial Planning as a discipline to generate tools, not as a continuous process.”**

Interviewee #1, personal communication, December 8, 2023

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The introduction of a National Urban Policy, facilitated by ONU-Habitat, aimed to harmonise the efforts of key institutions, including the “Secretariat for Governance” and the “Secretariat of Strategic Planning” (Interviewee #1, personal communication, December 8, 2023). However, persistent overlapping jurisdictions, multiplicities in work-flows and historical fragmentation continue to undermine these efforts (Interviewee #1, personal communication, December 8, 2023). Housing policies have been developed to align with urban planning goals, and initiatives like “Our City Plans Centroamerica” show potential, but implementation challenges remain, reflecting the need for spatial planning approaches tailored to Latin America’s specific context rather than outdated models from Europe and North America (Interviewee #1, personal communication, December 8, 2023)

This lack of coordination also contributed to the controversial establishment of enclave-like “Special Development Regions” (RED) and their evolution into “Special Economic Development Zones” (ZEDEs), further exacerbating issues of exclusion and exploitation (Corrales Andino & Mondragón, 2016).

#### 4.4. RED & ZEDE laws

The establishment of “Special Development Regions” (RED) and their evolution into “Special Economic Development Zones” (ZEDEs) reflects a continuation of neoliberal policies that prioritise foreign investment at the expense of national sovereignty and local communities (Interviewee #2, personal communication, April 4, 2024). The ZEDEs operate with substantial autonomy, raising concerns about environmental degradation, displacement, and the undermining of constitutional protections (CNA, 2021; Interviewee #4, personal communication, March 26, 2024).

Despite the repeal of the ZEDE “Organic Law” in 2022, ongoing legal disputes and backdoor transnational agreements continue to complicate the dismantling of the ZEDE framework (Interviewee #2, personal communication, April 4, 2024). The persistence of these enclaves emphasises the broader geopolitical struggle over private enclaves and special economic zones within national territories.

## 5. ZEDE: an enclaved infrastructure and a space of exception in Honduras

The “Special Economic Development Zones” (ZEDE) in Honduras represent a contemporary iteration of the banana and mining enclaves that shaped the country’s territory in the 19th and 20th centuries (Laínez & Meza, 1974; Palma-Herrera, 2019; Roux & Geglia, 2019). These zones, which were envisioned as ideological ‘utopias’ or ‘micronations’, were approved under questionable circumstances, with considerable influence from Silicon Valley and the “Start-up Nation” ideology (Interviewee #2, personal communication, April 4, 2024). Connections between Honduran ZEDes and investors from Silicon Valley, neoliberal politicians, and world-trotting nomads have fuelled the promotion of these spaces since their approval in 2003 (R. C. Berg & Carusi, 2022; Ebner & Peck, 2022; MacDougall & Simpson, 2021; Main, 2024; Mejía, 2021; Simpson & Sheller, 2022).

Despite the repeal of the ZEDE “Organic Law” in 2022, as discussed in sub-chapter 4.4, the persistence of ZEDes has resulted in a series of ongoing legal disputes and concerns regarding their long-term impact on local communities (Figuroa, 2024). The ZEDE enclave model, while offering the prospect of economic benefits through the promise of employment and regional development, bears resemblance to historical instances where foreign interests were advanced under the pretext of national progress (Editora, 2015). The experience of the banana and mining enclaves established during Latin America’s late 19th-century industrial boom demonstrates that such zones frequently resulted in social and economic instability, rather than the anticipated long-term prosperity (Araya Pocher, 1979).

As Interviewee #2 noted, “It is a great paradox that in a country with a history like Honduras, ZEDes are being implemented” (personal communication, April 4, 2024). Similar to their historical counterparts, ZEDes operate as independent localities, authorised to establish their own policies (Mason et al., 2021). This is ostensibly done to integrate the country into global markets and attract investment (Martinez et al., 2021). Nevertheless, as was the case with the earlier enclaves, these zones have frequently served to intensify inequality and displace local communities (Interviewee #3, personal communication, April 11, 2024).

An illustrative example is that of ZEDE Próspera in Roatán, which expanded into previously protected land, displacing long-established English-speaking Afro-descendant community (Mejía, 2021). This case study demonstrates how contemporary neoliberal enclave-like built entities, catering to business and tourism reproduce historical patterns of exploitation, with international investors and local elites prioritising profit over the well-being of local populations, blinded by the vision of a luxurious ‘digital nomad’ lifestyle (Interviewee #2, personal communication, April 4, 2024; C. A. Loperena, 2017a). The ZEDE Próspera, closely tied to the Pristine Bay Resort, exemplifies Loperena’s ‘disaster capitalism’, where crises are exploited to implement neoliberal reforms that favor private interests, under the guise of

promoting environmental and economic sustainability, in reality deepening ‘touristification’ and ‘greenwashing’ in a disaster-prone country (C. A. Loperena, 2017a; Valdivielso & Moranta, 2020). ‘Touristification’ involves transforming an area to cater primarily to tourists, often at the expense of local communities and cultures (Devine & Ojeda, 2017), while ‘greenwashing’ refers to the deceptive practice of presenting an activity or product as environmentally friendly when it is not, often to enhance a company’s image, both aiming to commodify nature (Brondo, 2015).

Furthermore, the ZEDE spatial model exploits the deficiencies in Honduras' fragmented spatial planning regulations and the absence of comprehensive guidelines in the urbanisation and zoning legislation (Interviewee #1, personal communication, December 8, 2023). This regulatory vacuum allows for the exploitation of legal loopholes, enabling investors to acquire land through backdoor deals and cooperation with existing resorts that already own land, thereby evading scrutiny (Hn, 2023). Articles 24, 25, and 28 of the ZEDE “Organic Law” grant ZEDEs the authority to levy taxes on land value, a provision that could precipitate gentrification, particularly in areas proximate to tourist destinations and historical centres. “The Cultural Heritage Protection Law” offers only limited protection, as the ZEDE “Organic Law's” Article 41 only recognises certain constitutional decrees and penal codes (Editora, 2015; R.eh Colectivo, 2021).

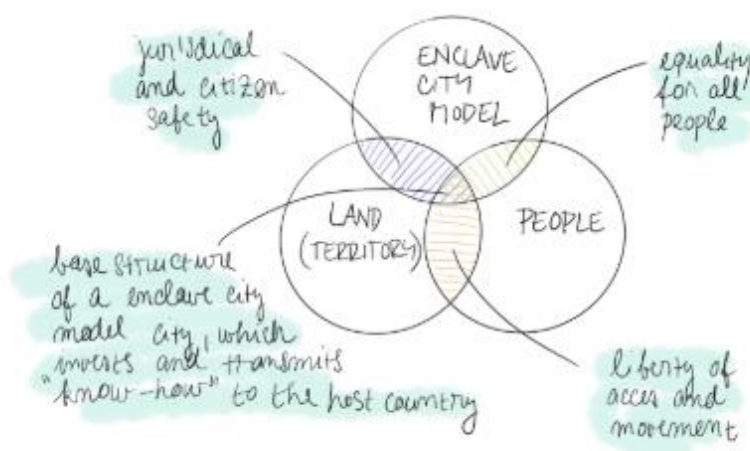


Figure 4: Relationship between the roles of participating nations and the basic elements of an enclave model city (according to the enclave model city proponents)

The historical context of enclaves, such as those in the banana and mining sectors, demonstrates how the political elites of Honduras perceived foreign investments as avenues for substantial economic advancement that local investment could not attain (Interviewee #2, personal communication, April 4, 2024). This was largely due to the concept of *terra nullius*, whereby land was considered to “belong to no one” and could therefore be freely granted to foreign investors (Nursey-Bray et al., 2022). This was perceived as a rapid and cost-effective method of achieving national development by exploiting what was considered unclaimed

territory (Devine & Ojeda, 2017). Nevertheless, this strategy frequently resulted in additional social and economic instability, mirroring the concerns currently surrounding ZEDEs (Interviewee #3, personal communication, April 11, 2024).

Furthermore, the employment practices observed within ZEDEs also exhibit similarities to those observed in historical enclaves (Rodríguez, 2018). While these zones do indeed generate employment opportunities, the positions that are created are frequently characterised by low remuneration, hazardous working conditions and a lack of long-term job security. As with the banana and mining sectors, the higher-paying supervisory roles are frequently occupied by foreign nationals, leaving local workers in precarious situations (Editora, 2015; Pousset, personal communication, 4 April 2024). The dual impact of enclaves and ZEDEs is characterised by a complex interplay of factors. While they provide short-term wages for families, but these are low-paying, exploitative jobs tied to the lifespan of the enclave. Concurrently, these developments have a detrimental impact on the surrounding environment and perpetuate a vicious cycle whereby the state ignores its responsibility to create sustainable employment opportunities (R. C. Berg & Carusi, 2022). A particularly illustrative example can be found in the experiences of a resident of a historical enclave:

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**“I was born in a camp run by an enclave company. I was a cattle rancher, and there was a trail where the cattle were slaughtered. Milk and meat were sent four times a week to all the banana fields, reaching as far as the region of El Progreso and the branch in Cortés. I attended a school owned by the company, where, after regular classes, we had an English lesson in the first year of the basic plan. When it was all over, the company started packing up their things and left; they took everything, even the railroad tracks. It was a hard blow for my whole family—they all worked for the company, and from one day to the next, they were out of work. It all happened between 1978 and 1980. For us, it was the best thing, though I didn’t know about the story you’re telling us. But imagine, my family had worked for generations, and suddenly everything collapsed. I remember it was a very hard blow for the whole family.”**

NelsonBueso9116, 2023

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Since 2021, there have been notable developments in the context of ZEDEs. The Honduran government has encountered considerable opposition from the public and encountered legal challenges with regard to these zones (Interviewee #2, personal communication, April 4, 2024). Despite the repeal of the ZEDE “Organic Law”, three ZEDEs remain operational, with

one continuing to continue under the legislative framework of the “Organic Law” (Interviewee #4, personal communication, March 26, 2024). As Interviewee #2 posits: “It is conceivable that at the conclusion of the current president’s tenure, a subsequent administration may reinstitute the legislation, reinstating the ZEDE and potentially resurrecting this initiative in Honduras” (personal communication, April 4, 2024). This situation serves to highlight the stubborn pervasiveness of neoliberal and colonial frameworks within the context of Honduras’ spatial planning practices, thereby keeping affected communities in the dark about their future (Interviewee #8, personal communication, June 22, 2024).

The case study in the following chapter will illustrate the socio-technical, socio-spatial, socio-ecological and socio-economic impacts of enclaves like ZEDE Próspera and their ongoing influence on the Honduran landscape.

## 5.2 Crawfish Rock: a case study of an enclaved infrastructure

Crawfish Rock, a small village situated on the north shores of the island of Roatán in the Bay Islands of Honduras, is inhabited by a predominantly English-speaking, Afro-descendant Garifuna community (Patterson, 2024). The population numbering about three hundred individuals has inhabited Crawfish Rock since the eighteenth century after being displaced here by the British from St. Vincent (Mihok, 2013). The area is characterised by a rich cultural heritage and a traditional way of life centred on fishing (Bellamy et al., 2023). The establishment and subsequent expansion of ZEDE Próspera, a “Special Economic Development Zone” (ZEDE), has resulted in heightened tensions and environmental challenges for the community (C. A. Loperena, 2016). Despite the repeal of the ZEDE “Organic Law” in 2022, ZEDE Próspera continues to operate, resulting in notable spatial and social transformations that have profoundly impacted the residents of Crawfish Rock (Interviewee #2, personal communication, April 4, 2024). This case study examines these

transformations, with a specific emphasis on the impact of the 'enclaved infrastructure' on the community.



Figure 5: Crawfish Rock and its borders



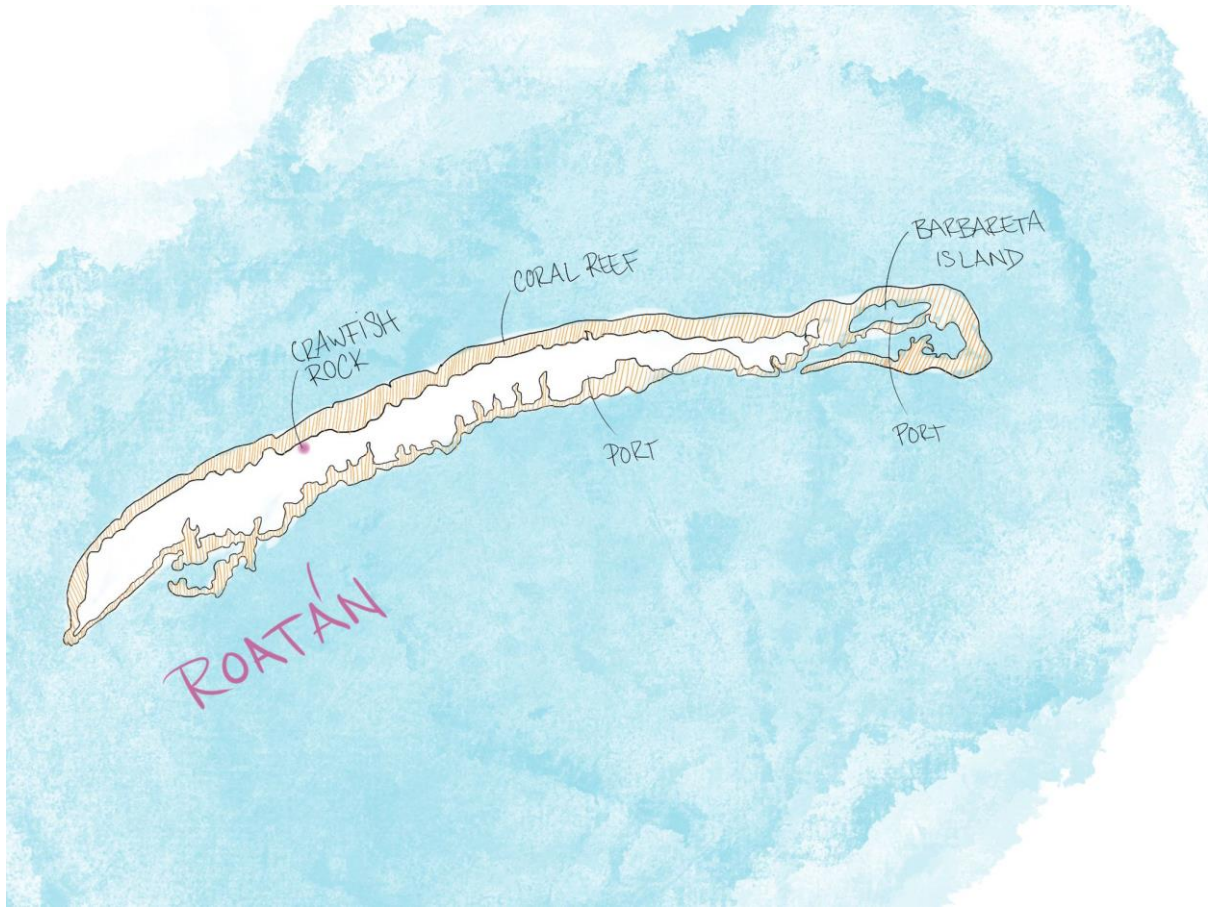


Figure 6: Island of Roatán

### 5.2.1 Legal framework and transfer of sovereignty

ZEDE Próspera represents a component of a more expansive initiative in Honduras, namely the establishment of autonomous zones or micronations (Interviewee #4, personal communication, March 26, 2024). These are designed with the objective of attracting foreign investment by offering favourable legal and economic conditions (Interviewee #3, personal communication, April 11, 2024). One of the most troubling aspects of the ZEDE legislation is its stipulation regarding land management and expropriation (Interviewee #8, personal communication, June 22, 2024). ZEDEs may acquire land under the pretext of public utility or necessity, with minimal safeguards put in place for affected populations (Interviewee #3, personal communication, April 11, 2024). The legal framework surrounding ZEDEs represents a continuation of historical patterns of extractivism, concession-specific legal tools, and enclave creation that enable the commodification of the natural environment (Svampa, 2015).

The ZEDE “Organic Law”, passed in 2013, established these zones, which enjoy significant autonomy and include their own legal and administrative systems (Editora, 2015). The ZEDE “Organic Law” effectively transfers sovereign powers from the Honduran state to private entities within these zones, thereby enabling them to establish independent courts, fiscal

policies, and administrative regulations (Palma-Herrera, 2019; R.eh Colectivo, 2021). This autonomy undermines national sovereignty and local governance, creating a situation in which private entities operate with minimal oversight and accountability (CNA, 2021). The legal mechanisms and “fail-save’s” enabling this include ‘sunset clauses’, which allow for a minimum of 10 years, potentially extending up to 50 years under international agreements, and the capacity to maintain operational control through international trade agreements (Iqbal, 2023). These instruments afford ZEDEs the legal authority to expand their territories and exert influence without immediate state intervention, effectively enabling private actors to override national and local authority (Bell, 2023). This framework protects the ZEDEs independent operation outside of Honduran law, particularly in regard to land use, taxation, and resource management, with minimal regulatory oversight (R.eh Colectivo, 2021). Honduras would have to pay a high fine, if it attempts to cancel the ZEDE enclave model (Bell, 2023), as seen with the upcoming arbitration process, filed for by the ZEDE Próspera (Mundi, 2022; Rivera, 2022). This protects the ZEDEs ability to designate and expand ZEDE territories without rigorous state intervention and permits the ‘enclaved infrastructure’ to continue its operations even after the repeal of the ZEDE “Organic Law” in 2022 (Interviewee #1, personal communication, December 8, 2023; Interviewee #2, personal communication, April 4, 2024).

The Honduran “Territorial Planning Law”, with no guidelines or laws at the urban level has been undermined by the international agreements the ZEDE “Organic Law” is backed by, mirroring the lock-ins historically seen in international concessions (Interviewee #1, personal communication, December 8, 2023).

### 5.2.2 Environmental and social impact

The establishment and subsequent expansion of ZEDE Próspera has resulted in significant environmental and social impacts on Crawfish Rock (Interviewee #7, personal communication, March 16, 2024). At the outset, in 2017, a mere five years after the ZEDE “Organic Law” was enacted, the project was presented to the community as a luxurious tourist resort (Interviewee #7, personal communication, March 16, 2024). The ‘utopian’ renderings designed by the ‘renowned’ Zaha Hadid Architects presented a utopian vision that was able to attract investor interest (Interviewee #2, personal communication, April 4, 2024). However, by 2020, it became evident to the community that this was not merely a conventional tourist facility, but rather an enclave development with unregulated jurisdiction and the potential for unchecked expansion, if the appointed technical secretary of the ZEDE were to determine such expansion as necessary for the economic growth and wellbeing of the enclave (Interviewee #8, personal communication, June 22, 2024).

The ZEDE Próspera enclave development promises a locally sustainable development model, covering over 750 acres with 1.2 kilometres of beachfront and residences constructed primarily using locally sourced sustainable wood (Interviewee #2, personal communication, April 4, 2024). However, this narrative omits a crucial detail: the enclave is situated in an area



designated as “protected” under the “Special Law for Protected Areas of the Bay Islands” (Mejía, 2021), where the Mesoamerican Barrier Reef acts as a natural buffer, protecting the shores of Crawfish Rock. This means, the territory of Crawfish Rock is wholly off-limits to human intervention due to its ecological significance, with the sole exceptions being activities pertaining to sustaining the livelihoods of the Crawfish Rock residents, scientific research, and environmental education (MacDougall & Simpson, 2021). Nevertheless, as Interviewee #8 states: “Construction activities associated with ZEDE Próspera have resulted in irreversible environmental degradation for us, including deforestation, soil erosion, coastal erosion, and repeated the contamination of our waterways” (personal communication, June 22, 2024).

At the peak of the global COVID-19 pandemic, ZEDE Próspera expedited construction activities, capitalizing on the reduced public scrutiny that accompanied the crisis (Interviewee #2, personal communication, April 4, 2024). The management of ZEDE Próspera announced a new investment round of \$60 million and adopted bitcoin as a legal currency within the zone (Interviewee #2, personal communication, April 4, 2024; Interviewee #4, personal communication, March 26, 2024). Subsequently, a number of new companies, including a gene-therapy venture, have established operations there (Clarke, 2023; ZEDE Próspera Council, 2023). The lack of transparency in the legal system of ZEDE Próspera permits the implementation of experimental procedures that may not be approved in other jurisdictions, which positions the enclave as a prospective hot bed for medical innovation and tourism (Interviewee #2, personal communication, April 4, 2024). Despite the repeal of the ZEDE “Organic Law” in 2022, which was intended to bring such developments to a halt, ZEDE Próspera continued with its expansion, potentially to bolster the aforementioned approaching arbitration case (Lorca, 2023; Mundi, 2022; ZEDE Próspera Council, 2023).

The community’s realisation of ZEDE Próspera’s true nature marked the beginning of heightened tensions and resistance (Iqbal, 2023). The community, historically characterised by peaceful and close-knit relations, has been significantly impacted by the environmental alterations resulting from the activities of ZEDE Próspera (Interviewee #2, personal communication, April 4, 2024). The described environmental degradation has had a significantly detrimental impact on the mangroves, coral reefs, local fisheries, and the livelihoods of residents (Interviewee #8, personal communication, June 22, 2024).

Residents of Crawfish Rock have reported that, “The forests have lost the ability to retain water, which has resulted in increased flooding and the drying up of community wells” (Interviewee #7, personal communication, March 16, 2024). This deforestation has exacerbated the community’s vulnerability to climate change, as the natural barriers that once tempered the effects of heavy rains are no longer present (Interviewee #2, personal communication, April 4, 2024). The destruction of these natural barriers has also had a devastating impact on local agriculture, which many residents rely on for their livelihoods (Lorca, 2023).

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**“I am slowly losing my house due to the constant flooding. This never happened before Próspera started building next to us. They destroyed the forest patch and now the water runs down on us.”**

Interviewee #7, personal communication, March 16, 2024

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The phenomenon of slow violence, as defined by Davies (2022), whereby harm occurs gradually and is often invisible to those not directly affected, is reflected by the operational approach of ZEDE Próspera. While ZEDE Próspera may engage in cooperative activities when it is to their advantage, such collaboration seldom addresses or repairs the irreversible harm caused. The negative effects extend beyond the confines of the enclave, giving rise to detrimental spillovers that are at odds with the assurances associated with this form of 'enclaved infrastructure' within the ZEDE framework (Interviewee #4, personal communication, March 26, 2024). Local communities like Crawfish Rock are confronted on a daily basis with the realities of the impacts of the ZEDEs' 'enclaved infrastructure', with limited avenues for seeking justice or restitution (Interviewee #7, personal communication, March 16, 2024).

### 5.2.3 Infrastructural violence

The concept of infrastructural violence is pivotal to an understanding of the impact of ZEDE Próspera on Crawfish Rock. Infrastructural violence can be defined as the harm caused by infrastructural developments that prioritise certain interests over the well-being of local communities (Rodgers & O'Neill, 2012). This form of violence is manifested in several key issues within the case study, including the control of water resources, soil degradation and the imposition of restrictions on road infrastructure (Thomas, 2021).

In 2019, Crawfish Rock experienced a shortage of potable water. At that time, ZEDE Próspera, which was in the initial stages of construction of its so-called tourist resort, approached the community with an offer to address their water supply issues (Interviewee #2, personal communication, April 4, 2024). The community, which was in debt to its existing water supplier to the sum of \$2,000, asked ZEDE Próspera to settle the bill as a preliminary step in the proposed collaboration (Interviewee #2, personal communication, April 4, 2024; Vasquez, 2023). However, rather than merely settling the debt, ZEDE Próspera put forth a proposal of linking Crawfish Rock's water system to theirs, which the community, in dire need, accepted (Interviewee #8, personal communication, June 22, 2024). The community was unaware that, following the initial period of assistance, ZEDE Próspera would begin issuing bills for the water supply, effectively transforming what had initially appeared to be a gesture of support into a

source of financial obligation and infrastructural dependency (Interviewee #2, personal communication, April 4, 2024).

As the community became aware of the dependency that ZEDE Próspera had created, the Patronato of Crawfish Rock (the elected council of the village) initiated a search for alternative water supply solutions. However, upon learning of these efforts, the leadership of ZEDE Próspera sent letters to all residents, issuing a 30-day deadline before cutting off the water supply (Interviewee #7, personal communication, March 16, 2024). This action, presented as a consequence of the Patronato's actions, resulted in considerable tension within the community, intensifying existing internal divisions (Interviewee #2, personal communication, April 4, 2024).



*Figure 7: Alternative water source secured by the community of Crawfish Rock*

Despite the community's eventual success in securing an alternative water source, tensions persisted due to the actions of ZEDE Próspera. Instead of acknowledging its faults and taking steps to repair them, ZEDE Próspera posted a sign on the main road leading to Crawfish Rock, stating that it had been "providing running water since September 2019" (Interviewee #7, personal communication, March 16, 2024). The sign, situated in a highly visible location at the intersection of the village and ZEDE roads, served as a constant reminder of ZEDE Próspera's previous control over the community's water supply. It symbolised their ongoing influence over local resources and their ability to leverage infrastructure—and its symbolic presence—as a tool of control. This further undermined the community's hard-won independence over

its essential resources. Interviewee #2, who has been visiting and reporting on the Crawfish Rock community since 2021, states: “I am informed that the situation has had a deleterious effect on the community. Such violence perpetrated by those occupying a libertarian space is not good for anyone’s mental health” (personal communication, April 4, 2024).

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**“They never told us we had to pay for the water supply. We would have never agreed to this, if we knew in advance. Luckily, we have a new water supplier now. But can you believe they still have the sign up, that says ‘providing water since September 2019’?”**

Interviewee #7, personal communication, March 16, 2024

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*Figure 8: Sign installed by ZEDE Próspera on only road leading to Crawfish Rock*

Furthermore, the road infrastructure has become a significant point of contention (Interviewee #2, personal communication, April 4, 2024). The original Crawfish Rock Road, which was previously the only access route to the village, has now become a shared road with ZEDE Próspera. It has been frequently reported by residents that they are prevented from entering the branch of the road leading to the ZEDE, whereas security personnel from ZEDE Próspera are able to access Crawfish Rock without hindrance. In addition to regulating access, the guards have reportedly harassed community members travelling to and from their village, thereby creating a sense of surveillance and control (Interviewee #2, personal communication, April 4, 2024; Interviewee #3, personal communication, April 11, 2024). The restrictions imposed by ZEDE Próspera on this road, which represents the sole connection

between Crawfish Rock and the rest of the island, are particularly troubling. This control over such a critical piece of infrastructure represents another form of infrastructural violence, as it restricts the community's access to essential services and further isolates them, thereby fuelling fears that their access could be even more severely limited or controlled in the future (P. Harvey & Knox, 2014; Rodgers & O'Neill, 2012).

Residents and advocates of the Crawfish Rock community also noticed the impact the 'enclaved infrastructure' has on their non-human counterparts, one testimony reflects on this: "They built this tall tower—not only is it ugly, but it is the tallest building on the island. It blocks the view; it's like the people building these structures have no respect for the surroundings. Last time I was there, they were speaking about building a new-age-y dome, you know, the one that all these sect-like libertarian nomad places have. I will go investigate if they actually built it (Interviewee #2, personal communication, April 4, 2024; Interviewee #8, personal communication, June 22, 2024)". This testimonial demonstrates, the impact the 'enclaved infrastructure' of ZEDE Próspera has on its surrounding environment.

The construction of the Duna Tower, a 70-meter and 17-storey concrete structure, located next to a fork in the road leading to Crawfish Rock, has resulted in the disruption of flight routes of endangered bird species and an increase in pollution levels, with soil and debris reaching Crawfish Rock (Corbett, 2024; Interviewee #2, personal communication, April 4, 2024).

Meanwhile, the Patronato of Crawfish Rock, believes, that creating and expanding their own infrastructure, could help them anchor themselves in the fight against further expansion of the 'enclaved infrastructure' of ZEDE Próspera. The community has asked the municipality for

new pavements and electricity grids, in the hopes of gaining more legitimacy on their own land (Roatán Hable Claro, 2023).

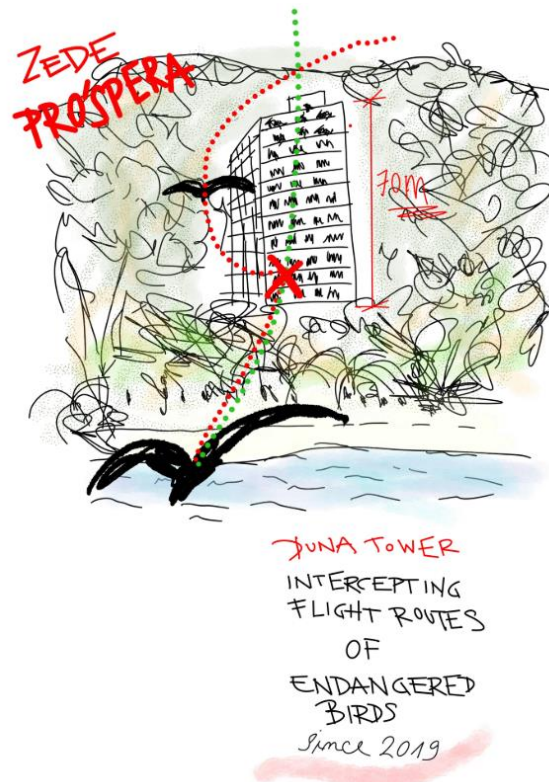


Figure 9: Duna Tower: intercepting flight routes of endangered birds

#### 5.2.4 Pristine Bay Resort: a ZEDE expansion strategy

The Pristine Bay Resort, a struggling high-end tourist resort just 500 meters west along the beach, serves as an example of how existing developments often originate or function as predecessors for others (Interviewee #2, personal communication, April 4, 2024). Pristine Bay was initially established as a luxury tourist destination, as observed during my visit in (2020). Its incorporation into the existing ZEDE Próspera exemplifies a shift from tourism-based development to a more expansive, enclave-like infrastructure that imposes significant environmental and social costs on the surrounding communities (Martinez et al., 2021).

In 2021, ZEDE Próspera acquired the failing Pristine Bay Resort, integrating it and its infrastructure into its broader vision of a self-contained enclave (Interviewee #3, personal communication, April 11, 2024). This acquisition permitted further expansion of ZEDE Próspera and increased the ecological footprint of the enclaved development. The construction of the Pristine Bay resort had already resulted in the disruption of local ecosystems; however, under the ZEDE framework, these issues were further exacerbated (Interviewee #8, personal communication, June 22, 2024; Mejía, 2021). The incorporation of Pristine Bay into ZEDE Próspera enabled the sustained deterioration of the coastal ecosystem. The ongoing construction activities have resulted in further erosion of the

coastline and increased sedimentation in the nearby coral reefs, which are vital for maintaining local biodiversity and supporting the fishing activities of Crawfish Rock residents (Interviewee #8, personal communication, June 22, 2024). As of 2024, one of the plots of land currently under the control of ZEDE Próspera is reportedly being offered for sale, which has prompted speculation about the future course of expansion for the enclave (Interviewee #7, personal communication, March 16, 2024). The lack of response from the realtor and the recent timing of the advertisement contribute to the uncertainty surrounding the enclave's future plans.

The absorption of Pristine Bay into the ZEDE Próspera enclave is indicative of a broader trend of using legal mechanisms, such as those provided under the ZEDE "Organic Law", to circumvent environmental regulations and expand private interests at the expense of the public good (Bell, 2023). This unchecked expansion has resulted in Crawfish Rock becoming gradually isolated, as the community finds itself increasingly surrounded by privatised land, cut off from traditional fishing grounds, and facing mounting environmental hazards (Interviewee #8, personal communication, June 22, 2024).

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**“We are afraid the walls of ZEDE Próspera will expand further and swallow our community. Take away the little that we have.”**

Interviewee #8, personal communication, June 22, 2024

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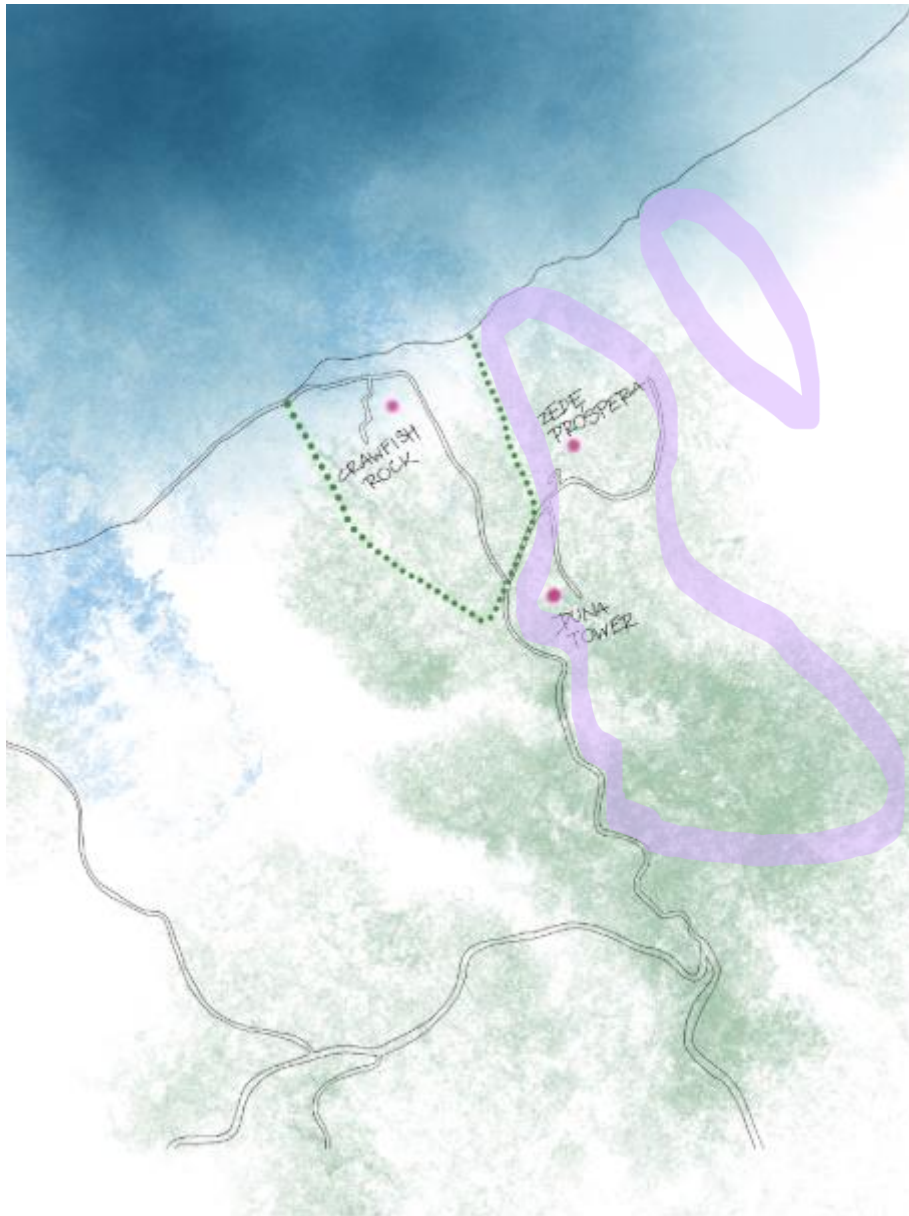


Figure 10: Current borders of ZEDE Próspera in relation to Crawfish Rock

### 5.2.5 Socio-economic impact

The social and economic impacts of ZEDE Próspera on Crawfish Rock have been multifaceted and profoundly divisive (Fundación para la Libertad Económica, 2024). While the ZEDE has created some employment opportunities, these were only made available after considerable pressure from the local community. At the outset, ZEDE Próspera demonstrated minimal enthusiasm for hiring residents of Crawfish Rock, despite its legal obligation to prioritise local employment (Editora, 2015; Fundación para la Libertad Económica, 2024). It was only after residents initiated a protest to demand their right to be considered for employment that a limited number of jobs were offered. These positions, though vital for those struggling to cope with the rising costs of living, are predominantly in construction or



low-level service roles that offer minimal pay and lack long-term stability (Interviewee #2, personal communication, April 4, 2024).

This situation has placed the Patronato of Crawfish Rock, the community's elected council, in a challenging position. From one perspective, the Patronato of Crawfish Rock is responsible for resisting the actions of the ZEDE on behalf of the village. This entails protecting the land and way of life of the residents from being violated. In contrast, opposing the ZEDE could result in job losses for those community members who depend on these wages, leading to internal tensions. The ZEDE Próspera has skilfully exploited these divisions, using the economic dependence of some residents to claim broader community support for its operations, despite significant evidence to the contrary (Interviewee #2, personal communication, April 4, 2024).

Furthermore, the influx of workers associated with the ZEDE has led to an increase in the cost of housing and other essentials, thereby increasing the economic strain on long-term residents. The process of gentrification, in conjunction with the social divisions resulting from the ZEDE's selective employment practices, has served to further marginalise the community, thereby intensifying inequality and social tension within Crawfish Rock (Interviewee #7, personal communication, March 16, 2024).

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**“The people of Crawfish Rock struggle, because through the ongoing construction the nature around is changing, it impacts even the possibility to fish for them and that has been their livelihood for over 200 years. Imagine.”**

Interviewee #2, personal communication, April 4, 2024

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### 5.2.6 Resistance and advocacy

Despite the challenges, the community of Crawfish Rock has actively resisted the actions of ZEDE Próspera. Local leaders and organisations have collectively mobilised in order to defend their rights and protect their environment. The Patronato of Crawfish Rock, headed by Vanessa Cardenas and Luisa Conon, has facilitated community meetings to discuss the impacts of the ZEDE and to develop strategies for the protection of their village (Interviewee #2, personal communication, April 4, 2024). Furthermore, they have sought the assistance of national and international organisations and municipalities in order to amplify their voices and advocate for their rights. As reported by multiple social justice organizations, including OFRANEH (Honduran Black Fraternal Organization) and ARCAH (Honduran Alternative for Community and Environmental Vindication), the actions of ZEDE Próspera have resulted in the undermining of social cohesion within Crawfish Rock, creating divisions that did not previously exist (Interviewee #3, personal communication, April 11, 2024; Patterson, 2024).

These organisations assert that the claims of extensive community support for ZEDE Próspera are unsubstantiated.

Furthermore, legal challenges have been initiated against ZEDE Próspera, particularly concerning the legitimacy of land acquisitions and the broader framework that allows the ZEDE to operate. These legal actions are intended to hold ZEDE Próspera accountable and to ensure that the rights of Crawfish Rock residents are upheld (Interviewee #4, personal communication, March 26, 2024). However, the community remains in a precarious position, with ongoing fears of further expansion, displacement, and retaliation, in light of the past actions of ZEDE Próspera discussed in this case study.

## 6. Discussion

This chapter critically discusses the findings presented in Chapters 4 and 5, connecting them with the conceptual framework established in Chapter 2. The discussion is structured around four key themes: ‘colonial heritage as an instrument embedded in spatial planning’, ‘enclaves as infrastructural solutions’, ‘enclaved infrastructure’ and ‘infrastructural violence’. These themes are explored to understand how they manifest and materialise within spatial planning practices in Honduras, particularly in the affected community of Crawfish Rock (P. Harvey & Knox, 2014).

This analysis operates on three levels:

**Macro level:** This addresses the broader historical and geopolitical context of spatial planning in Honduras, situating these ‘enclaves as infrastructural solutions’ within the larger framework of national spatial strategies.

**Meso level:** The focus here is on the emergence and impact of ‘enclaved infrastructures’ of ZEDEs as materialisations and instruments of colonial heritage, examining how these zones are shaped by and contribute to ongoing patterns of domination and extraction.

**Micro level:** This involves an in-depth case study of ZEDE Próspera in Crawfish Rock, Roatán, exploring its direct impacts on the local community and how it exemplifies the broader trends discussed.

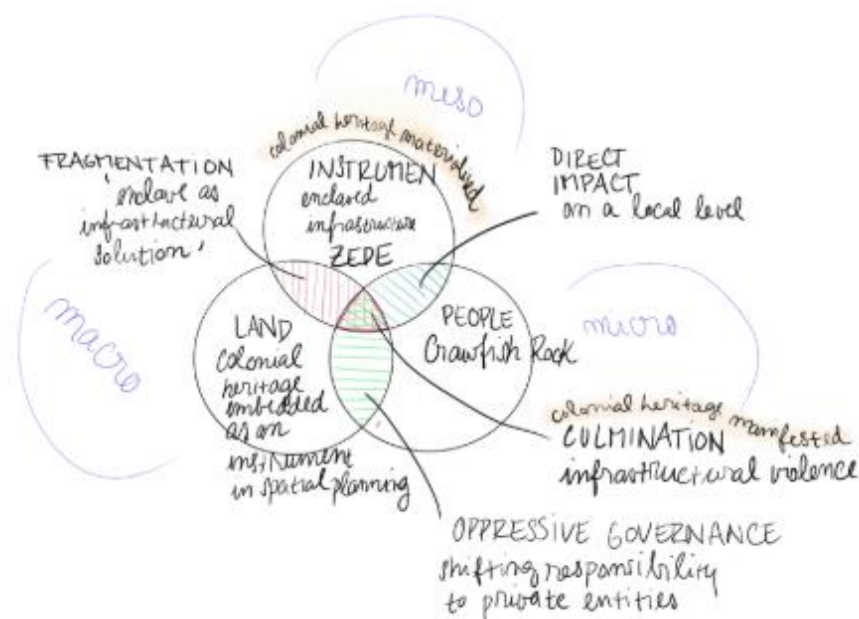


Figure 11: Adapted relationship between the roles of participating nations and the basic elements of an enclave model city (on a macro, meso and micro scale)

## 6.1 Colonial heritage as an instrument embedded in spatial planning

Colonial legacies continue to shape spatial planning in Honduras, perpetuating historical power structures through mechanisms like concessions. Spatial planning practices rooted in colonial ideologies are deeply intertwined with the exercise of control and exploitation, often rendering them regressive rather than progressive (Yiftachel, 1998). The concept of internal colonialism (González Casanova, 2006) is crucial here, as it underscores how domestic elites, who have internalised colonial ideologies, perpetuate these oppressive practices within their own countries.

In Honduras, the lack of state involvement and the absence of urban planning regulations have led to severe deficiencies in basic infrastructure, social housing, and employment opportunities, driving thousands of people yearly, to join migrant caravans toward the U.S.-Mexico border in search of stability (Interviewee #1, personal communication, December 8, 2023). These colonial legacies are embedded within the ZEDEs, which serve as contemporary instruments of domination. Concessions continue to function as legal instruments of territorial control, echoing the exploitative practices of the colonial era (Kenney-Lazar, 2020), with ‘spatial politics’ maintaining these practices through complex interactions between powerful actors (Interviewee #5, personal communication, December 13, 2023).

This ongoing influence of colonial practices is further explained by decolonial theory, which highlights how these outdated power structures have been adapted to modern contexts. Decolonial theory emphasises the need to break down these embedded systems that continue to harm local communities and favour the privatisation and commodification of land and nature over social and environmental well-being (Icaza, 2022).

## 6.2 Enclaves as infrastructural solutions

Enclaves, such as ZEDE Próspera, are often presented as innovative and sustainable responses to anthropogenic climate change, economic challenges and territorial improvement, but frequently serving to reinforce existing socio-economic inequalities through “disaster capitalist” approaches like ‘touristification’ and ‘greenwashing’ (Interviewee #5, personal communication, December 13, 2023). These enclaves are framed within national strategies for economic development but often mask deeper patterns of exclusion and segregation on a socio-spatial and socio-technical scale (Rajagopal, 2011).

ZEDE Próspera exemplifies how infrastructure is developed to serve the interests of foreign investors and local elites, often excluding local communities from decision-making processes and rendering them invisible. This model perpetuates internal colonialism and the concept of *terra nullius*, where local elites collaborate with foreign interests to claim and maintain control over resources and land, which is not up for grabs (Interviewee #2, personal communication, April 4, 2024).

The decolonial framework challenges the imposition of such external models, advocating for spatial planning practices that prioritise the rights and sovereignty of local communities (Tuck & Yang, 2012).

### 6.3 Enclaved infrastructure

‘Enclaved infrastructure’ refers to the physical infrastructures developed within enclaves, often disconnected from the broader region and designed primarily to support the enclave’s operations. This disconnect perpetuates colonial logics of segregation and exclusion, as seen in the case of Crawfish Rock, where ZEDE Próspera’s infrastructure has led to environmental degradation and social disruption (Grydehoj, 2023; Interviewee #7, personal communication, March 16, 2024).

The decolonial framework emphasises the importance of challenging these exclusionary infrastructures and advocating for inclusive and contextually appropriate developments, as desired by local populations. As the decolonial collective Possible Futures notes, when subjected to oppressive colonial systems that determine our built and natural environment, it is not important to understand these patterns of oppression fully, rather to identify and intercept them effectively (personal communication, December 13, 2023). The case of Crawfish Rock illustrates the dangers of allowing such ‘enclaved infrastructures’ to dictate the scope and direction of regional spatial planning, highlighting the need for decolonial strategies that genuinely consider the well-being of all community members and the natural environment (Icaza, 2022).

### 6.4 Infrastructural violence

The final theme addresses the concept of ‘infrastructural violence’, which is central to understanding the impact of ZEDE Próspera on Crawfish Rock. This form of violence, which often manifests as slow and cumulative harm, is a continuation of colonial strategies of ignorance, control and exploitation (Nijim, 2023). ‘Infrastructural violence’ is not merely a byproduct but a deliberate outcome of a planning approach that prioritises economic growth and control above all (Kadir, 2010).

The experiences of Crawfish Rock residents starkly illustrate how infrastructural violence affects daily lives, threatening community cohesion and well-being (Interviewee #2, personal communication, April 4, 2024). The decolonial framework advocates for infrastructural development that is inclusive, equitable, and aligned with the needs of the community, challenging the prevailing model that perpetuates inequality and marginalization.

## 6.5 The broader implications: rethinking infrastructure ‘development’ and spatial planning

Throughout this discussion, it becomes evident that the persistent chase after “progress” in conventional spatial planning practices often overlooks the diverse and context-specific pathways to a non-oppressive planning practice and sustainability (Noxolo, 2024; Porter, 2023; Yiftachel, 1998). The mainstream ‘eco-modernist discourse’, which emphasises novelty and technological innovation, frequently disregards the potential of maintaining, re-using, and evolving existing technological and infrastructural legacies (Mignolo, 2008). This universal valuation of a particular planning and developmental trajectory, deeply rooted in Western European and North American histories, fails to recognise the rich diversity of sustainability strategies that have emerged from local contexts and resistance movements (Wijsman & Feagan, 2019).

The case of Crawfish Rock and the ZEDE Próspera enclave development exemplifies the dangers of ‘maladaptation’, where infrastructure developments/entities marketed as sustainable lead to fatal outcomes for local communities, reinforcing socio-spatial inequalities rather than addressing them (Erakat, 2023; C. Loperena, 2022; Schipper, 2020). This situation underscores the need for a critical re-evaluation of what constitutes sustainable development, urging planners and policymakers to consider the long-term impacts of infrastructural developments/entities on social and environmental and spatial justice through the lens of decolonial theory. Decolonial theory calls for a break from the eurocentric and technocratic models that dominate contemporary spatial planning, advocating instead for approaches that are grounded in the lived experiences and knowledge systems of marginalised communities and resistance movements (Mignolo, 2008; Tuck & Yang, 2012).

## 6.6 Significance of the research

This research contributes to the broader discourse on decolonial theory, spatial planning in a postcolonial country, and neoliberalism by providing a case study that illustrates the complex interactions between these elements in the Honduran context. By examining the influence of ZEDE Próspera on Crawfish Rock, this thesis highlights the enduring coloniality inherent in contemporary spatial planning practices and

underscores the need for decolonial methodologies that prioritise social, environmental and spatial justice.

The findings also have practical implications for policymakers and planners in Honduras and other contexts where ‘enclaved infrastructures’ are promoted as economic and spatial development ‘solutions’. By drawing attention to the damaging consequences of such initiatives for local communities, this research calls for non-oppressive—decolonial—inclusive and equitable planning procedures that genuinely considers the needs and perspectives of existing communities. Starting by redressing, giving back what has been taken and repairing what has been altered without consent (Clements et al., 2022; Sheller, 2024; Tuck & Yang, 2012).

## 6.7 Limitations

While this thesis offers valuable insights into the dynamics of spatial planning and infrastructural violence in Honduras, its focus on a single case study is a limitation. The specific context of Crawfish Rock may not fully represent other communities affected by similar enclave developments, and further research is needed to explore these dynamics in different settings. Additionally, the use of qualitative interviews means that the findings are highly contextualised and may not be readily generalisable.

Despite these limitations, the study provides a critical perspective on the intersections of colonial legacies, neoliberalism, and spatial planning, informing future research and action in this field.

## 7. Conclusion

This thesis set out to explore colonial heritage as an instrument embedded in spatial planning in Honduras, with a particular focus on the ZEDE Próspera enclave and its impact on the indigenous community of Crawfish Rock. Spatial planning in Honduras is an under-researched topic, especially given that the country's first spatial planning law was only established in 2003, prompted by the natural disaster of Hurricane Mitch in 1998 (Interviewee #1, personal communication, December 8, 2023). This research aimed to bring light to this overlooked area within the conventional contexts of spatial planning, while also informing my own practice and training myself in applying research in a practical and history-informed manner.

### 7.1 Revisiting the research questions

The principal research question guiding this thesis was: **What are the effects of an 'enclaved infrastructure' on an indigenous island community in Honduras, specifically in the case of Crawfish Rock and the ZEDE Próspera?**

The ZEDE Próspera has profoundly disrupted the indigenous community of Crawfish Rock, perpetuating historical patterns of exclusion and marginalization rooted in colonial land use and concessions. It has led to social and cultural displacement, with residents feeling alienated in their own homeland as the ZEDE operates as a "space of exception", prioritizing external investors over local interests. Economically, while some jobs have been created, they are often low-paying and disconnected from the local economy, echoing the extractive practices of colonial concessions.

Environmentally, the ZEDE's infrastructure has caused significant degradation, threatening traditional livelihoods tied to the natural ecosystem. The development exemplifies infrastructural violence, where the imposed developments not only degrade the environment but also erode community cohesion and resilience. Legally, the ZEDE's autonomy further marginalises the community, bypassing national protections and reinforcing power imbalances. The enclave development has also fragmented the community, creating divisions that weaken collective resistance, underscoring the urgent need for a critical re-evaluation of spatial planning practices in Honduras.

The first sub-question explored the principles and dynamics shaping spatial planning in Honduras since colonial times. The findings confirm that concessions have historically served as instruments of territorial control, facilitating the exploitation of land and resources by elites and foreign investors. This colonial legacy continues to influence the fragmented and poorly regulated spatial planning framework in Honduras today,



making it easy for privatization to flourish, especially in a context where elites are largely unaccountable.

The second sub-question focused on how Honduran spatial planning contributes to territorial fragmentation and facilitates the development of enclaves like ZEDE Próspera. The research shows that the absence of urban planning regulations at the urban scale has created a “free-for-all” environment, enabling exclusive development zones to emerge without adequate consideration for existing infrastructures or local communities. This fragmentation is not just evident in policy but is also physically manifest in the territory, which is characterised by poor infrastructure, inadequate public mobility, and a lack of social housing.

The third sub-question examined how the community of Crawfish Rock perceives and copes with the impacts of the ZEDE Próspera enclave. Through interviews, I discovered the extent of infrastructural violence experienced by the community—often normalised to the point of being unnoticed by those affected. This highlights a critical oversight in spatial planning, where the broader impacts of a development on surrounding areas are frequently deemed unimportant, especially when those areas are segregated.

## 7.2 Rethinking spatial planning and enclaves

This research contributes to the understanding that spatial planning is inherently political. Many practitioners prefer to remain apolitical, but understanding the origins of spatial planning—how it has historically served militarization and conquest—is essential for informed practice. Examining policy documents in the context of historical events allows for critical thinking that is often missing in apolitical approaches. The lack of regulation and guidelines in Honduran spatial planning, particularly at the urban scale, underscores why privatisation is so prevalent. The ability of legal instruments to materialise into built structures shows a clear, traceable line from transnational agricultural land use models to the embedding of (extractivist) concessions within the fragmented framework of spatial planning.

## 7.3 Practical implications and recommendations

The findings of this research emphasise the need for practical and actionable changes in Honduras’s approach to spatial planning:

1. **Legal reform:** Honduras must undertake comprehensive legal reforms to ensure that concessions and enclave developments prioritise the rights and sovereignty of local communities. Environmental protections need to be reinforced to prevent the exploitation of natural resources and the degradation of local ecosystems.

2. **Institutional coordination:** Establishing a centralised spatial planning authority could reduce fragmentation and ensure that development strategies are cohesive and inclusive. This authority should enforce regulations that prevent the unchecked proliferation of enclaved infrastructures like ZEDEs.
3. **Community empowerment:** Empowering local communities through policies that support their resistance to harmful developments is crucial. Educational programs should acquire skills from these to participate in and benefit from spatial planning processes that are outside of the neoliberal approach.
4. **Transparent regulation of enclave models:** Should enclave models similar ZEDEs continue, they must be subject to rigorous regulations that ensure transparency and accountability. Collaboration with local educational and other public institutions should be mandatory to ensure that possible benefits are equitably distributed and aligned with local needs.

## 7.4 Concluding thought: a path forward

This thesis does not merely critique the existing spatial planning practices in Honduras but offers a path forward—one that requires not only reform but ‘radical’ reimagination. To truly break free from the colonial and neoliberal structures that have long governed its land and people, Honduras must consider a profound shift in how it conceives of and practices spatial planning. This shift should go beyond decolonial, non-oppressive attempts, proposing a decolonial transformative vision where land is no longer a commodity to be controlled, traded, or exploited, but a communal resource to be shared, stewarded, and regenerated.

One ‘radical’ approach would be to **reclaim and redistribute land** that has been enclosed by elites and foreign entities, returning it to the indigenous and local communities who have historically been dispossessed. This isn't just about legal reforms—it's about reversing centuries of land theft by abolishing the concept of private land ownership in favor of collective stewardship. Communities, rather than governments or corporations, would take the lead in deciding how land is used, ensuring that it serves the needs of the many, not the few.

Another ‘radical’ idea is the **dismantling of spatial planning as we know it**, replacing it with a plural, networked, decentralised system where communities across the country collaborate to design their environments in ways that honor their cultural heritage and environmental context. This approach would involve the **abolition of top-down planning models** that have historically enabled genocides and displacements and would instead empower communities to create spaces that reflect their values and aspirations.

**A perhaps shocking but practical step** in this direction would be to **declare a moratorium on all large-scale developments**—especially those driven by foreign investment—until a comprehensive, community-led audit is conducted on the social and environmental impacts of existing infrastructures. This audit would be conducted by the very communities affected by these developments, using their knowledge and lived experiences as the primary data source. Any development that fails to meet the standards of social and environmental justice set by these communities would be dismantled or radically restructured.

Finally, **consider the idea of reparative planning**—a process in which spatial planning itself becomes a tool for healing and redress. This could involve the construction of memorials, the restoration of ecosystems destroyed by colonial and neoliberal developments, and the creation of new public spaces dedicated to the histories and futures of marginalised communities. Spatial planning would no longer be a tool of oppression but a means of reconciliation and justice.

These ideas might seem ‘radical’ or even impossible within the current global order, but true transformation often requires us to envision what lies beyond the limits of what is considered possible. If Honduras is to achieve a future where the rights and dignity of all citizens are respected, it must dare to imagine—and implement—an entirely new way of relating to land, space, and each other. **By starting with practical, community-led actions like the development moratorium, Honduras can weave these ‘radical’ ideas into the fabric of its future, ensuring that the thread of decolonial justice runs through every aspect of its spatial planning practices.**

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# Appendix A

## Semi-structured interview guide

### Introduction

1. Introduction and consent
  - Briefly introduce yourself and the purpose of the interview.
  - Explain the interview process and the topics that will be covered.
  - Ensure that the interviewee understands their rights, including anonymity and the ability to withdraw at any time.
  - Obtain verbal or written consent to proceed with the interview.

### Section 1: Background information

1. Personal and professional background
  - Can you tell me a bit about your background and your current role in the community?
  - How long have you been living/working in this area?
2. Initial involvement with the ZEDE or relevant projects
  - How did you first become involved with or aware of the ZEDE (Special Economic Development Zones) or related projects?
  - What were your initial thoughts or expectations regarding these projects?

### Section 2: Impact on community and environment

1. Environmental changes
  - Have you noticed any environmental changes in your area since the establishment of the ZEDE or similar projects?
  - Can you describe how these changes have impacted the local ecosystem, such as water quality, forest cover, or marine life?
2. Economic impact and employment
  - What types of employment opportunities have emerged as a result of these projects?
  - Do you feel these opportunities have benefited the community? Why or why not?
  - How has the cost of living changed in your community since the introduction of these projects?
3. **Social dynamics and infrastructure**
  - How have these developments affected social relations within the community?
  - What has been the impact on local infrastructure, such as roads, water supply, or housing?
  - Have there been any infrastructural projects that you feel have had a particularly positive or negative impact on your community?

### **Section 3: Governance, consultation, and institutional challenges**

1. Community consultation and decision-making
  - Were you or other members of your community consulted before these projects were initiated?
  - How do you feel about the level of involvement the community has had in decision-making processes?
2. Political and legal context
  - How have political changes or legal frameworks impacted the implementation and operation of these projects?
  - What are your thoughts on the legal status and governance of ZEDEs? Do you feel they operate transparently and fairly?
3. Institutional support and challenges
  - How have local or national institutions supported or hindered the development of your community in the context of these projects?
  - Are there any particular institutions or policies that you believe should be reformed to better serve the community?

### **Section 4: Community resilience and future outlook**

1. Coping mechanisms and resistance
  - How has your community responded to the challenges posed by these projects?
  - What strategies have been employed to protect or advance community interests?
2. Future expectations
  - What are your hopes for the future of your community in relation to these developments?
  - What support do you think is necessary to ensure a positive outcome for your community?
3. Recommendations
  - Based on your experiences, what recommendations would you make to improve the situation for your community or others facing similar challenges?

### **Closing**

1. Final thoughts
  - Is there anything else you would like to add or emphasise that we haven't covered?
  - Do you have any questions for me about this research or how the information will be used?
2. Thank you and next steps
  - Thank the interviewee for their time and insights.

- Explain any next steps, including how the interview data will be used and when they might hear back from you, if applicable.

## Appendix B

### Coding table (glossary)

Code	Description
POL	Political context and issues affecting planning and governance
PLT	Planning and territorial ordering processes and experiences
CHL	Challenges and gaps in the current spatial planning framework
INS	Institutional changes and developments
CPE	Comparative examples and lessons learned
REC	Recommendations and strategies for improving spatial planning
NTW	Networking and collaboration among institutions and international bodies
EXP	Expert commentary on specific practices and their implications
CV	Climate vulnerability and impacts
SJ	Spatial justice and equity concerns
CP	Colonial Patterns: Elements of urban planning that reflect colonial influences and legacies
DE	Decolonisation Efforts: Actions and initiatives aimed at dismantling colonial structures and influences in urban settings
CR	Climate Resilience: Strategies and practices aimed at enhancing the ability of urban areas to withstand and adapt to climate change
HC	Health and Capitalism: The intersection of health issues and capitalist structures in urban environments
PS	Power and Sustainability: The relationship between power dynamics and sustainable practices in urban planning
PI	Pattern Identification: The process of recognizing and understanding recurring themes and structures in urban development
DG	Disassociation and Gaslighting: Psychological and social phenomena that undermine people's understanding of their environment and history
SP	Spatial Planning
TO	Territorial Ordering
DGOT	Dirección General de Ordenamiento Territorial
InstChange	Institutional Changes
Exp	Experiences
Proc	Processes

Issues	Issues
ZEDE	Special Economic Development Zones in Honduras and their impacts
Infra	Infrastructure
InfraViolence	Infrastructural Violence / Eliminary Infrastructure
ClimateVul	Climate Vulnerability
SpatialJustice	Spatial Justice
Agrarian Reform	Policies and changes related to the redistribution of land to farmers and the impacts of these reforms
Anti-Hydroelectric	Opposition to hydroelectric projects and their impacts
Anti-Mining	Opposition to mining projects and their impacts
Anti-ZEDE	Opposition to ZEDes and their impacts
Community Impact	The effects of policies and projects on local communities
Community Support	Actions and measures taken to support at-risk communities
Connectivity	How different projects and initiatives are interconnected
Energy Distribution	Issues related to the distribution of electricity and other energy sources
Elite Land Ownership	Ownership of land by elite families and its impacts
Extractivism	The practice of extracting natural resources for economic gain, often at the expense of local communities
Historical Oppression	Long-standing patterns of oppression faced by certain groups
Infrastructural Violence	The harm caused by infrastructure projects to communities
Land Investment	Investment in land by wealthy individuals or groups
Landscape Change	Changes to the physical landscape due to projects and policies
Light Pollution	Unwanted or harmful light from artificial sources
Megaprojects	Large-scale projects that often have significant social, economic, and environmental impacts
Mining	Activities related to the extraction of minerals
Neoliberal Policies	Policies that favor free-market capitalism and deregulation
Noise Pollution	Harmful or annoying levels of noise
Political Instability	Unstable political situations that impact governance and society
Protection	Measures taken to ensure the safety of individuals or communities
Water Privatization	The transfer of water services from public to private control

Violence Infrastructure	Infrastructure projects that result in violence or harm to communities
State Failure	The perception or reality of a state being unable to provide essential services and governance
External Influence	The role of foreign entities or individuals in shaping local projects and policies
Cultural Appropriation	The adoption of elements of one culture by another, often without understanding or respect
Community Resilience	The ability of a community to withstand and recover from adverse situations
Technological and Mystical Mix	The blend of technology and mystical beliefs or practices in planning or development