The megaproject, the people, and the strong maritime power: A multi-method case study of the shifting ecologies of the Greater Bay Area, China

Sallie Hoi-Yin Lau

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Committee:

Yoshitaka Ota, Chair

David Fluharty, Member

Edward Allison, Member

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Abstract

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Sallie Hoi-Yin Lau

Chair of the Supervisory Committee:

Dr. Yoshitaka Ota

Coastal megaprojects are on the rise. In Southern China, 11 cities are to merge into a super-region through the Greater Bay Area megaproject. This is the result of centrally planned infrastructure such as a large bridge or an artificial island built to connect the region. By building massive infrastructure to connect coastal cities, the megaproject promises a redistribution of wealth from richer to poorer regions. The megaproject also promises that it will protect the region's natural resources and provide better social welfare to residents through a reconfiguration of territories.

However, megaprojects often fail in delivering their promises. In doing so, they lay bare the socio-environmental inequities they cannot resolve and the power relations that create such inequities. In this thesis, I use coastal megaprojects as an instrument to investigate three ideologies that guide China’s coastal development - strong maritime power, ecological civilisation, and moderately prosperous society - and show how they influence socio-environmental relations. I perform a multi-method analysis. First, I do an analytical literature

review to contextualise and explain the three ideologies and their import for megaproject construction. Next, I perform a content analysis on a planning document for the Greater Bay Area to show how megaproject infrastructure shifts ecologies and alters landscapes to benefit the elite and the state. Finally, using interview data collected in Hong Kong and Zhuhai in summer 2019, I contrast how people from two different political and cultural contexts perceive the megaprojects and show how the megaprojects and the ecologies they create alter people's access to and relationship with the coast. I argue that Chinese coastal megaprojects and their guiding ideologies shift ecologies and coastal spaces into ones that prioritise economic growth and are increasingly privatised and surveilled. In doing so, they also devalue environmental protection, reify intra- and inter-community injustices, erase public spaces, and create more capitalist, authoritarian coastal futures in China.

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Chapter 1. Introduction

In late 2012, then-President of the People's Republic of China, Hu Jintao, declared that becoming a "strong maritime power (海洋強國)" was essential for the country's nationalist goals (Hu, 2012). China, historically a land-based, agrarian nation, would make the twenty-first century its "ocean century" in order to achieve its dream of "great rejuvenation". Since it was officially incorporated into official party discourse (State Council, 2003), the phrase "strong maritime power" has not only been taken up by leaders like Hu (2012), but also by provincial and local governments alike. Plans to create strong maritime provinces or cities have proliferated (e.g., Shandong Provincial Council, 2018). Such plans tend to describe aspirations to develop maritime industries and build port infrastructure, in order to contribute to the construction of national maritime power.

Around the same time, the concept of an "ecological civilisation" was also adopted into the constitution of the Chinese Communist Party. Ecological civilisation refers to a broad set of policies created to recognise the need for resource conservation and environmental protection (Hu, 2007). It signals that the previous economic model of growth-at-all-cost needs to be replaced, through technology and innovation, with a more eco-centric model ("Ecological Civilisation", 2007). Together, "strong maritime power" and "ecological civilisation" point at the possibility of sustainably developing a Chinese ocean economy.

There is relatively little literature written in English about the intersection of Chinese ocean and environmental governance. Some exceptions exist (e.g., Hanson, 2019; Lu, 2015), focusing mainly on marine functional zoning or China's responsibility to protect the ocean environment at the global scale. However, articles written about China's rise as a strong

maritime power generally lean towards a US-centric audience and have the intention to guide US national security policy (e.g. Erickson & Goldstein, 2012; Mallory, 2015). Additionally, while many scholars write about ecological civilisation, they tend to disagree on what it is and what its impacts are. Some meditate on its connection to the ancient Chinese philosophy of "being in harmony with the heavens (天人合一)" and whether it is a better sustainable development model compared to Western ones (e.g., Frazier et al., 2019; Gare, 2012), others debate how ecological civilisation as a narrative can or cannot mobilise China into acting on global environmental issues (e.g. Geall & Ely, 2018; Heurtebise, 2017).

I do not, in the following pages, contribute to the debate of China's influence on global maritime and environmental governance. In contrast, I follow the footsteps of Chen (2012) and Yeh (2005) and investigate how the *desire* of the Chinese government to become globally recognised as a modern, ecological superpower can have an impact on its own landscape and people. And while Chen (2012) and Yeh (2005) set their studies in terrestrial, rural spaces, I examine ocean-adjacent regions and communities. However, like these authors, I also probe into the goals of achieving a "moderately prosperous society" (小康社會) and question how the capitalist[1] interpretation of these goals, when combined with the desires to build stronger, more

[1] I argue that, though the Chinese Communist Party is communist in name, China is essentially an authoritarian capitalist state. In his 2017 essay, "Is China socialist?" Barry Naughton assesses China's self-described socialism based on four criteria: 1) the state's capacity to shape economic outcomes, 2) whether it has the intention to get noninterventionist market outcomes, 3) whether the state is successful in redistributing economic and social benefits to the less well-off, and 4) whether the government has mechanisms through which the broader public can influence policies. Naughton shows that while the Chinese state has enormous capacity to shape economic outcomes, it is increasingly interventionist, is rather unsuccessful in its redistribution efforts, and remains largely unaccountable to its public. Naughton concludes that China cannot be considered a socialist "until it makes much greater progress fulfilling its own declared policy objectives of universal social security, modest income redistribution, and

competitive maritime economies and to ecologically civilise populations, can further change ecologies and displace certain coastal populations.

China is known for its infrastructural megaprojects of spectacular proportions. The South-North Water Transfer (SNWT) project is one such example. The SNWT is the world's largest, most expensive inter-basin water transfer project which aims to move water from South China through channels that run through the Yangtze, Huai, and Yellow Rivers (Pohlner, 2016). Another example are ghost cities. Throughout the country, there are a multitude of ghost cities sprawling across the landscape, full of luxurious skyscrapers but empty of people (Sorace & Hurst, 2016). And, zooming back into the global, there is the Belt and Road Initiative, an infrastructural project that spans continents, ecologies, and geographies - including oceans and coasts (Flyvbjerg, 2014). Built with the intentions of integrating economies and societies, and, in doing so, improving the wellbeing of people and the environment (Schindler et al., 2019), megaprojects can also create opportunities for land and ocean-grabbing (Bennett et al., 2015), degrade environments, displace communities, and create modernising, capitalist fantasies (Appel et al., 2019).

What can coastal megaprojects tell us about the Chinese government's ideologies of strong maritime power, ecological civilisation, and moderately prosperous society? How do they reproduce the inequities caused by the processes of globalisation, modernisation, and authoritarian-capitalist growth? These are the questions I address in this study. The connection

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amelioration of environmental problems" (p. 22). In this publication, he describes China as an "authoritarian growth machine" (Naughton, 2017, p. 21). In another, he calls its system one "state capitalism" (Naughton & Tsai, 2015).

between megaprojects and the political has been made many times by scholars like Paul Gellert and Barbara Lynch (2004), Janis van der Westhuizen (2007), and Tim Oakes (2019). Megaprojects of the infrastructural kind, in particular, refract class, race, gender relations through deciding who can access it or for whom it can be made available to (Appel et al., 2019). According to Appel et al. (2019), infrastructure can be seen as "a forceful re-engagement with gender, race, colonialism, post-coloniality, and class on new empirical and political terrain. Infrastructure provides a site in which these forms of power and inequality are reproduced or destabilized, in which they are given form, occasionally obduracy, and often contingency" (p.14). Megaprojects reveal the social and environmental structural inequities that hold up the status quo of state-authoritarian capitalism. So, in order to answer the question "what can coastal megaprojects tell us about China as a strong maritime power, an ecological civilisation, and a moderately prosperous society," we must also address the relevant question of: what social inequalities and ecologies are being made visible through the construction of coastal megaprojects?

In this thesis, I address these questions by studying the construction of one coastal megaproject in Southern China: the Greater Bay Area. The Greater Bay Area is a set of infrastructural projects that aims to connect the Pearl River Delta (Figure 1.1). What makes the political ecology of the Greater Bay Area murky is that it is not merely an integration of territory and economies, but also is an integration of three different political systems and identities into one. Two cities in the region - Hong Kong and Macao - despite being part of the same estuarine ecosystem, have their own political, economic, and judicial systems. Attempts at integration and landscape-changes in politically disparate regions can make social and environmental inequities even more visible. I analyse the construction of the Greater Bay Area (GBA) using a multi-

method approach, which includes a literature review, content analysis, and interviews described in Chapter 2. I argue that the three methodological approaches point to how the strong maritime power, concepts of ecological civilisation, and moderately prosperous society work together to reify class inequities along the coast.

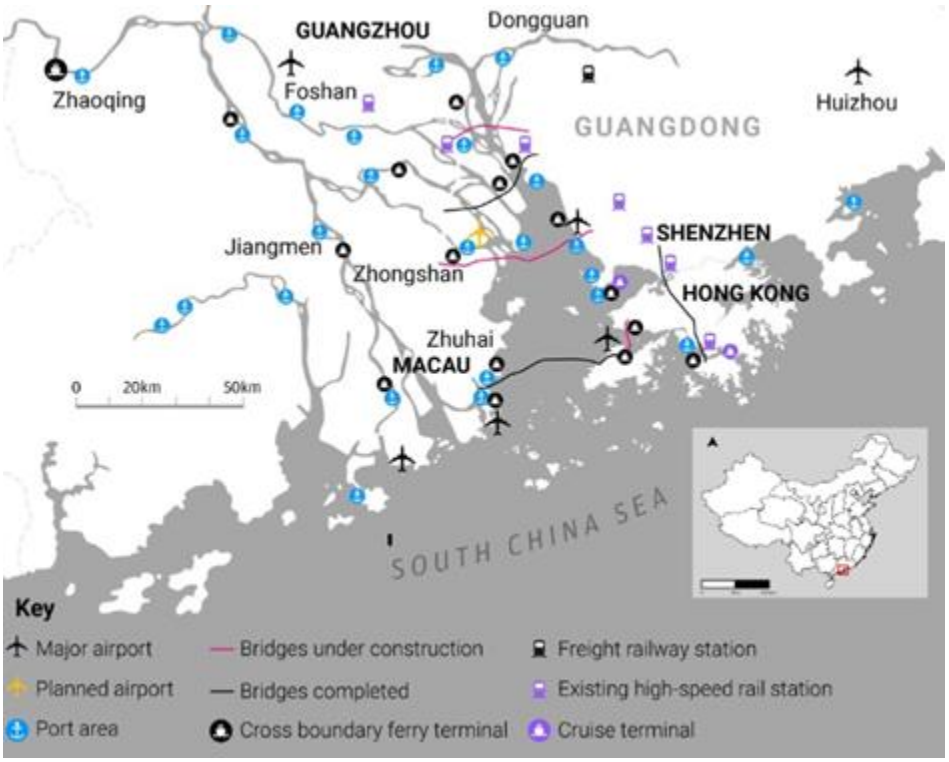

Figure 1.1 The Greater Bay Area, a series of implemented and planned megaprojects that connect the Pearl River Delta. Modified from SCMP Graphics (2019).

In Chapter Three, I review Chinese planning documents, media reports, and academic literature to outline the histories and contexts that cumulate in the three ideologies. I review the ideologies of strong maritime power, ecological civilisation, and moderately prosperous society, as well as their import for megaproject development. In doing so, I problematise the recent, expansionist ocean economic policies that prioritise growth. I argue that these three ideologies, while broadly beneficial to all Chinese citizens on paper, greenwash economic ambitions and

ultimately serve the political and economic desires of the state through the construction of megaprojects in the ocean/coastal setting.

In Chapter Four, I perform a content analysis of a planning document for the Greater Bay Area. I map out how these projects can potentially change the landscape of the Pearl River Delta using Cohen's (2017) shifting ecologies framework. I argue that megaprojects build privatised worlds that are made for the economic and political elite. They create exclusionary, "luxury" ecologies that restrict who can access the coast. I also demonstrate that while Chinese coastal megaprojects may consist of green, connective infrastructures, they also consist of economic, political and ideological infrastructures that promote a state-controlled human-ocean relationship.

In Chapter Five, I draw on direct and participant observation, as well as semi-structured interviews with residents in Hong Kong and Zhuhai, to report on the opportunities people see the GBA might provide them, the anxieties it elicits, and the desires it fulfills or leaves wanting. I show that opportunities observed, anxieties evoked, and desires longed for vary between and even among communities in these two PRD cities. Whether people can see opportunities or retain reservations about the GBA is dependent on resources they already possess and their mobility. Although people see coastal spaces and futures very differently. The megaproject only allows for certain opportunities and desires to be fulfilled, and those who see the megaproject as a threat feel a strong sense of powerlessness in influencing how coastal space is used. I argue that China's style of state-authoritarianism, enacted through the construction of GBA projects, makes it hard for people to oppose capitalist coastal development endeavours.

The literature review, the content analysis, and the ethnographic interviews focus on different aspects of megaproject planning. They all illuminate how, through the current

sustainable development model of the Chinese state, social inequities and environmental degradation are perpetuated, and even become magnified on the coast. However, the findings within this thesis are not meant to be taken as generalised conclusions about all megaprojects. It is tempting to, but to do so is run into the same pitfalls as megaprojects do. Megaprojects can be conceptualised by powerful people and states as something simple, unifying and universally beneficial, but the impacts they have on the people and spaces they take over are diverse and complex and difficult to comprehend in their totality. The Greater Bay Area was built specifically for the integration of a diversity of political and ecological landscapes. However, many aspects of these landscapes resist integration. If there is a generalisation to make about megaprojects, it is that they generalise. They simplify. And in order to resist the unrelenting tide of simplification, perhaps it is necessary to continue to tell of the cultural- and biodiversity one such project seeks to drive out.

Chapter 2: Theoretical Frameworks and Methods

2.1 Theoretical Frameworks

2.1.1 The Megaproject as Framework

According to Merriam-Webster (n.d.), the definition for "megaproject" is "a major project or undertaking (as in business or construction)." The modifying prefix, "mega," connotes largeness, mightiness, or importance. In terms of scientific measurements, "mega" also means "million." Megaprojects can thus mean large-scale construction or business projects that cost millions of dollars. Nowadays, megaprojects are so vast they far exceed the million-dollar mark, costing billions or even trillions (Brookes & Locatelli, 2015).

The vastness of a megaproject is not only measured in economic terms. In a paper titled "What you should know about megaprojects and why," Bent Flyvbjerg (2014) argues that megaprojects are "complex ventures" that not only cost billions of dollars, but also "take many years to develop and build, involve multiple public and private stakeholders, are transformational, and impact millions of people" (p. 13). Flyvbjerg's (2014) definition shows how megaprojects are also sprawling in terms of temporality, social involvement, and impact. Gellert and Lynch (2004) have classed megaprojects into four types: (i) infrastructure (e.g., ports and railroads); (ii) extraction (e.g. oil and gas); (iii) production (e.g. plantations and manufacturing parks); and (iv) consumption (e.g. malls, theme parks, and real estate). Other scholars include in their definition non-material or imagined projects such as unfinished cities, sporting events, or national ID databases built by facial recognition programmes (Carse & Kneas, 2019; Schindler et al., 2019; Figure 2.1). Their reasoning is that these megaprojects,

though non-material, can reshape politics and social landscapes just as well as megaprojects that are material.

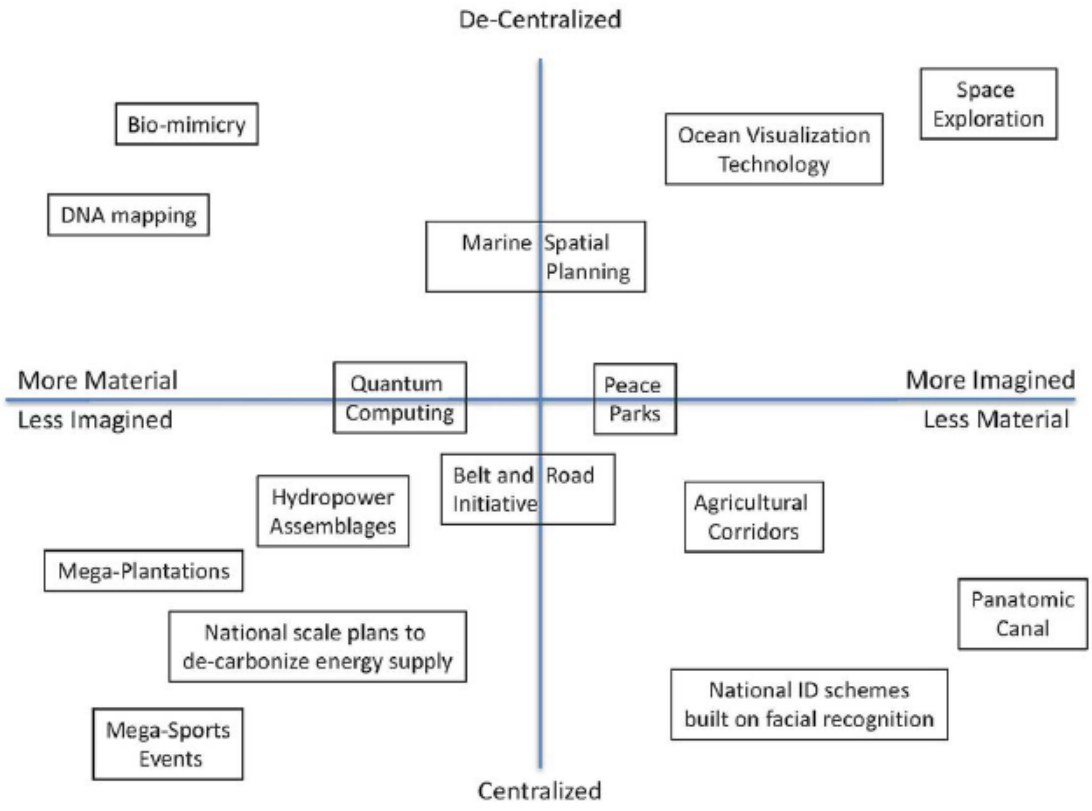

Figure 2.1. Examples of contemporary megaprojects (Schindler et al., 2019).

In the popular imagination, megaprojects are also often iconic. Some megaprojects Flyvbjerg (2014) cites in his paper include the Chrysler Building in New York, the Burj Khalifa in Dubai, and the Bay Bridge in San Francisco. These are all structures that have become widely known symbols of their cities. However, the megaproject can also be a mere spectacle, the result of a nation-state spending public dollars to give the world a performance of a thriving economy despite the project's inaccessibility to local residents (Guano, 2002). In this case, a megaproject is a "superlative" of the desire to cast a place as modern and world-class (Leslie, 2015), holding the promise of global status but never quite fulfilling it.

International recognition is but one of the promises megaprojects hold. In Europe, large-scale urban projects promise economic growth and competitiveness (Swyngedouw et al., 2006). In Pacific Rim cities, skyscrapers and financial districts promise "utopia" (Olds, 2001, p. 6). In Mexico, the "large spider-web of... projects known collectively as the Trans-Isthmus Megaproject" promised industrial development to the towns it passed through (Call, 2011). Other scholars have noted that megaprojects of infrastructure also carry narratives of liberal equality, technological progress, and modernity (Appel et al., 2019, p. 3).

Nation states, especially authoritarian nation-states, build megaprojects because of these promises of a modern, better life. If citizens believe in these promises, the megaprojects make authoritarian nation states' continued political legitimacy possible (Dynon, 2011). Consider the 2008 Beijing Olympics, which was both a mega-sporting event and a mega-network of dazzling sports infrastructure. The Beijing Olympics megaproject was an "emphatic signal" to both the world and China's citizens that China "no longer wished to 'catch up' with the modern world, but that it had arrived on the world stage and now strived to get ahead" (Broudehoux, 2007). Nationally, because of the Olympics, Chinese citizens' patriotism increased, and there was a heightened belief in the party state-led Chinese collective (Yang et al., 2010).

However, when scrutinised more closely, the Olympic megaproject can be found to exacerbate existing inequities. As China built the Olympic stadium, poor families in old neighbourhoods were displaced, migrant workers were policed for their "uncivilised" behaviour, and their interests came increasingly in the control of the already rich and powerful (Broudehoux, 2007). This resulted in the exacerbation of pre-existing "socio-spatial polarisation" of the city (Broudehoux, 2007). Even the improving environmental standards in the city were an illusion (Eguiguren, 2016): environmental injustices continued to exist in the city after the

Olympics, and likely worsened due to the displacement of migrants and workers (Ma et al., 2017).

Megaprojects, therefore, magnify class, race, and gender relations through deciding who can access it or for whom it can be made available (Appel et al., 2019). According to Appel et al., (2019), studying megaprojects, in particular infrastructure megaprojects, allow for "forceful re-engagement with gender, race, colonialism, post-coloniality, and class on new empirical and political terrain. Infrastructure provides a site in which these forms of power and inequality are reproduced or destabilised, in which they are given form, occasionally obduracy, and often contingency" (p.14). Using megaprojects as a framework for studying Chinese coastal development can thus reveal the potential social and environmental structural inequities that hold up the ideologies of "strong maritime power," "ecological civilisation", and "moderately prosperous society."

2.1.2 Political Ecology as Lens

In my introduction, I proposed that in order to answer the question of "what can coastal megaprojects tell us about China as a strong maritime power, an ecological civilisation, and a moderately prosperous society," we must ask: what social structures and ecologies are being made visible through the construction of coastal megaprojects? If the megaproject is the object we are scrutinising for answers, I suggest using political ecology as a powerful lens for investigation and scrutiny.

Political ecology is the study of relations between social and environmental conditions and uneven power relations (Muldavin, 2013). Specifically, it dissects the restructuring of social and environmental relations during policy changes and reveals unequal power dynamics, occupation of territories and spaces, and access to nature and resources (Xie et al., 2019).

Questions political ecologists ask about China generally include whether ecological modernisation narratives and development deny citizens access to resources (Yeh, 2009), how local people perceive their environment in different ways from outside planners (Xie et al., 2019), and how have marginalised groups have come up with practices to resist unwanted development and land degradation (Chen, 2012). Such questions can be directly applicable to studying state-led megaprojects, which can shift politics, integrate territories and change scales of governance, and transform long-established social and environmental relations in ways that can be desirable or undesirable for people living in its proximity (Carse & Kneas, 2019; Goett, 2016; Rippa, 2020; Schindler et al., 2019). Political ecology is not only useful for capturing changing ecologies and critiquing unequal human-environment relations, it also allows the researcher to identify and centre preferred or more equitable alternatives to the current mode of development (Xie et al., 2019). It allows the researcher studying coastal megaprojects to not only scrutinise coastal environments and human-ocean relationships desired by the state, but also to present visions of alternate coastal futures.

Political ecologists such as Robbins (2003) and Yeh (2015) have argued for both the better understanding of state institutions and the analyses of China's human-environmental relations at the local scale. In doing so, the political ecologist puts the tension and possible conflict between the state, the people, and other actors at the centre of the study, as opposed to traditional ethnography, which only centres a particular social group (Little, 2007). Thus, I adopt a multi-method approach at analysing megaprojects that considers both the perspectives of the state and the people.

2.2 Methods

For the purposes of this thesis, the term “megaprojects” refers to not just a single project but multiple infrastructural developments that are built or will be built in close proximity to each other. These developments are intended to be complementary. In the case of the Greater Bay Area, such developments can include artificial islands, coastal highways or inter-city roadways, bridges, near-shore reclamation, industrial parks, and the technology embedded within these structures. Together, these developments have cumulative, emergent effects on people's sense of place, economic and political opportunities, and their relationships with the ecosystems they depend upon.

To address the questions of how Chinese coastal megaprojects shift natural and human ecologies, and how it makes visible the intersection and inequalities of strong maritime power, ecological civilisation, and moderately prosperous society, I employ three approaches.

2.2.1 Literature Review

Chapter 3 consists of an analytical literature review of both Chinese-language primary sources and English-language secondary sources on the development of the three key ideologies: strong maritime power, ecological civilisation, and moderately prosperous society. Primary sources include government planning documents, press releases, and reports that describe central government policies and thought related to the history and development of the three ideologies. I gathered such sources by searching through the websites of various Chinese government departments, such as the Ministry of Ecology and Environment and the Chinese Communist Party’s National Congress, as well as through the websites of the government’s media mouthpieces, such as *Xinhua* and *China Daily*. Keywords for these searches included “strong

maritime power," "China Dream," "ecological civilisation," "moderately prosperous society," and "blue economy." Other primary sources include academic articles written by Chinese scholars. These academic articles were found through the China National Knowledge Infrastructure (CNKI) database using the same keywords as those used for government website searches. Academic articles were included in this literature review because they offer insight into how domestic scholars interpret such ideologies and policies.

English-language sources – academic articles from China Studies scholars and from those in the fields of geography and political ecology – were incorporated into the literature review in order to provide context and alternative explanations for the rise of these ideologies and policies. There are very few Chinese-language studies that critically analyse the intersection between the political and the environment, partly because of Chinese state control on scholarship (Yeh, 2015). Incorporating non-Chinese-language sources opens up space to critique China's human-environment relations in state-constructed narratives and to investigate those outside of it. I found the relevant secondary sources by performing searches on Google Scholar using the keywords "strong maritime power," "China Dream," "ecological civilisation," "moderately prosperous society," and "blue economy."

2.2.2 Content Analysis

Chapter 4 presents findings from a content analysis on one specific planning document - the *Outline Development Plan of the Guangdong-Hong Kong-Macao Greater Bay Area* (the *Outline Development Plan*; State Council, 2019). Planning documents are ideological innovations that convey government policy and influence development (Moyle et al., 2014). Analysis of the *Outline Development Plan*'s contents provides insight on how the state planners imagine the three ideologies manifesting in the Pearl River Delta through the construction of the

Greater Bay Area. Chapter 4 consists, firstly, of a word-frequency analysis, and secondly, a deductive content analysis.

The word-frequency analysis was performed using the open source text mining tool, Voyant Tools 2.0 (Sinclair & Rockwell, 2016), for the purposes of finding, simply, the most frequent terms that appear in the Plan. A word-frequency analysis makes visible the focus of the plan and assists in drawing out potential answers to the question: for what purpose is the Greater Bay Area built? Similar word-frequency analyses have been used in business and politics; word clouds are often used to visualise the contents of, for example, the underlying message of political speeches (Atenstaedt, 2012). In the analysis for Chapter 4, I limited my results to the 75 most frequently mentioned words in the *Outline Development Plan*, and excluded common stopwords such as "to," "and," "is."

An assumption that an unweighted, computer-generated, single word-frequency analysis makes is that the most frequently used words reflect the the *Outline Development Plan*'s greatest interests (Stemler, 2000). However, it is often difficult to determine the context of where and when these frequently appearing words are used or co-occur. In *spatial* planning documents, the lack of information on co-occurrence can lead to confusion of where certain infrastructure will be located; for example, the frequent appearance of "park" and "Hong Kong" does not necessarily mean that these parks will be built in Hong Kong. Moreover, using single words as a unit of analysis does not render any information on the nature of the individual infrastructural projects that taken together, as the Greater Bay Area, could transform the landscape of the Pearl River Delta (PRD).

Thus, in addition to a word-frequency analysis, I also conducted a deductive content analysis on the Plan. The purpose of Chapter 4 is to determine how the Greater Bay Area,

through its planned infrastructure projects, might shift ecologies of the PRD from a more populist ecology, to either business or political elite-oriented ecologies (Cohen, 2017), or "ideological" ecologies oriented towards state-control. I therefore mined the Plan for descriptions of planned infrastructure projects, and categorised each project into the following groups:

1) Democratic - in which a project would confer universalist benefits to a broad majority. For example, a boardwalk constructed in an already existing nature reserve where even a person with no income can enjoy free of charge
2) Luxury - in which a project would confer benefits to a mostly professional class with a high education level or income. For example, a techno-industrial park confers benefits mainly to tech companies and tech workers, who have to be educated in tech in order to utilise this infrastructure, or; an airport, which mainly provides retail space for consumer brands and mobility benefits for the social classes that can afford air travel.

It can be argued that a techno-industrial park can have an equalising impact; in time, a majority of people may be able to enjoy its technological benefits. However, if one bases their evaluations on current purposes and contexts, like I am doing so here, industrial parks can be seen as a form of enclosed spaces within a Chinese city to "zone in" private capital while keeping access to such capital scarce (Wang & Leng, 2012). It can also be argued that airports are built so that more people can access air travel and tourism, but building an airport economy can also create displacement (e.g. Choy, 2011).

3) State-oriented - in which a project would, ultimately, confer benefits to the party state. Infrastructures that police movement, control behaviours, or regulate

environments fall into this category. For example, surveillance systems embedded into the GBA environment, or re-education programs through schools.

In addition to the above-mentioned groups, I also categorised infrastructure outlined in the Outline Development Plan as either "green," "grey," or "black." By calling shifts in landscape "shifts in ecologies," I am ascribing an environmental aspect to my analysis. This is, in part, relevant to my analysis of whether a region described as an ecological civilisation is actually ecological. It is also relevant to my analysis of whether state-envisioned coastal futures in China are sustainable. The "environmental categories" are thus described:

1) Green - looks like nature, enhances the "natural" aesthetic of the project, or increases access to nature. For example, community gardens or a nature reserve.
2) Grey - does not necessarily look like nature but reduces indirect production of pollution. For example, a wind farm does not enhance the natural aesthetic of a space, but it helps reduce pollution by providing renewable energy. Public transit is also an example because it reduces emissions from private cars.
3) Black - does not reduce pollution or emissions, nor does it enhance the "natural aesthetic" or increase access to nature. For example, an oil pipeline.

2.2.3 Interviews

The findings presented in Chapter 3 are primarily supported by the fieldwork I conducted in July-August 2019 in Hong Kong and Zhuhai (UW Human Subjects Division IRB-approved; study number: 0007753). I returned to these places in January 2020 to observe the changes brought about by megaproject development and to spend time with the communities there. My goal for fieldwork was to understand how the Greater Bay Area megaproject, or the idea of it, impacted people and their relationship with the surrounding environment. To conduct my

research, I employed a variety of methods: public interception interviews, elite interviews, participatory observation, and intentional conversations. Public interception interviews were generally short (Flint et al., 2016), less than 15 minutes in length. I met these interviewees in public spaces, intercepting them on piers, docks, or the streets to ask them a subset of interview questions available in Appendix C. Elite interviews were particularly useful when speaking with government officials, NGO representatives, and academics. In an elite interview, interviewees answer open-ended questions in ways that reflect their own experiences (Turner, 2010; for questions, see Appendix C), and are given space to introduce topics they think relevant (Dexter, 1970). These interviews took longer than the public-interception interviews, ranging between 30 minutes to two hours long, and were recorded using a voice recorder. Intentional conversations lasted even longer, spanning evenings or multiple days. Drawing from ethnographic techniques, I wove specific topics into one-on-one conversations (Maldonado, 2014), with the goal of providing a more culturally appropriate space for interviewees to express themselves through not only answering questions, but also through their actions. As such, intentional conversations sometimes took place at the same time as participatory and direct observation, which included guided place-based walking tours and seafood-selling.

Between July and August 2019, I interacted with 26 people through these various methods. These people were residents of Hong Kong and Zhuhai, and were hostel or bed and breakfast owners, fishworkers, government officials, NGO representatives, academics, community leaders, and retirees. Of these 26 people, ten people were residents of Hong Kong, and 16 were from Zhuhai. Nine people, randomly selected, participated in public-intercept interviews; ten people, selected through random and snowball sampling, participated in elite interviews; and seven people, purposefully selected, participated in intentional conversations

(Appendix B). The employment of different methods helped me understand how megaprojects impacted my interviewees in ways they would not have otherwise revealed. For example, I was only able to interview a Hong Kong supermarket worker through public interception because he only had time to engage in more casual conversation while he was waiting for a ferry to offload his groceries. In constrast, eating lunch and engaging in sustained conversation with one hostel owner allowed me to slowly comprehend her anxieties and desires in relation to the place she was living in and to the megaproject.

Considering that political ecology is concerned with the intersection of power, environment, and its economic and social entanglements, I first categorised interview data into the themes of political, social, environmental, and economic concerns. Then, noting at how many interviewees separated their engagement with the megaproject into the past, present and future, I also categorised data according to these temporalities. However, given that the Greater Bay Area is a vision of a certain future, I finally landed on a broad coding theme of opportunities, anxieties, and desires, all of which allude to alternate visions of the future. Within these broad themes emerged themes of political fears, such as the encroachment of the party-state onto semi-autonomous territory, social aspirations such as the desire for a more intellectual community, and environmental fantasies such as the yearning for a more beautiful coast.

Chapter 3. The strong maritime power and its ecologically civilised moderately prosperous society: An overview of the three overarching ideologies that inform China's coastal development

3.1 The ideologies of coastal megaprojects

In official Chinese discourse, three ideologies arguably guide coastal development. First, coastal zone management and other ocean-oriented policies are developed with the goal to make China a globally-recognised "*strong maritime power*" (海洋強國), a country that is known internationally for the prowess of its ocean economy and for its control of maritime territories. Second, due to increasing attention towards environmental degradation resulting from growth and development at all costs, coastal policies incorporate aspects of "*ecological civilisation*" (生態文明) to ensure that natural resources are used in a way that is sustainable and is not detrimental to development itself. Third, coastal and ocean development policies are to provide financial and social security for Chinese people, to eliminate poverty, and to create a "*moderately prosperous society*" (小康社會).

Such ideologies therefore guide the development of coastal megaprojects. The "Blue Silicon Valley" in Qingdao, a 576km^2 area zoned off and constructed for developing marine science and technology research, is built to aid Shandong Province - in which it is situated - into becoming a competitive and strong maritime province (*"Qingdao Langu"*, 2020). Such strong maritime provinces, scholars have theorised, are essential to building a strong maritime power (Lin et al., 2013). In addition to this goal, the integrative megaproject of the Greater Bay Area in Guangdong Province is to be built in accordance with the principle of "prioritis[ing] ecology and pursu[ing] green development" (National Development and Reform Commission, 2017). Both

these projects have been mentioned in conjunction with creating a moderately prosperous society (Mai, 2020; Wang, 2020).

While these ideologies are common in coastal megaproject development plans and propaganda, it is necessary to question what these ideologies mean on the ground. In what forms of infrastructure will they be manifest? What effects will they have on people's everyday lives, their behaviours, and relationships with each other and with the environment? Chinese ideology and propaganda are often locally used to pay lip-service toward the central government; and most government officials have been found to not take their own propaganda seriously (Harris, 2006). And yet, scholars have found that despite their posturing nature, Chinese propaganda can affect behaviour and induce citizen compliance (Mallory, 2015; Schmalzer, 2016). Ideology is important also because it is essential in ensuring one-party rule through social control despite very real economic flatlining and social insecurity (Brown & Bērziņa-Čerenkova, 2018). In this chapter, I outline the discourses and the three ideologies of strong maritime power, prosperous society, and ecological civilisation: their histories, resulting policies, and emerging criticisms. I hope that the discussion of these ideologies can lead to a better understanding of why coastal megaprojects are built and what forces inform their construction.

3.2 National rejuvenation and the China dream

Before I discuss the three ideologies that inform coastal megaproject construction, however, it is crucial to provide a brief explanation of the overarching Chinese ideologies in the era of Xi Jinping. The Xi era is characterised by the rise of more assertive nationalism and a more intense focus on creating unity within the Chinese Communist Party and between Chinese people. This nationalist and unifying agenda is best exemplified through Xi's key slogan: the China dream.

The China Dream was first mentioned by Xi in 2012, who defined it as "a dream of the people. We can fulfill the Chinese dream only when we link it with our people's yearning for a better life" (Xi, 2012). It spoke to aspirations for a more prosperous people, a more prosperous society. And while the China Dream slogan does have imaginings for better social security for its people, it is also tinged with nationalism through the rejection of Western values. In the same speech in 2012, Xi proclaimed that the China Dream is 'the great rejuvenation of the Chinese people and the Chinese nation" (Xi, 2012), imbuing his catchphrase with the narrative of the Chinese people moving from a place of powerlessness into the spheres of the powerful.

The "great rejuvenation" that Xi mentions in fact stems from an older narrative of "the century of humiliation." During the 19th and 20th century, China was subjected to a slew of unequal treaties from Western powers (Liu, 2009; Wang & Wang, 2012). The Chinese Communist Party refers to this period as the "century of humiliation (百年耻辱)," and uses it as an argument to mobilise people domestically to support its political ideologies. In her essay, "'Century of Humiliation,' then and now: Chinese perceptions of the International order," Alison Kaufman (2010) writes:

> the Century of Humiliation is part of a narrative of loss and redemption that legitimizes the PRC's political system, crediting the CCP with pulling China out of this nadir and into a globally prominent position. Much has been written about the way that Chinese elites today use the memory of national humiliation to promote nationalism and bolster support for a regime that depicts itself as increasingly able to block any current-day attempts by Western powers to again subjugate or "humiliate" China. (p. 3).

In order to overcome the humiliation of its subjugation, China must achieve equal status with those that subjugated it, but also to distinguish itself from the power systems that are

Western-centric. It needs to prove itself as strong and powerful as other global powers (Xi, 2012), and therefore, the China Dream forms the basis for the ideology of maritime strong power. At the same time, the China Dream is a rejection of Western modernisation, which China saw as the instigator for the unequal treaties during the century of humiliation. Ecological civilisation is one such rejection, where Western "industrial modernisation" is rejected in favour of "ecological civilisation" with Chinese characteristics, a development model that is in harmony with nature and thus superior to the unsustainable mode of Western industrialisation (Pan, 2003). Ecological civilisation is therefore of the China Dream of "modernisation with Chinese characteristics" (Brown & Bērziņa-Čerenkova, 2018). The desire for modernity and nationalistic Chineseness creates the foundation for, and prompts the transformation of, other ideologies and subsequent projects that inform the development of coastal China in the 21st century.

3.3 Strength through wealth: Conceptualising "strong maritime power" within China

In early 2019, Premier Li Keqiang stated in his policy brief: "Vigorously develop the blue economy, protect the ocean environment, and construct a nation that is a strong maritime power (大力發展藍色經濟，保護海洋環境，建設海洋強國)." (Li 2019). The concept of becoming a strong maritime power is central to China's ocean and coastal policies. It is central to why, in the eyes of many Chinese marine affairs scholars and politicians, "the 21st century is China's ocean century" (e.g. Luo, 2018; Wang et al., 2016).

The strength (強/*qiang*) in strong maritime power can be interpreted as military might and dominance in international maritime relations. Scholars like Mallory (2015) and Erickson and Goldstein (2012) have been concerned with China as a *qiangsheng* (強盛) maritime country with lots of capability in protecting its sea power (海權) in international waters. Indeed, China

has been aggressive in asserting its dominance in the South China Sea since 2013. This ocean territory to which China has claimed sovereignty contains an estimated 11 billion barrels of oil and 190 trillion cubic feet of natural gas (Xu et al., 2019). China has increased its military operation budget by 131%, intensified its efforts to reclaim and develop islands for naval purposes in the area, and has deployed missile systems on the Spratly Islands (Xu et al., 2019). China also currently has the largest and farthest roaming fishing fleet in the world (Hancock, 2018). Since its first 13 distant water fishing boats set sail to West Africa in 1985, China's distant water fishing has expanded exponentially; by the end of 2019, China had a total of around 2600 boats fishing in the high seas, in the coastal waters of 40 other countries, and in Antarctica (Liu, 2019). Its total catch was 2.2 million tons, which was worth RMB 26 billion (USD 3.68 billion) (Liu, 2019). China's military strength and influence in international waters certainly render it a *qiangsheng* - mighty - maritime power.

However, within China, and certainly in the context of domestic megaprojects, the ideology of a strong maritime power cannot be conceptualised through might. Instead, the strong maritime power is *fuqiang* (富強) domestically. The term *fuqiang* means strong and rich, or strength through wealth, and is one of the 12 key terms that have been promoted vigorously during the Xi era (Brown & Bērziņa-Čerenkova, 2018). The *fuqiang* maritime power therefore "vigorously develop[s] [its] blue economy" (Li, 2019), and since the beginning of the 21st century, China's marine GDP increased from RMB 1.068 trillion (USD 150 billion) to RMB 8.34 trillion (USD 1.17 trillion) (To & Lee, 2018). Total production from maritime industries in China now accounts for 10% of its total GDP, and the number of people employed in China's maritime sectors grew to 35.89 million by 2015 (To & Lee, 2018). Additionally, coastal provinces each have their own blue economy development plans to become economically strong

and competitive maritime provinces worthy of a strong maritime power (e.g. Shandong Provincial Council, 2018).

I also interpret *fuqiang* (富強) to be related to technological development and modernisation. In a paper analysing China's development of renewable energy, Andrew B. Kennedy (2013) discusses the possibility of techno-nationalism developing in China. Kennedy (2013) defines techno-nationalism not only as the attempt to protect national technological breakthroughs from foreign powers, but also to develop technologies and encourage foreign investment in these technologies in a way that helps fulfill national goals. Recently, China has been placing greater importance and investment in its marine technological innovations. Not only is technological innovation a major economic development goal in the 13th Five-year Plan (National Development and Reform Commission, 2016), and in other ocean economic plans (e.g. the National Technology Developing Ocean Economic Plan 2016-2020 (全國科技興海規劃) (State Oceanic Administration, 2016)), so, too is an investment in ocean research and development (Table 3.1). The idea that investment and thus faith in science and technology results in progress and state power is also explored in James C. Scott's *Seeing Like a State*. In this seminal work, Scott calls this faith in science and technology "high modernism." High modernism is the idea which the authoritarian state believes it gains power through its aspirational ordering of nature and society through technology (Scott, 1998). This idea, that technology is wealth is modernism is power, is another aspect of the *fuqiang* maritime power. The *fuqiang* maritime power represents an inconsistency in rejecting western modernisation while adopting "high modernism."

Table 3.1 Major economic development goals listed in the 13th 5-year plan (National Development and Reform Commission, 2016)

	Indicator	2015	2020
Comprehensive Strength	海洋生產總值年均增長（%）		
	Average growth rate from ocean GDP (%)	8.1	7
	海洋生產總值佔國內生產總值的比重（%）		
	Ocean GDP as a percentage of national GDP (%)	9.4	9.5
Technological Innovations			
	海洋研究與試驗發展經費投入強度（%）		
	Investment rate in ocean research and development (%)	2	>2.5
	海洋科技成果轉化率（%）		
	Ocean scientific and technological outcome conversion rate (%)	>50	>55
Maritime Sector Structure	海洋新興產業增加值年均增速（%）		
	Annual value-added rate from emerging maritime industries (%)	19.8	(>20)
	海洋服務業增加值佔海洋生產總值比重（%）		
	Maritime service industry added value as a percentage of total Ocean GDP (%)	52	>55
Social Welfare			
	新增涉海就業人員數（萬人）		
	New employees in the maritime industry (ten thousand)	[239]	[250]
	海洋科普與教育基地（個）		
	Number of ocean science education bases	[206]	[400]
Environment and Natural Resources	近岸海域水質優良（一、二類）比例（%）		
	Coastal water quality (ratio of 1st to 2nd tier) (%)	68	70
	大陸自然岸線保有率（%）		
	Proportion of natural coastlines (%)		>35

Note: [ ] means five-year total,
( ) means five-year average

Technology, therefore, is an instrument through which the state gains wealth and shows its power. It demonstrates that there is an element of the spectacular in being a *fuqiang* maritime power: to show your wealth and power through spectacular maritime technologies and infrastructure. This is perhaps one of the aspects of strong maritime power that motivates the development of coastal megaprojects. Florian Schneider (2019) discusses the relationship

between the spectacle and state power in their book *Staging China: The politics of mass spectacle*: "Large-scale staged spectacles have been a cornerstone of the communication strategy of [showcasing the leadership's policies to a domestic audience]...these events remain crucial markers of China's domestic and international success" (p. 21). Schneider (2019) mainly speaks of spectacular mega events such as the Beijing Olympics, military parades, and the Shanghai Expo. However, if one thinks of an infrastructural megaproject as a permanent spectacle set up, then the same kind of state-building logic applies. The coastal megaproject is constructed to not only create wealth and national power for the *fuqiang* maritime power but to also display it.

However, in China, some spectacles are for viewing purposes only. That is, infrastructure can sometimes make the country seem wealthy and powerful but lack citizen support. For example, ghost cities are urban infrastructure megaprojects that have cropped up in many places in China. While they are supposed to be a spectacular display of Chinese economic growth, urbanisation, and thus modernisation (Ren, 2012; Sorace & Hurst, 2016), they remain empty and without residents because they lack adequate social support (Harvey, 2013). Such ghost cities have been accused of being a kind of "fake urbanisation" (ARDHMC, 2011), a charade of progress and economic power without any real positive impact on citizen's lives or social welfare.

There is no doubt that strong maritime power is an ideology that influences policies and projects that can make the nation seem strong and powerful. Some of these policies and projects can create benefits for Chinese citizens. However, there are other policies that are designed to show state power and promote nationalism instead of actually distributing such wealth and power to its people. With its spectacular elements and ambitious scope, the coastal megaproject will certainly contribute to building a strong maritime power. But the question is: what kind of

fuqiang power will it help build? One that generates and distributes wealth and power, or one that only builds state power through capital accumulation?

3.4 A society that is moderately prosperous in all respects

The question of whether a *fuqiang* coastal megaproject is one that distributes power and wealth to its citizens can be further elaborated on through an exploration of the second ideology: moderately prosperous society (小康社會). Moderately prosperous society is a development principle that was first incorporated into Chinese party discourse in 1979 by Deng Xiaoping, where he described being "moderately prosperous" as one of the most basic goals in China's modernisation process (Zhang, 2014). Deng's definition of moderately prosperous was that everyone would be "not extremely well-off, but at least living a comfortable life." He measured prosperity by GDP: to be moderately prosperous meant that GDP and GDP per capita would quadruple between 1980 and 2000. And in those 20 years, GDP per capita did rise, yet there were many people who still lived in relative poverty.

It is because of this widening wealth gap that the Chinese government re-appropriated the moderately prosperous society in the 2000s. During the Hu-Wen era, moderately prosperous society meant redistributing income, taking on the meaning of a more egalitarian society (Miles, 2019). In the Xi era, the meaning of moderately prosperous society changed yet again. It meant alleviating poverty by 2020 (Xi, 2017). It also meant more holistic development; with the government determined to achieve, in Xi's words, "material and cultural needs...democracy, rule of law, fairness and justice, security, and a better environment" (Xi, 2017).

Thus, a megaproject that aligns itself with the slogan of "moderately prosperous society" should aim to not only boost its economy, but also be inclusive of the many cultures that exist within Chinese society, take social justice and equity issues seriously, and plan and develop in a

more environmentally sustainable way (democracy and the rule of law merit one long analysis that goes beyond the scope of this chapter). However, if one considers the integrative megaproject of the Jingjinji (京津冀), one can see how current (2020) megaprojects can fall short of their goals. The aim of creating Jingjinji, an area six times the size of New York (Johnson, 2015), is to reduce the physical sprawl of Beijing by moderately weakening its economic function while also developing new technologies, cultural industry, and tertiary sectors in the nearby city of Tianjin and the province of Hebei ("Introduction", 2017). To achieve these goals, the integration of Jingjinji began economically optimising the layout of the land. Integration infrastructure is built so that duplication of industries is avoided, and within the super-region, areas complement each other, and synergies and production are maximized (Preen, 2018).

To geographers Jiang Xu and Yanyan Chen (2014), the Jingjinji megaproject represents a change in the political-economic landscape: "super-regions represent a new spatial scale for capital accumulation, state regulation, and political compromise... a critical shift away from pre-reform state socialism, [and] also a significant alteration to post-reform neoliberal urbanism" (p.12). Political processes and relationships are altered. Economic dependencies are changed. For cities within the Jinjinji, the role of smaller, peripheral cities in Hebei is to produce for Beijing and Tianjin, even as technologies and innovation are funnelled in from those more developed urban centres. This can push the ecological burdens of production from Beijing onto Hebei; both regions are already facing water deficits, but if Hebei takes on the role of heavier production, water scarcity would be exacerbated in the region as Beijing gains relief (Lockett, 2016). Additionally, planning for the Jingjinji is still centred around Beijing. Much of the planning around Hebei is vague (Lockett, 2016), and it is unclear what Hebei is going to become besides

becoming a proudction node for Beijing. Through interconnectivity and integrative zoning, the urban-rural divide is reified, and the periphery is either producing for or polluting because of Beijing, which remains the urban centre. This moderately prosperous megaproject does not create prosperity for all.

Along the coast of China, development is also patchy. Highly urbanised areas with dense populations and productive economies lie next to less developed towns and fishing villages. GDP between these areas vary, and there are plans of new megaprojects of integrative infrastructure (e.g. roads, bridges, additional transport systems, as well as other projects) to unite these cities, towns, and villages. This integration will even out production, spur economic growth in these less urbanised, less productive areas, and promote egalitarian development (Figure 3.1).

Figure 3.1 The city clusters and super-regions to be created through integrative megaprojects in China. The most populous and massive of them are situated along the coast ("A tale", 2018).

The rhetoric of moderate prosperity for all in each of these coastal megaprojects is troubling given the trajectory of the Jingjinji. It is even more troubling when one takes into

account the inequities within cities and townships. Coastal cities in China can have high levels of within-city income inequality that might remain unaddressed, even as these cities and townships merge into one (Pan et al., 2020). Changes in scales of development and governance may exacerbate inequities, bringing more opportunities to certain groups of people while further limiting access to resources for others.

Moderately prosperous society is an ideology that, at its core, aims to create a more egalitarian China. However, with rampant inequality still present along the coast, along with the tendency of megaprojects to fall short of its promises, it is necessary to closely examine the plans for future coastal megaprojects that fall under the banner of moderately prosperous society and better understand if and how the megaproject eliminates inequality or reifies it despite an equalising rhetoric.

3.5 Ecological civilisation and its civilised ecology

The principle of "ecological civilisation" (生態文明) is also often applied to development projects in China. Throughout the late twentieth century up until the early 2000s, China gained the reputation of the world's biggest polluter. In 2007, the *New York Times* reported on how China seemingly adopted a policy of "growth at all costs" (Yardley, 2007). The *Times* showed how, during this period of stunning economic growth, the Chinese environment had been destroyed; Tai Hu, one of the biggest lakes in China, was overrun with toxic chemicals, and cities like Beijing and Shanghai were choking on air saturated with particulates from car exhaust pipes (Yardley, 2007). The pollution and environmental degradation as a result of uninhibited economic growth have also been observed by Elizabeth Economy (2004) in her book *The River Runs Black: The Environmental Challenge to China's Future*, where she discusses

how China's economic growth has led to environmental hazards such as water scarcity, desertification, and flooding.

In response to degrading environmental resources, and to rising international awareness of such environmental degradation, ecological civilisation as a political discourse began to circulate within China. It was first brought up as a concept in 2003 by Pan Yue, the then vice-minister of environmental protection. Pan, an eco-socialist, described ecological civilisation as "the scientific view of development [that] seeks a comprehensive and sustainable change of politics, economics, society, culture and theory – a transformation of civilisation" (Pan, as quoted in Zhou, 2006). Sustainable development under the ecological civilisation philosophy involved not only a technology fix or economic growth, but also social justice and environmental protection.

Pan had initially framed ecological civilisation as economic modernisation with Chinese characteristics. He wrote:

> China's environmental crisis has arisen, basically, because our mode of economic modernisation has been copied from western, developed nations...China is a socialist country and cannot engage in environmental colonialism, nor act as a hegemony, so it must move towards a new type of civilisation [of] a harmonious, resource-saving and environmentally-friendly society. (Pan, as quoted in Zhou, 2006)

If ecological civilisation was not palatable to the Chinese state before, this development-with-Chinese-characteristics framing certainly made it so. The Chinese Communist Party incorporated ecological civilisation into their ideology in 2007, when President Hu Jintao announced the "commencement of ecological civilisation infrastructure" in his work report to the 17th Communist Party Congress (Hu, 2007). In this report, Hu states: "The construction of an

ecological civilisation will be given a prominent place and included in all aspects and processes in economic, political, and social development" (2007). By including the environment in all other processes of development and growth, Hu seems to be indicating a transformative approach towards environmental governance, where economic, political, and even social development would be shaped by at least some consideration of the environment.

Ecological civilisation under Hu (2007) meant stricter, top-down, iron-fisted pollution regulations (Goron, 2018). This led some scholars to believe that China's command-and-control style of governance could bypass all the "unnecessary bureaucracy" and order top-down sweeping changes in regulations and infrastructure needed in order to speedily solve environmental problems (e.g. Beeson, 2010; Gilley, 2012). However, under Xi Jinping, ecological civilisation was much more aligned with economic development than with social justice and environmental protection. This new iteration of the ecological civilisation ideology was enshrined in the catchphrase, "lush mountains and lucid waters are mountains of gold and silver (綠水青山就是金山銀山)," in Xi's work report to the 19th Communist Party Congress (Xi, 2017). This catchphrase, now written onto most propaganda posters in China calling for the construction of an ecological civilisation, suggests that environmental governance under Xi will not be discussed in terms of intrinsic values but in terms of how it can improve economic growth. In other words, it is a highly instrumental economic value-argument for environmental conservation – ironically one shared by neoliberal or market-based conservation.

Environmental governance that prioritises economic growth can exacerbate not only the destruction of ecosystems, but also inequalities within China itself. Ecological civilisation has been a means to intensify production in some areas while restricting and redirecting production activities to others. For example, Chen (2013) writes about the enclosure of 300 km^2 of rural land

in Yixing, Jiangsu and its conversion into an “ecological city” with “ecological industrial zones” developed under the principle of “constructing a socialist economic, politically, culturally, and ecologically civilised harmonious society” (NPC, 2011, as quoted in Chen, 2013). Agricultural activities in Yixing were curbed in the name of ecological development. 50,000 residents were displaced, their displacement justified not only by the eco-city and eco-industrial parks, but also by wetland restoration in the neighbouring Taihu region (Chen, 2013). Green, ecological development, despite restoration and climate adaptation efforts, had resulted in greater social inequity with China (e.g. Rosseau, 2020; Zheng, 2011).

Along the coast, similar scenarios are playing out. In 2015, the State Ocean Administration issued a marine ecological civilisation plan discussing the ecological problems that China’s waters were facing and the need for a blue ecological civilisation to ensure the sustainable and healthy development of China’s marine economy (State Oceanic Administration, 2015). Marine ecological civilisation, according to the State Oceanic Administration (2015), meant protecting and restoring wetlands, improving fishery management, limiting distant water fishing, controlling the scale of aquaculture, and restricting land reclamation (State Oceanic Administration, 2015). However, while China has established 250 marine protected areas (MPAs) and is taking steps to restore wetlands, beaches, and coastal habitats (Ling, 2019), urbanisation has also intensified, new cities and mega city-clusters are being built on reclaimed land from mudflats (“Zhongyang”, 2017). Aquaculture farmers are also being displaced, their farms being paved over for ecological restoration (Hao, 2019).

Due to the social inequities that ecological civilisation can cause, megaprojects that promote a similar vein of blue-green development must be closely examined. Though many coastal megaprojects, such as the Greater Bay Area in Guangdong Province, are to be developed

under the principle of "prioritising ecology," it is necessary to critically assess whether environmental protection is truly prioritised despite the possibility of slower economic growth. It is also necessary to examine what "prioritising" really means - how do megaprojects prioritise environmental protection, and will it be at the cost of social equity? The ideology of ecological civilisation, like that of moderately prosperous society, could aid in more equitable, sustainable development, especially at the scale at which megaprojects are built. However, there is also a great possibility of it doing quite the opposite.

3.6 A megaproject of ideologies

China's coastal development is governed by the ideologies of maritime strong power, moderately prosperous society, and ecological civilisation. In this chapter, I showed how these ideologies interact and can produce mixed results: maritime strong power can promote economic development in certain areas along the coast. However, it can also mobilise resources to create expensive, spectacular megaprojects with no buy-in from people. Such projects may contribute to building the state's power and prestige but may not serve its citizens. These megaprojects can try to integrate coastal territories to optimise productivity in these marine spaces, spurring economic growth in these regions to achieve moderate prosperity. However, despite prosperity increasing in the region as a whole, social inequities can remain unaddressed within these integrated coastal areas. Similarly, just as how megaprojects could be labelled as "ecological and harmonious" in accordance with the ecological civilisation ideology, promoting green technologies and low-carbon lifestyle. However, they could also be built on reclaimed wetlands and the displacement of coastal residents, thereby magnifying social *and* environmental inequities instead of minimising them. In Chapter 4, I further demonstrate these points by examining the government plans of the Greater Bay Area megaproject, looking at the

infrastructure that will embody these ideologies and how they will change socio-environmental relationships.

Chapter 4. The shifting ecologies of the Greater Bay Area

In China, integrative megaprojects are being planned along the coast (Section 3.1). In this chapter, I use the megaproject as a vehicle for studying Chinese coastal development, the underlying development ideologies outlined in Chapter 3, and how such development reveal or reify social and environmental structural inequities. Megaprojects, as spectacular as they are, often represent the promises the state makes to its people. They also document the failures in delivering these promises, and thus make visible the inequities that remain unresolved, as well as the power relations that create these inequities. The purpose of this chapter is to detail the landscape-wide transformations planned by one of the coastal megaprojects - the Greater Bay Area. In doing so, I address the questions: what purpose do megaprojects serve? What coastal futures will they create?

4.1 The Greater Bay Area

The Guangdong-Hong Kong-Macao Greater Bay Area (粵港澳大灣區), or simply, the Greater Bay Area, is a coastal super-region consisting of a cluster of nine cities and two Special Administrative Regions in the Pearl River Delta, Guangdong Province, southern China (Figure 4.1). While it can be thought of as a geographical region or an administrative jurisdiction, the Greater Bay Area is a megaproject for the purposes of this thesis. It is a large-scale development project consisting of smaller infrastructure, extraction (e.g. oil pipelines), production (e.g. manufacturing parks), and consumption (e.g. malls, theme parks, real estate) projects that together transform the landscape.

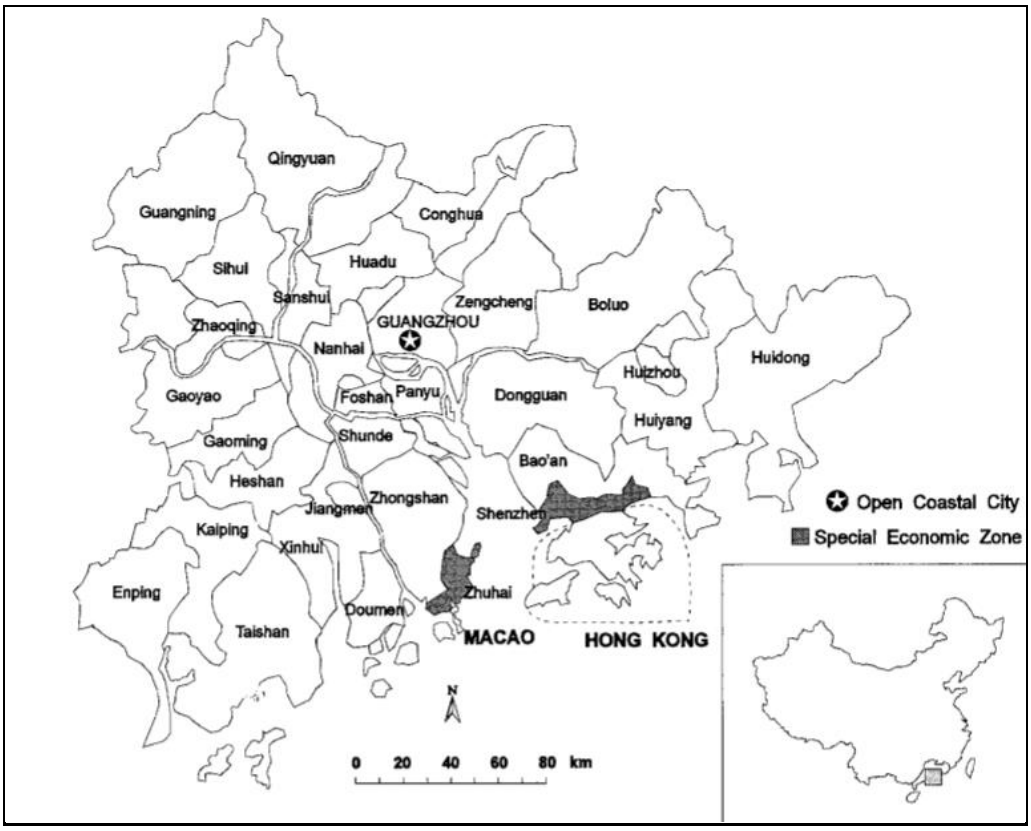

Figure 4.1 The Pearl River Delta, its cities, its special economic zones and special administrative regions (Lin, 2001).

The Pearl River Delta is an estuary that derives sediment and water input from five rivers: the West, North, East, Liuxe, and Tan Rivers. The Delta's annual freshwater discharge is 3.3×10^{11} m^3/year; its annual sediment flux is 8.5×10^7 tons (Chen et al., 2013). The deposited sediment forms mudflat wetland, which is an ecosystem rich in biodiversity and fishery resources (Zhou & Cai, 2010). Estuaries in general are considered to be one of the most productive ecosystems in the world, acting as nurseries and refuges to various species of birds, fish, crustaceans, molluscs, and mammals (Beck et al., 2001). The Pearl River estuary system is no exception; it is home to at least 26 ecological functional groups, including fish species such as commercial anchovy (*Stolephorus commersoni*), and waterbirds such as the little egret (*Egretta garzetta*) (Duan et al., 2009).

Because of its ecological richness and high levels of biological productivity, human activity around the Pearl River Delta has largely revolved around fishing and agriculture. It has also been a gateway for international trade and transportation (Shen et al. 2002). Although regarded as one of the most "economically advanced" regions historically (Xu & Li, 1990), there was actually no significant urbanisation and economic growth until the 1960s-1970s; until then, the annual growth rate of the nonagricultural population within the Delta was only 0.75% (Shen et al. 2002). However, once urbanisation and economic growth started, it occurred at "breakneck speed" (Kimmelman, 2017). The population expanded rapidly, and industries such as toys, electronics, and textiles boomed, and deforestation, damming, and sand excavation became commonplace (Liu et al., 2014).

Today, the Pearl River Delta is one of the most highly urbanised and densely populated regions in China. The Delta is home to around 70 million people (Chen & Chen, 2019), and the total annual GDP in the region – US$1.5 trillion in 2017 – rivals that of South Korea's and accounts for 12% that of China's (Cheung, 2019). The Delta's astronomical economic growth was in part due to China's economic reform and liberalisation; the creation of special economic zones in Shenzhen and Zhuhai allowed foreign capital, imported material, and business cooperative opportunities to flow into the Pearl River Delta (Crane et al., 2018). These foreign investments supported rapid economic development in those aforementioned cities. However, while the urbanisation, creation of special economic zones, and the influx of foreign capital have led to prosperity in the urban areas in the Delta, it has not brought about a reduction in regional income inequalities (Huang & Wei, 2019). Even as central cities and peri-urban towns become highly developed, economic benefits have not spilled over to peripheral regions (Lin, 2001). Social inequalities also exist. Urbanisation in the Pearl River Delta has created a need for labour

and therefore rural-urban migration (Guo et al., 2018), yet migrant workers, due to their lack of entitlements, often experience discrimination and lack of social benefits (Meng & Zhang, 2001; Wu, 2004).

The special economic zones and the urban-rural divide are not the only kinds of divisions existing in the Pearl River Delta. The two Special Administrative Regions, Hong Kong and Macao, are – in official capacities – politically, economically, and judicially separate from the rest of the Delta. The separation of political jurisdiction is the direct result of prior Portuguese and British colonisation of Macao and Hong Kong, respectively. After Hong Kong and Macao were returned to China after British and Portuguese rule, their governments and the Chinese central government agreed to a 50-year period of semi-autonomous governance in the two cities, resulting in their special administrative status and additional rights, such as freedom of speech and press, that cannot be enjoyed in mainland China. However, this agreement has - in the case of Hong Kong at least - gradually eroded in the years since, and has resulted in large-scale protests in 2014 and 2019 against China's encroachment, representing Hong Kong people's increasing detachment from and distrust of Chinese rule.

Ecological fragmentation is also occurring at alarming speed. 40 years of industrialisation has caused changes in hydrological regimes, eutrophication, heavy metal pollution, and habitat destruction despite authorities implementing policies to curb pollution and waste production (Karczmarski et al., 2016; Liu et al., 2014; Zhou & Cai, 2010). Urban development often takes place in the expense of coastal wetlands, mudflats, and waters, creating increasingly patchy natural areas and habitats (Haas & Ban, 2014). These ecosystems are also at risk of flooding and sea-level rise, which could create more fragmentation and loss of land and ecological function (Kimmelman, 2017).

It is under this context of political, social, and ecological fragmentation that the Greater Bay Area megaproject arrives, full of promises of connectivity and economic redemption. The megaproject was first mentioned in the English versions of China's 13th Five Year Plan for Economic and Social Development in 2016, promising a deepening of "mainland exchange and cooperation with Hong Kong and Macao in relation to social development, living standards, culture, education, environmental protection, and other areas" (National Development and Reform Commission, 2016). It seemed to be the solution to the problems in the Pearl River Delta. Integration of territories would spur economic prosperity in areas less developed peri-urban or rural areas, provide increased social welfare and political stability, and better support a smart, green future.

On 1st July 2017, the governments of Guangdong, Hong Kong, and Macao signed the "Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area (深化粵港澳合作 推進大灣區建設框架協議)" (National Development and Reform Commission, 2017). The Framework outlines the general principles underlying the development of the Greater Bay Area, including:

1) To be guided by openness and driven by innovation
2) To achieve a win-win situation through complementary cooperation
3) To be led by the market and driven by the government
4) To adopt the early and pilot implementation approach and make breakthroughs in key areas
5) To prioritise ecology and pursue green development

After the framework agreement was signed, the central government of China was quick to proclaim that the Greater Bay Area will be a region of increased maritime trade and a

booming economy (State Council, 2019). This economic development would simultaneously advance sustainability, as the Greater Bay Area is "poised to become the world's top green economy" (Xie, as quoted in Tsang, 2018).

But will the Greater Bay Area (GBA) fulfill its promises? Consider one of its infrastructures built in late 2018. The Hong Kong Zhuhai Macao Bridge (HZMB) is a 55km-long mega-agglomeration of structures - including a 30km bridge, a 6.7km sea tunnel, and two artificial islands - that connects western Hong Kong with Zhuhai and Macao ("Hong Kong-Zhuhai bridge", 2018). The HZMB was to meet the needs of passenger and freight land transport, to provide a form of land transportation between the east and west banks of the Pearl River, and to enhance the economic and sustainable development in the region ("HZMB main bridge", n.d.). Zipping through the Wanshan Archipelago at the outer edge of the Pearl River Delta, the bridge promised to spur the tourism industries and economies of these islands' dreams. The English tagline of the bridge is, "dream beyond the horizon;" the literal Chinese translation is, "Build your dreams between the sky and the sea (海天之間建您想)" ("HZMB main bridge", n.d.).

However, the HKMB can be exclusionary. Bridge crossings are limited through permits and a quota system. Vehicles have to pay a toll. During the construction of the bridge, hundreds of workers have been injured, and at least 18 people have died. The bridge callously cuts through the habitat of the endangered Chinese white dolphin (*Sousa chinensis*), and surveillance cameras have been installed at 48 intervals to "combat terrorism and manage security" (Leung, 2018), sparking debates of censorship and the policing of the environment. The bridge is not alone in its controversial nature; citizens have questioned the sustainability and equity of the development of other GBA artificial islands and coastal projects (see Chapter 5).

Planned megaprojects are often full of promises: of modernisation and development, progress and freedom, circulation and more equitable distribution, and environmental restoration through techno-fixes (Appel, Anand, and Gupta, 2019). However, just as often, they fall short on these promises. Many megaprojects evolve or remain unfinished (Carse & Kneass, 2019). They also have the potential to exacerbate inequalities rather than alleviating them (Gellert & Lynch, 2004). Given that the Greater Bay Area megaproject will impact millions of people across communities, as well as many biological communities across ecosystems, it is crucial to take a closer reading of the state-designed *Outline Development Plan of the Guangdong-Hong Kong-Macao Bay Area* (henceforth referred to as *Outline Development Plan*; State Council, 2019) to critically analyse what kinds of futures the GBA projects listed in the *Outline Development Plan* will together create: what kinds of ecologies will these projects constitute, and who has the power to determine social and environmental futures in the region?

For the rest of this chapter, through the case study of the GBA, I continue to answer the question I posed in Chapter One: who are megaprojects really for, and, in this particular case study: what purpose do they serve? Are the privatisation, militarisation, and shifting ecologies we see exclusive to the Hong Kong-Zhuhai-Macao Bridge, or is it a connective theme and trend that is present in all the projects that make up the GBA? I argue that the GBA is a state-driven effort to shape nature into an ecology more suitable for a "strong maritime power" and to groom people in the area into a more suitable population for the "moderately prosperous society" aesthetic. I argue that ecological civilisation is not a way to provide checks and balances to these modifications, but as a justification for them, exacerbating existing social inequities, including access to power to determine environmental futures. I start with a brief description of the approach I am using to make this argument. Then, I describe the results from a word frequency

and deductive content analysis of the Outline Development Plan. Finally, I put my findings in conversation with historical context and direct observations to discuss their implications.

4.2 Shifting ecologies

This chapter is framed by the notion of shifting ecologies. The shifting ecologies framework arises out of Daniel Cohen's categorisation of urban ecological and social dimensions (Figure 4.2). In his paper on urban climate politics, "The other low carbon protagonists," Cohen (2017) juxtaposes two environmental movements occurring in Sao Paulo, Brazil, and categorises infrastructure and policies coming out of these movements to determine their ability to improve the city's socio-ecological qualities for all. The shifting ecologies framework is relevant for examining the GBA's planned projects and the socio-environmental futures and relationships it espouses for two reasons.

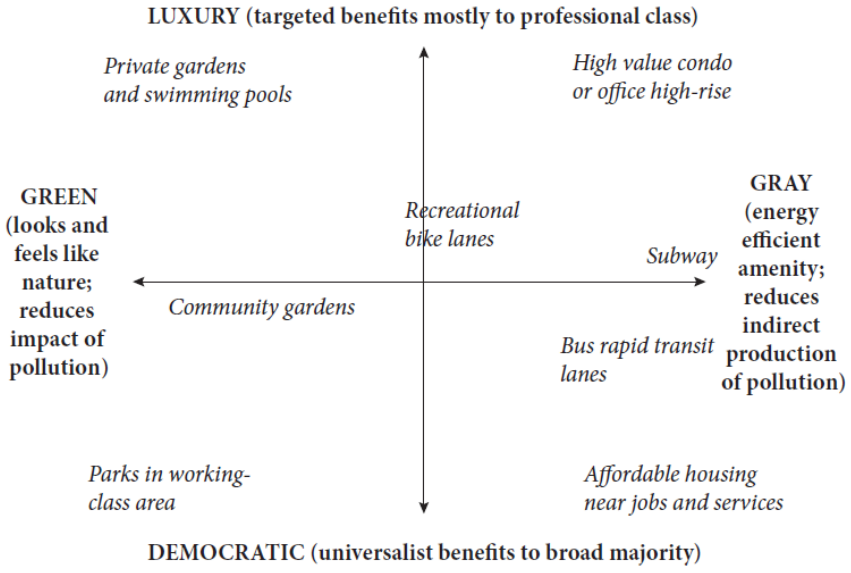

Figure 4.2 A heuristic grid of democratic, luxury, green, and grey ecologies and how various types of projects fit in the grid (Cohen, 2017).

First, the shifting ecologies framework examines socio-environmental relations as opposed to only encompassing an environmental component. In the framework's terminology, ecologies can be "green" - with natural or natural-looking infrastructure - but also "grey" - built interventions aimed at decreasing emissions or pollution. In this chapter, I also add a "black" component - projects that neither restore nature nor decrease pollution (Figure 4.3). The separation of green ecologies from grey and black suggests that, for a space to be sustainable or "green," not every natural ecological feature or function has to be restored. Infrastructures can be built along the coast to increase the ecological functionality of the already built environment. These infrastructures are necessary in urban ecological planning because what is most urgently needed is not only "natural space," but broadly beneficial, low-carbon policies that are a hybrid of the grey, green, and blue (Bulkeley, 2011; Depietri & McPhearson, 2017). As such, separation and inclusion of grey and black ecologies is useful when examining whether planned projects along the coast create a more sustainable, equitable environment, or if they are constructed to maintain the environmental or social status quo.

Second, the shifting ecologies framework examines infrastructure not only along a sustainability or socio-environmental axis, but also an axis of power. Political ecology asserts that socio-environmental relations are mediated by larger patterns of investment, expropriation, production, accumulation, distribution, and consumption (Muldavin, 2013), as well as the people and institutions who control and benefit from hegemonic processes of development (Brand & Wissen, 2012). The shifting ecologies framework locates projects on an axis of access to benefits. In Cohen's original heuristic grid, projects either contribute to a "democratic" - broadly beneficial and accessible - ecology, or one of "luxury" - beneficial or accessible only to the political, educated, or business elite (Cohen, 2017). In this chapter, because Cohen's framework

is versatile and easily adaptable to different contexts, I add the possibility of the creation of a "state-oriented" ecology to this axis of access to benefits. The *Outline Development Plan* is a creation of the Chinese government (State Council, 2019): a single-party government of a capitalist, authoritarian state. One of the desires of a one-party authoritarian government is to protect its power and legitimacy, and it is possible that, within *the Outline Development Plan,* there are projects created to fulfill this desire. Adding a "state-oriented" component allows me to highlight projects created not with the Chinese population at-large or even the business or political elite in mind, but for the protection and projection of Chinese state power (Figure 4.3).

Despite how the framework is named "shifting ecologies," I do not, in this chapter, include an analysis of the baseline socio-political-environmental ecology. This is because no such baseline is available. However, by examining planned ecologies and mapping out its socio-political-environmental relations, I am able to critically examine the promised coastal future of the GBA by showing who has the power to dictate who gets to have what relationship with the coast. Because the GBA is designed with enhancing maritime power, increasing prosperity, and becoming an ecological civilisation in mind, I am also indirectly able to examine if these overarching ideologies are environmentally just and socially equitable. I conduct my analysis with the working hypothesis that, given the promises of all-round green economic growth, projects in the GBA contribute to a green/grey, mostly democratic ecology.

Figure 4.3. A heuristic diagram of shifting ecologies, with black ecologies and state-oriented ecologies included. Adapted from Cohen (2017).

4.3 Word frequency analysis

The *Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area* was published in 2019. Self-described as an "important outline document guiding the current and future cooperation and development of the Greater Bay Area," the *Outline Development Plan* covers goals and objectives intended for the area in the intermediate term (until 2022) and in the long term (until 2035) (State Council, 2019, p. 1). The *Outline Development Plan* spans 11 chapters, detailing actions and infrastructure to be built to achieve the goals and objectives. A plan for implementation is also included at the end.

A quick word-frequency analysis (Sinclair & Rockwell, 2016) was performed to find the 75 most frequent terms that appear in the *Outline Development Plan* (Figure 4.4, for more details on word-frequency, see Appendix A, Table 1). A word-frequency analysis makes visible the focus of the *Outline Development Plan* and draws out what future the Greater Bay Area megaproject is supposed to create.

Figure 4.4. A word-frequency cloud of the 75 most common words within the *Outline Development Plan*.

The most frequent words that appeared in the *Outline Development Plan* was “Hong Kong” (324 times) and “Macao” (289 times); despite the fact that the Greater Bay Area consists of nine other cities and surrounding towns, these other cities did not feature as prominently in the *Outline Development Plan* as the two special administrative regions. The next most common words were “development” (266 times) and “cooperation” (162 times), both describing actions taken within the Greater Bay Area. Taken together, the four most common words appearing in the *Outline Development Plan* point to its main purpose: to develop the region through cooperation with Hong Kong and Macao (State Council, 2019). The focus on Hong Kong and

Macao could be due to political reasons - to more quickly politically integrate these two semi-autonomous regions with the mainland though the material connective infrastructure and the guise of "cooperation" and equal sharing of power. Nonetheless, it is strange to focus on two already well-developed and urbanised cities when the GBA also promises to spur the economy of smaller towns. If these towns are to be developed through the GBA and the region's economic and social benefits are to be evenly distributed throughout its cities and towns, should not other places receive a similar frequency of mentions?

Other frequently appearing words include "innovation," "services," "industries," and "technologies" (Appendix A, Table 1). These words show the means through which the Greater Bay Area will develop. Services, innovation, and technology all refer to tertiary-sector development, which appears to be more of a focus than primary or secondary industries. In terms of scale, "regional" and "cities" were used more frequently than "municipality" and "national," signifying an emphasis towards regional-scale governance rather than national-scale, as well as increasingly decentralised urban development. The term "international" features heavily in the *Outline Development Plan* (114 times), more so than other scale-related terms. However, "international" is, in contrast to "regional" and "cities," not an indication of governance scale. Instead, it points to one of the goals of the Greater Bay Area: to become a "world-class" city cluster and an "international" bay area (State Council, 2019, p. 2). Having "international" appear in the *Outline Development Plan* frequently means an exhaustive repetition of what the government envisions the GBA to become.

Ocean-related terms that appeared in the *Outline Development Plan* included "marine" (33 times) and "coastal" (14 times). They appeared most frequently in Section 6.4, "Vigorously Develop the Marine Economy." "Marine" appeared most often with the terms "develop,"

"industry," and "technologies," showing that marine-related activities and projects would mainly be for economic purposes. On the other hand, while "coastal" also often appeared with the term "develop," it also co-occurs with "tourism," indicating that "marine" and "coastal" spaces are conceptualised differently in terms of economic purpose.

The term "environment(al)" also appeared 52 times. It appeared most frequently in Section 7, 'Taking Forward Ecological Conservation," and co-occurred mainly with "protection" (13 co-occurrences), "energy" (8), "create" (7), "resources" (5), "innovation" (4), "section" (4), and "ecological" (3). On the other hand, "ecological" only appeared 24 times. However, the terms that co-occurred with "ecological" were similar to those with environmental. This indicates that the *Outline Development Plan* envisions environmental and ecological planning in the Greater Bay to revolve around protection and conservation through innovation and emergent, creative strategies.

The single word-frequency analysis provides little context on how each word is used in the *Outline Development Plan*. Therefore, in analysing words that were explicitly related to social justice or equity, I could not infer any other than the term "social" (31 times); "equality" and "justice" each only featured once in the *Outline Development Plan*, and not in proximity to "social." However, "social services" did appear seven times in the *Outline Development Plan*, and "social security" nine. Despite mentioning these terms, it appeared that the Outline Development Plan was more focused on "social cooperation" (12 times), and "social governance" (7 times).

4.4 Content analysis

While the single-word frequency analysis offers insight on the general goals and focus of the Greater Bay Area megaproject as a whole, it does not render any information on the nature of

the individual infrastructural projects and the ways they interact to transform the landscape of the Pearl River Delta. A deductive content analysis, on the other hand, allows us to appraise each project separately, and show how the projects altogether can shift ecologies. Because the content analysis focuses on individual projects, it also gives a finer resolution look at these ecological shifts and how they might be related to shifts in power. Power, in the context of this analysis, refers to who benefits the most from the planned projects in the GBA, and who has most access and control of coastal environments in the future envisioned in the *Outline Development Plan*. Whereas infrastructure and projects collectively refer to the material, technical, and cultural forms of transport, telecommunications, urban planning, education, energy, and water etc.: institutionalised structures that circulate goods and services and techno-political ideas, connecting and binding people into collectivities (Larkin, 2008; Oakes, 2019).

To map out the ecologies that would emerge through the centrally-planned vision of the *Outline Development Plan*, I located 52 projects within the document that embody the various material, technical, and cultural forms described by Larkin (2008) and Oakes (2019) (Appendix A, Table 2). Of these 52 projects, 19 projects would be implemented throughout the region, whereas 26 projects had specific locations within a city. As of the publication date of the *Outline Development Plan* (2019), it was unknown where seven of the projects would be implemented. The projects with known locations would be distributed between all of the 11 cities to be aggregated into the GBA, although most of the projects would be concentrated in Hong Kong, Macao, Shenzhen, Guangzhou, and Zhuhai.

When the planned projects were plotted along the green/grey/black axis of shifting ecologies, I found that five projects could be categorised as green, 22 projects could be categorised as grey, and 25 projects could be categorised as black (Table 4.1). Green projects

included walking infrastructure such as urban greenways and pedestrian walkways, coastal ecological belts, as well as ecological corridors and biodiversity protection networks. Grey projects included natural resource conservation structures such as water conservation infrastructure, low carbon energy infrastructure that could reduce emissions, and green finance centres that could support the development of conservation or carbon reduction efforts. In my categorisation process, I also included in the grey infrastructure category less material projects that would be implemented in the GBA: surveillance infrastructure could monitor and enforce better environmental protection and pollution reduction efforts, and youth integration and exchange projects, which would likely use a curriculum containing an environmental awareness component.

My categorisation also assumed the best environmental intentions of each project; it is when I absolutely could not see a possibility of the project contributing to pollution or emissions reduction of the region, or to nature conservation or enhancement of natural aesthetics, that I categorise the project as black. Even so, around half of the projects identified in the *Outline Development Plan* were black. These included environmentally neutral insurance centres and cultural centres, but also projects that would drastically increase emissions or pollution within the region. The government has plans to build or expand at least seven airports, and will be constructing large petroleum and coal reserve bases, as well as oil and liquified natural gas terminals and pipelines. Given the distribution of projects along the green/grey/black axis, it can be concluded that the Greater Bay Area megaproject would shift the Pearl River Delta into a grey/black ecology.

When the planned projects were plotted along the democratic/luxury/state-oriented axis of shifting power relationships, I found that 21 projects could be categorised as democratic, 29

projects could be categorised as luxury, and 11 projects could be categorised as state-oriented. All of the green projects were democratic, as well as some grey and black infrastructure such as inter-city rail construction and data centres and ubiquitous high-speed internet. These democratic structures are mostly public goods and have broad benefits. Some of the democratic projects overlapped with luxury projects. While this may sound contradictory – how can broadly beneficial projects also only benefit a small number of people? – the dual categorisation arises out of the vagueness of a planned project. For example, an experimental zone for entrepreneurship and employment can increase access to jobs. However, the entrepreneurial nature of the centre could lead to it being selective on who gets employed. Therefore, there is a potential for it to be a luxury project.

Table 4.1 Planned projects mentioned in the *Outline Development Plan* as well as the ecologies to which they contribute: democratic/luxury/state-oriented - as represented by columns 3-5, and green/grey/black - as represented by the colour of the dots. For detailed rationale for the categorisation of each project, please see Appendix A Table 2.

Infrastructure	Location	Democratic	Luxury	State
High speed railways	Regional		●	
Intercity railways	Regional: Shenzhen, Maoming	●		
High-grade motorways	Regional: Chaozhou, Zhanjiang, Hong Kong, Macao	●		
Bridges	Hong Kong, Zhuhai, Macao, Shenzhen, Zhongshan, Humen	●		
Greater Bay Area Big Data Centre	No info	●		●
Technological infrastructure facilites	No info		●	
National high-tech industrial development zones	Hong Kong, Shenzhen, Guangzhou, Nansha, Hengqin		●	

State Key Laboratories	Hong Kong, Macao		●	
Technology incubators	Hong Kong, Macao		●	
Ports	Hong Kong	●	●	
Airports and airport economic zones	Hong Kong, Macao, Zhuhai, Guangzhou, Shenzhen, other		●	
New boundary crossings	Heung Yuen Wai (HK) Qingmao (Macao/GZ) West Kowloon (HK)			●
Data centres, ubiquitous high-speed Internet	Regional	●		●
Surveillance infrastructure	Regional			●
Low-carbon energy infrastructure	Regional	●		
Petroleum reserve bases	No info		●	
Liquefied natural gas terminals	No info		●	
Coal reserve bases	Guangzhou, Zhuhai		●	
Oil and gas pipelines	Regional		●	
Water conservation infrastructure	Regional	●		
Water supply pipeline	Macao	●		
Seawall and riverwall flood control infrastructure	Regional	●		
Advanced equipment manufacturing industrial belt	Zhuhai, Foshan, west bank of Pearl River		●	
World-class manufacturing industries cluster Dongguan Binhaiwan New District	Shenzhen, Dongguan, east bank of Pearl River Dongguan		●	
Green manufacturing infrastructure	Regional		●	
Industrial belt of energy conservation and environmental protection technologies R&D	Yinhu Bay (Jiangmen)		●	
Macao-Zhuhai cross-boundary financial cooperation demonstration zone	Macao, Zhuhai		●	●

Green finance centre	Hong Kong			●	
Pilot zone for green finance reform	Guangzhou			●	
Pilot zone for development in insurance innovation	Shenzhen			●	
Base for modern marine industries	Regional	●		●	
Ecological corridors and biodiversity protection networks	Regional	●			
Ecological barrier	The North	●			
Coastal ecological belt	No info	●			
Green aquatic ecological network	Regional	●			
Blacklist system for environmental pollution	Regional	●			
Walking infrastructure such as urban greenways and pedestrian walkways	Regional	●			
School and university infrastructure to set up an international demonstration zone for education, especially for students whose parents take up cross-regional employment	Regional				●
National-level human resources services industrial park	No info			●	
Major cultural infrastructure	West Kowloon (HK)				●
Youth integration and exchange projects	Hong Kong, Macao, Dongguan				●
International cruise terminals	Hong Kong, Macao, Guangzhou			●	
international yacht infrastructure	No info			●	
Experimental zones for entrepreneurship and employment	Hong Kong, Macao, Qianhai, Nansha, Hengqin	●		●	
Green agriculture base	Huizhou, Zhaoqing	●		●	
Social assistance information infrastructure	Regional				●
Public/Private elderly homes	Regional			●	

Social credit system	Regional			●
Quality traceability centre	Nansha	●	●	
Qianhai Shenzhen-Hong Kong Modern Serivce Industry Cooperation Zone	Qianhai, Hong Kong		●	
Boundary control point	Qianhai			●
Logistics park	Hengqin	●	●	

However, there are many projects that are undoubtedly in the luxury category: yacht marinas and cruise terminals only benefit the people who own yachts or can afford to go on cruises. Techno-industrial parks for international renewables-research corporations, which will proliferate in the region, are only accessible to and immediately benefit those corporations. Luxury projects can be highly diverse in terms of function, but all are built to benefit or restrict access to land area to a select few.

None of the state-oriented projects explicitly say that they reinforce state power, and therefore could also appear democratic or luxury. For example, building more schools or universities available to Hong Kong, Macao, and Guangdong students in mainland China appear to increase access to education. However, the purpose of constructing cross-border school infrastructure is to integrate Hong Kong and Macao students into the mainland education system. As mentioned in section 4.1, integration is politically fraught in the Pearl River Delta, and integration infrastructure is highly likely to be a strategy for the state to extend its influence on politically semi-autonomous special administrative regions. Similarly, surveillance infrastructure could appear to serve the purpose of maintaining social stability and make it easier for the state to crack down on crime. However, the definition of "crime" and the "law" is nebulous in the

authoritarian state; the state has the power to change the law and definition of crime at its whim to maintain its legitimacy. While 11 state-oriented projects appear to be a small number in comparison to democratic and luxury projects, the *addition* of 11 state-oriented projects is evidence of an environment increasingly under state control.

The content analysis therefore shows that the future ecologies of the Greater Bay Area have the potential to become more sustainable through emissions or pollution reductions projects, even as unsustainable projects will be built in the Pearl River Delta. However, the means of emissions or pollution reduction, and access to these sustainable infrastructures will be increasingly controlled by select groups as opposed to the broader population, and by the state as opposed to more citizen power.

4.5 Discussion

Many threads arise through the word-frequency analysis and the content analysis. The projects described in the *Outline Development Plan* are diverse and are designed for multiple purposes (State Council, 2019). While the megaproject is shown to be focused on the economic development of financial and service industries, the proliferation of green and grey projects in the Pearl River Delta shows that the Greater Bay Area megaproject is designed with at least some consideration for sustainability and environmental protection. The additions of projects such as homes for the elderly and schools show that the improvement of social welfare is also taken into account. However, I return to my primary research questions in this discussion: what social inequalities and ecologies are being made visible through the construction of coastal megaprojects? And what can coastal megaprojects tell us about China as a strong maritime power, an ecological civilisation, and a moderately prosperous society? To focus on these questions, I will discuss the themes of the proliferation of techno-industrial parks, the role of

centrally-planned nature walkways, the domination of luxury projects, the increase in state-oriented infrastructure, and the socio-ecological relationships made visible through these megaproject development trends.

One such trend is the proliferation of techno-industrial parks. In the *Outline Development Plan* (State Council, 2019), nine of these planned parks are named. They will mostly be set up in Hong Kong, Shenzhen, Guangzhou, and Zhuhai, cities that are already densely populated and with established service industries. While there will be a proliferation of these parks as part of the Greater Bay Area, techno-industrial parks are not a novel invention from the region. In China – and indeed, globally – clusters of high-technology corporations have existed for decades. Silicon Valley in the U.S. is perhaps the most well-known example of such agglomerations, but China also has its own, such as Zhongguancun in Beijing (Cao, 2004). Between the 1990s and 2002, the Chinese government has built 52 national-level techno-industrial parks in its major cities (A. Hu, 2007). According to the International Association of Science Parks (IASP, as quoted in Hobbs et al., 2017), a science and technology park is "an organisation managed by specialised professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions." This definition of a technology park shows that firstly, by aiming to increase the wealth of *its* community, the creation of parks zones off capital spillover into areas outside of its zonation. The quote also shows that only specialised professionals can access the park, creating a space that is not broadly accessible.

The proliferation of techno-industrial parks creates luxury ecologies that rely on technical expertise. Their propensity for economic growth and their technocratic nature appear to adhere well to the development principle of "moderately prosperous society," which aims to increase the

prosperity of Chinese people through modernisation (An, 2017). However, through the development of techno-industrial parks, the inequities of prosperity-through-modernisation are made clear: techno-industrial parks, even with their futuristic, modernist presentation, only benefit a select few (Lam, 2019). Additionally, by locating them in densely populated cities where land is scarce, questions arise: where will these parks be built? Will the construction of parks have to displace residents, or will they require reclamation along the coast like the science and technology parks before it (Development Bureau, 2000)? Also, what kinds of environments will they create? Studies show that "landscaped gardens, running water, trees" are "mandatory" in techno-industrial parks, creating a rather homogenous environment (Jones et al., 2008). Taking this into consideration, the proliferation of techno-industrial parks in the Greater Bay Area megaproject creates seascapes that are increasingly curated and privatised, and a modernised, moderately prosperous society might not be as egalitarian as advertised.

Parks of the more traditional kind are described as "pedestrian walkways, "urban greenways," and "ecological corridors" in the *Outline Development Plan* (State Council, 2019). These descriptions evoke a more harmonious sense of being with nature; "ecological corridors" and pedestrian walkways within nature reserves appear to be built with conserving ecosystems in mind. However, a tour in one of these walkways casts doubt on this appearance. A pedestrian walkway built in a mangrove protected area in Qi'ao, Zhuhai appears to lead one into understanding how a mangrove ecosystem in coastal China works. But on closer examination, the trees lining the walkway are very different from the ecosystem existing outside the walkway's immediate vicinity (Figure 4.5a). Read carefully, signs along the walkway tell of how the trees are a non-native mangrove species (Figure 4.5b). The walkway, therefore, allows for a

harmonious connection with a constructed park with natural aesthetics rather than a connection with nature itself.

a) b)

Figure 4.5 a) A pedestrian walkway in a nature reserve in Qi'ao, Zhuhai. b) A sign describing *Coccoloba uvifera*, a coastal species native to the Americas, in a nature reserve in Qi'ao, Zhuhai.

"Harmony with nature" is one of the key themes of ecological civilisation, an ideology whose key goal is to create a sustainable Chinese society without compromising economic growth (Pow, 2017). Creating nature reserves with pedestrian walkways certainly constructs a very green or green*ing* aesthetic. However, lining the walkways with non-native trees while trying to play it off as a nature reserve shows how greening efforts and ecological civilisation in the Greater Bay Area megaproject are nothing more than a performance. This kind of performance is painfully reminiscent of Pow's (2017) description of the Sino-Singapore Tianjin Eco-city in Tianjin: "from the tree-lined boulevards ('Eco-valley') to the carefully manicured

‘Eco-districts’ with spectacular megastructures that invoke world-class aesthetics...Even fake leaves were painstakingly attached to otherwise barren trees along a boulevard during the winter months to create an evergreen view of the eco-city” (p.11). Although these walkways are available to everyone free of charge, it is necessary to question what freebies they are offering. What is the purpose of a mangrove protected area for non-native mangrove species? What kind of human-coastal relationships are these meticulously planned seascapes encouraging? By creating such a manicured seascape, the state constructs what appears to be a harmonious natural environment. In reality, it is a highly uniform and controlled setting that is essentially a theme park (Miles, 2012). By encouraging residents to consume nature-like spaces as nature, strong performative state logic is staged to convince people of an unproblematic harmonisation of aesthetics, ecology, and urbanisation while addressing none of the urban environmental problems (Pow, 2017). The issue with this is that, in Chinese discourse, “harmony” implies unity and joint purpose, but also a silencing tool to use against anyone who contradicts this vision (Brown & Bērziņa-Čerenkova, 2018). This way, even projects that seemingly contribute to a democratic green ecology can turn state-oriented. They also make visible how ecological civilisation is more of a civilising project for the authoritarian state than an ecological one.

While the state-orientation of greening projects in the Greater Bay Area is obscure, the political intentions of other projects are less so. Surveillance infrastructure and social credit systems – infrastructure intended for “social governance” and “social cooperation” (Section 4.3) – are to be embedded into the land and seascape, putting the environment increasingly under state control (Neo & Pow, 2015). And, while this is neither captured in the word-frequency or content analysis, the *Outline Development Plan* states that it is one of its intention to “take forward military-civilian integration in innovation development...and support the establishment

of a demonstration zone of military civilian integration in innovation development"(State Council, 2019, p.17). A seascape of surveillance and military power, as well as industrialism and capital accumulation, are the institutional dimensions of modern state power (Christoff, 1996), and it appears that policing and militarizing its coastal environment is one of the ways China wants to strengthen its legitimacy and state-control within its borders and its position as a maritime nation outside of it.

In this chapter, I have demonstrated how the Greater Bay Area megaproject, as envisioned by the state, makes scarce democratic ecologies and creates coastal environments increasingly monitored by the state. I have also shown how a grey/black, luxury ecology is emerging through the proliferation of techno-industrial parks and other economic and finance centres (both those labelled green and those that are not), limiting civic participation in how coastal areas can be utilised, developed, or restored. These planned projects and the ideologies they represent are highly likely to erode human-nature relationships that are important for strong environmental governance, as well as the public nature of coastal spaces necessary for equitable planning. Upon closer reading, the centrally planned Greater Bay Area megaproject, therefore, appears to be less sustainable and equitable than how it is generally described. However, as I have reiterated throughout this chapter, megaprojects rarely are built according to plan, and slippages can occur between central planning and local implementation. Analysing only centrally-planned documents cannot provide insight into which people in the Pearl River Delta will be impacted by the megaproject and how. Therefore, in the next chapter, I will examine residents' perceptions of two particular projects in the Greater Bay Area: the artifical island of the Lantau Tomorrow Vision and the dualistic eco/modernist construction of Gaoxin District.

Chapter 5. Anticipating the Greater Bay Area: Opportunities, anxieties, desires

5.1 Slippage

The Greater Bay Area is a planned megaproject that is gradually being implemented. However, megaprojects are rarely built according to plan. Not only can budgets, designs, and timelines change the nature of the megaproject, social and political actors outside of the central planning committee who have their own agendas and interests can also do the same (Carse & Kneas, 2019). These actors can reinterpret the plan or even the broader governmental policies (maritime strong power, ecological civilisation, and moderately prosperous society) to suit their hopes or desires. At the same time, if the promises of the megaproject threaten these agendas and have the potential to realise an actor's fears, these actors can resist megaproject development, providing friction to the implementation process. These acts of reinterpretation and resistance causes implementation to slip away from the original planned imaginations of the megaproject. The planned megaproject modifies landscapes, but so do these acts of reinterpretation and resistance. I call these acts and its results "slippage" (Freudenberg & Gramling, 1994).

In China, slippage is common. In his book about Chinese factory life, Andrew Walder (1986) argues that the landscape of the Chinese enterprise is shaped not only by party-state ideology and manipulation, but also by the personal, political, and social interests of workers and their local party cadre which magnify or distort party-state policies. As a result of the personal motivations or desires of workers, additional social infrastructure such as *guanxi* (social ties) or *biaoxian* (putting up a performance to get by) gets built into the daily operations of the Chinese factory. The state-owned enterprise (SOE) slips from being solely managed by the state to being a landscape that is also shaped by workers or local party officials. To provide an example that is

more closely related to socio-environmental issues, Grumbine and Xu (2011) assert that state-mandated ecological conservation efforts can be undermined by the material desires of local officials (i.e. corruption) or political aspirations (*zhengji*). These personal agendas of achieving economic and political success create problems for the implementation of national-level environmental conservation policies and regulations, all the while reinforcing individualistic power relationships (Grumbine & Xu, 2011).

Because of slippage, it is important to study megaprojects and the broad ideologies that characterise them at multiple scales. Only focusing on ideologies and centrally approved policies can distract from underlying factors or hidden power relations that have equal or greater importance in shaping the megaproject and its constituting landscape (Freudenberg & Gramling, 1994). Single-scale studies can also neglect or underestimate the real, on-the-ground impacts planned megaprojects have on the everyday lives, values, and subjectivities of people living within the landscape (Powell, 2018; Yeh, 2015). This call for multi-scalar studies of megaprojects, and indeed, other socio-environmental issues, has been echoed by other scholars in the field of political ecology (e.g. Zhouri, 2018). For example, through interviews with local residents and planners on Chongming Island, Xie (2019) was able to deconstruct the utopian narrative employed in the eco-city plan of Chongming Island. She showed that the local government held most of the power in reconstructing and reimagining Chongming Island; by limiting local residents' participation in the planning process, local government officials prevented Chongming residents from realising their desired future for their island (Xie, 2019). In another case (Bach, 2010), fieldwork and discussions with villagers, developers, intellectuals, city officials, planners, architects, artists, and workers showed that villagers within Shenzhen's chengzhongcun (urban villages) actually held a lot of power. These villagers gained

economically in the village's urbanisation process, despite the narrative that villagers were backward and villages were the antithesis of economic progress (Bach, 2010).

In this chapter, I continue to address the questions: who are megaprojects really for, and who has the power to reconstitute socio-environmental relationships through the construction of the megaproject? However, like Xie (2019) and Bach (2010), I move away from government plans and official discourses pertaining to the Greater Bay Area. Instead, I turn towards interviews and ethnographies to draw out alternative narratives on the futures the Greater Bay Area megaproject may create. These interviews and stories show the contradictions and conflicts in the imagination and implementation of the GBA. They also provide an analysis at a different scale of the social inequalities and ecologies made visible through the construction of coastal megaprojects and their underlying ideologies.

5.2 Anticipatory Landscapes

Megaproject plans and the gradual implementation of the megaproject itself are present artifacts of an anticipated future. Though unbuilt or half-finished, the imaginings of the megaproject can shift politics and human migration patterns and change people's relation to the land and sea (Carse & Kneas, 2019; Goett, 2016; Rippa, 2020). By playing into or erasing the hopes, desires, values or fears of residents, community leaders, developers, and other actors, a megaproject can influence behaviours, create new knowledge, or generate social movements (Carse & Kneas, 2019). In a book discussing Desert Rock, a proposed coal power plant in Navajo territory, Dana Powell (2018) argues that the power plant, though ultimately blocked and unbuilt, shaped social and political life in the Navajo Nation by acting on "imaginations, desires, hopes and worst fears in a manner that gave it the moral weight to shape the politics of energy" (p.5). What Powell is describing is a socio-political landscape that is formed through the

anticipation of a certain future. The coal power project had, in fact, created an anticipatory landscape.

Here, I focus on the anticipatory landscapes shaped by two projects in the Pearl River Delta. Both these projects were not mentioned in the *Outline Development Plan* (State Council, 2019). They are also unbuilt or in progress. And yet, I also found that each project had a profound impact on residents' lives and their human-human and human-environment relationships, as well as their perceptions on power and powerlessness to change such relationships. The two projects are Lantau Tomorrow Vision in Hong Kong, and Gaoxin District in Zhuhai, and my interviewees generally had ties to two places that are to be impacted by each project: Mui Wo and Peng Chau in Hong Kong, and Qi'ao and Tangjia in Zhuhai (Figure 5.1)

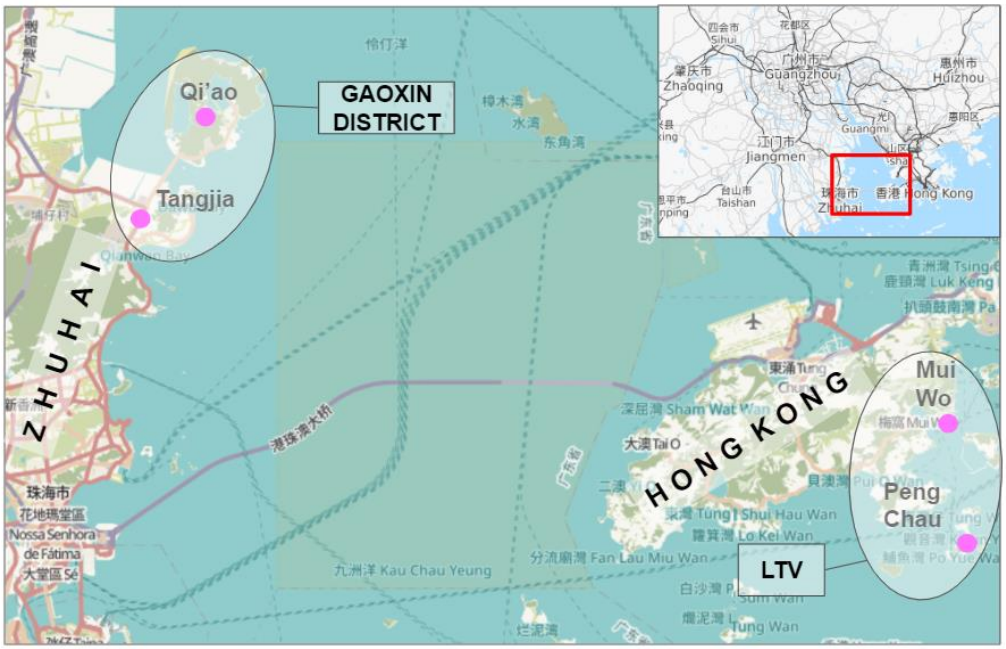

Figure 5.1 The locations of Gaoxin District and Lantau Tomorrow Vision, as well as the locations of Qi'ao, Tangjia, Mui Wo, and Peng Chau, where most of my interviewees had ties to.

Lantau Tomorrow Vision is - or will be - a series of artificial islands built in the Central Waters of Hong Kong. The artificial islands were first designed in the 1980s by Hong Kong

tycoon Gordon Wu for the purposes of creating “land banks” of developable land for private corporations (Toland, 2017). The plan to build the Lantau Tomorrow Vision picked up speed in 2015, when then-Hong Kong Chief Executive Leung Chun Ying opened up the possibility of building such an island to solve Hong Kong’s housing and economic needs in the midst of talks about the Greater Bay Area (Toland, 2017). The Lantau Tomorrow Vision (LTV) has its own planning document (Sustainable Lantau Office, 2019), and a budget of HKD 624 billion (USD 80.45 billion) from the current Hong Kong administration (Zhao, 2019). When complete, the LTV will occupy 1700 hectares of land built through the reclamation of Hong Kong waters, enveloping the neighbouring natural islands of Peng Chau, Hei Ling Chau, and Kau Yi Chau, before coming to a stop near the shores of Mui Wo, a small town on the larger island of Lantau.

Gaoxin District is a district in northern Zhuhai. It came into being in 1992 and expanded in 2006 through the agglomeration of 19 communities, including Tangjia and Qi’ao. Zhuhai’s Gaoxin District, whose name translates to “new high-tech,” is one of the 57 Gaoxin Districts (國家高新技術產業範展區, National High-Tech Development Experimental Zones) scattered throughout China. The purpose of these Gaoxin Districts is to house industrial and technological parks, incubators for innovation, and higher education institutes. Though not mentioned in the Plan itself, Zhuhai’s Gaoxin District is currently home to techno-industrial parks, as well as 979 technological enterprises (“Zoujingaoxin”, n.d.). Reclamation around Tangjia, one of the bays in Gaoxin District, has occurred over the past 20 years and is currently being developed into more tech campuses and an area of “innovation” (Chen et al., 2005; “Zoujingaoxin”, n.d.). However, reclamation and technological development in Gaoxin District stop abruptly at the Qi’ao Bridge. The bridge crosses onto Qi’ao Island, which has been established as an eco-island and is being

developed into an area for eco-tourism (Hong, 2018). Gaoxin District, therefore, represents the dualistic ecological and modernist goals of the Greater Bay Area.

I present findings from interviews I conducted with residents, academics, government officials, and business owners in Peng Chau, Mui Wo, Tangjia, and Qi'ao in this chapter. Though my interview questions were formulated based on my initial interest on a wide range of topics including historical changes to place, the interviewee's relationship with sustainability, and perceptions of the future (Appendix A, Table 1), I discuss my findings here under the three broad themes of opportunities, anxieties, desires. Opportunities, anxieties, desires are all anticipatory emotions and imaginations that motivate actions (Caplin & Leahy, 2001; White, 2016). They have also been used as analytical themes in similar studies on megaprojects, such as Jamali's (2013) investigation into Baloch fishermen's experiences and imaginations of the Chinese-funded Gwadar Deep Water Port Project in Pakistan. Jamali (2013) calls these anticipatory emotions and subsequent actions a "prelude" towards "appropriation and reorganisation of territory" (p. 23), and thus draws a connection between the themes of opportunities, anxieties, and desires to the megaproject's reconfiguration of land (and sea), power, and consequently people's relationship with them. As such, I, too, perform a similar thematic analysis and interpretation on the conversations and interviews I had with people implicated in or impacted by the Greater Bay Area megaproject.

Finally, a note on the writing style: compared to previous chapters, I employ liberal use of the first-person and more thick description in this chapter. I use a first-person account because the interviews and conversations presented in this chapter were conducted in the field, and as such, they were mediated by my own experience and memories of being in place (Madison, 2012). Capturing and making clear my subjective interpretations of conversations and interviews

in this chapter is especially important because of my positionality: I am from the Pearl River Delta. I am from Hong Kong. I carry my own views of opportunity, anxieties, and desires even as I ask for those of others, and the writing of their perceptions of the megaproject is filtered through my own proximity to it. To present myself as an omniscient, disembodied knower would be dishonest.

Thick description is a qualitative method of research where a researcher provides a more detailed account of field experiences to make explicit and put into context the patterns of cultural and social relationships (Geertz, 1973; Holloway, 1997). According to Lincoln and Guba (1985), thick description is a way of achieving external validity; by describing a phenomenon in detail, we can evaluate how the conclusions drawn might be transferable to other contexts. Additionally, thick description is a much more compelling way to describe the hopes, fears, and desires welling up in the Pearl River Delta because it establishes emotional connection and conveys notions of belonging and change in ways one cannot explain through explanatory prose. Through sensations, imagery, and impressions, one can more keenly feel the shifts in ecologies and socio-environmental-political relations due to the megaproject, and more clearly see the preferred futures interviewees sketch out as alternatives to the Greater Bay Area.

5.3 Opportunities

In 2018, 38 local academics co-wrote an open letter detailing their support for the Lantau Tomorrow Vision (LTV). This letter, picked up by the Chinese government mouthpiece, *China Daily*, was hailed as a rational and objective response to the unreasonable and emotional dissent from the public ("Lantau gets backing," 2018). The 38 academics wrote that they saw the LTV as a cost-effective opportunity to alleviate land shortages in Hong Kong, to create a new central

business district, and to build a low-carbon island that meets citizens' environmental protection demands.

R is a research assistant to one of the economists who wrote the letter. In describing the opportunities he saw in the LTV and the Greater Bay Area, he reiterated most of what his advisor had described and more. He did not see the LTV only as an opportunity to resolve the lack of housing and land, but also as a way of developing two new economies – an airport economy and a bridgehead economy – through additional infrastructural connections with mainland China. To R, these new economies would help boost consumerism in Hong Kong and raise the GDP of the city, which he says is the most basic measure of economic benefits. R also saw in the GBA the possibility of bringing more social benefits to Hong Kong people; Hong Kong-style hospitals and schools are being built in the mainland in anticipation of integration, he said. This would increase access to social security resources such as healthcare and elderly homes while alleviating population growth in Hong Kong, which he told me was the major cause of environmental issues.

Throughout the interview, I noticed that R mostly talked about regional benefits he saw arising from the LTV and GBA. This was not surprising, because R studies regional economies and thinks of globalisation as "Americanisation," which he regards unfavourably. However, I was interested in whether he saw himself benefitting from these regional opportunities. Therefore, I asked if any of it would apply to him. Would R move to the mainland given that the GBA would integrate social resources? R took a longer pause than he previously had done before saying "no." His social connections, which were important to him, remained in Hong Kong, and Hong Kong offered more academic opportunities and freedom than the rest of the GBA would. He said nothing of his potential benefits if the LTV indeed boosted consumerism. For R, his own

individualised opportunities and benefits remained separate from GBA projects and its infrastructure of integration.

For D, on the other hand, individual and regional opportunities were entangled. D is a community developer in Tangjia, Gaoxin District, a self-proclaimed "Cantonese opera prop-upper." He said that the GBA presents an opportunity for cultural exchanges between Hong Kong, Macao, and mainland students, and he was therefore proactively making Tangjia into an enclave for GBA university students. According to him, Tangjia of the old was full of mahjong parlours and gambling dens. But now, with his community leadership, bookstores and coffee shops were popping up in the village. With this cultural infrastructure and with the integration of Hong Kong and Macao, Tangjia would cultivate an intellectual community, and become a truly globalised town with a unique history. To D, the GBA presented the opportunity to realise his vision of Tangjia, to bring happiness, security, and stability to the district. I asked him which bookstore was his favourite in an attempt to get a visual of what he was imagining, and he told me to go to *Wujie* (無界, No Boundaries).

As I left D's office, which was in fact the lobby of an international hostel he had established, I paid more attention to Tangjia Old Town. The area was indeed populated by cafes and restaurants serving international cuisine: from Spanish seafood joints to "Western" delis. The Old Town evoked a sense of nostalgia as well. Large banyan trees swayed overhead, and small, hole-in-the wall shops displayed hand-written signs advertising traditional Cantonese dessert. The lack of cars and narrow streets, too, seemed to slow down time, reducing the pace of Zhuhai City to a leisurely stroll. It all appeared contradictory to the hi-tech campus Gaoxin District was supposed to be. However, the illusion of nostalgia broke when a golf cart pulled in front of me and stopped next to a queue of tourists waiting to be transported through this

"walking district." And upon closer inspection, some of the storefronts of the closed shops looked exactly the same; their traditional folding doors were in fact a poster print out, and they were all owned by the same company: Zhuhai Tangjia Cultural Tourism Limited (珠海唐家文化旅遊有限公司; Figure 5.2). I tried to look for *Wujie* but could not find it in the Old Town.

Figure 5.2. A "traditional" storefront in Tangjia Old Town that is in fact a printout poster pasted onto some other kind of gate.

Z, a museum tour guide on Qi'ao, seemed to think that regional opportunities arising from the GBA equalled individual opportunities. As she gave me the museum tour, she proudly detailed how Qi'ao played a part in Chinese history by warding off British colonisers, listed out the party officials Qi'ao had birthed, and showed me the book of party ideologies she was studying whenever the museum was emptied of visitors. When I asked about the current mode of development on Qi'ao, Z mentioned the mangroves and how it had created a tourism industry and provided some economic opportunities for the residents on the island. Now that there were

tourists, old women could set up stalls to sell some food and handicrafts. The islanders were less poor now. However, she seemed more enthusiastic about the development of Gaoxin District as a whole. “We’ve upgraded again!” she said, referring to how the district had now the jurisdictional power as a district rather than a county, which made it more urbanised than it was before. She was also enthusiastic about the way Gaoxin District was full of technology firms and enterprises, and the way it would soon have even more connecting roads and bridges. “If roads were smooth,” Z asserted, “economic growth would also be smooth.”

Out of all 26 interviewees, Z was the most steadfast with her faith in central planning: “The GBA is personally designed by President Xi, so it can’t go wrong! Our economy cannot be spurred by our village government. We need the support of central policies. With the Greater Bay Area, there will be a lot more opportunity for all of us.” Through this statement, Z expresses her mistrust in local governance and her belief that centrally planned regional economic growth in the GBA would lead to broad-based benefits for everyone. Because of this sentiment, I was curious to see if her museum job, which was apparently a Chinese Communist Party endorsed job, paid her well. Z responded that this job was actually a volunteer position supported by a small stipend. I asked if her stipend covered her living costs. Z said no.

J, on the other hand, had disposable income. He also cared less about regional opportunities; to him, development was uneven. And anyway, everyone was just trying to do business and earn money and get returns. J was an employee at a financial firm in Hong Kong, but he was trying to open a bed and breakfast on Qi’ao. It was a business adventure for J, an opportunity to see a project from start to finish. Qi’ao provided him with an opportunity to create and design a place for himself. According to J, the GBA was a way for the cities in the Pearl River Delta to search for its identity. To carry out this identity-work, city governments and

residents were going to build anything they want to try building. The GBA was an opportunity for J to try things out himself as well, to achieve a personal goal and to live out an individualised fantasy.

J moved back and forth between Hong Kong and the mainland. Even though Qi'ao was the location he would set up his new business, he did not see it as home.

> I'm not attached to Qi'ao as a place. Before the bed and breakfast, I'd actually never heard of it before. But X [J's business partner] wanted to open our business there. The first time I went, I really didn't like it because everything was so close. I told X not to open our B and B there. I liked it better the second time. I began to see that not only were buildings close to each other, but also the people as well."

J's discomfort with the density of buildings on Qi'ao was surprising to me because Hong Kong had one of the highest populations and building densities in the world. I asked J if he was planning to move to Qi'ao permanently now that he's found that he likes it. The answer was no. "I'm probably going to America in a few years," he told me in English. "I want to go to Cornell [University] and do their real estate program. I can't imagine what Qi'ao's future would look like...and I think Hong Kong is the place where I will always have one foot in." J's plan was to spend nights on Qi'ao whenever he feels like it, but he remained more attached to Hong Kong. He liked the surf here, and felt more responsible to the coastline; during our interview, he spent some time enthusiastically outlining the work of Sea Kayak Hong Kong, an environmental activist group in Hong Kong that hosts kayaking and clean up tours. "If you're into marine conservation, you would join them," was one of J's closing thoughts during the interview.

5.4 Anxieties

GBA projects that provide opportunities for some may be the cause of anxieties for others. While D, the community leader, and J, the bed and breakfast owner, are able to construct the future they desire through the GBA development, the future for other residents remain uncertain. In this section, I detail the perceived disadvantages arising from GBA development and the anxieties they elicit. The anxieties interviewees feel span various scales. Some are personal and community-based, others regional or even transnational. I begin by discussing how benefits and disadvantages are unevenly felt even within the community of hostel/bed and breakfast owners on Qi'ao.

A is the mother of a hostel owner. She moved from Hebei to Qi'ao a couple of years ago after her son decided to start a business here. He told her it was the best place to retire. When she came to Qi'ao, her son left, leaving the hostel management responsibilities to A while he went to find more exciting work opportunities in Vietnam. A had kept the hostel the way her son left it: Tibetan patterns and tapestry rising from floor to ceiling, the walls lined with A's son's postcards, the lines of dusty and unopened beer and liquor bottles stacked together simulating an open bar. A's son also had an advertisement for the Qi'ao Mangrove Nature Reserve displayed in the hostel's common area, but that had gotten dusty as well. I thought that A was like an outsider in her own house. She definitely felt like an outsider on Qi'ao; she was a bit lonely, she told me. Her son's hostel sat outside the main sprawl of Qi'ao village, separated from the rest of the community by a wide road. A did not like going into the village much. However, she will stay in Qi'ao as long as she can because she has to watch her son's hostel and his dogs. She also liked how one can get most essentials on Qi'ao without having to go off the island; she only ventured into Zhuhai City once a week if she had to.

But A did not know how long she will be able to stay in her son's hostel. She said there were plans to develop the side of the island the hostel is located on. As of January 2020, a large-scale yacht marina is being built along the same coast as the hostel itself. Another enormous structure of unknown purpose (though other villagers have speculated that it is a private hotel for the political elite) sits like an outsized crab on the hill next to the hostel. Land re-acquisition notices were being issued to some residents, and A reckoned that she has five years before she will be evicted. She felt certain that her landlord would take the government's offer to buy his land. The landlord would benefit from the compensation money the government would provide, amounting to around RMB 800,000 (USD 113,000). However, A would get none of the compensation, and she would be evicted. She felt uncertain as to where to go: "we could move into the village, but I really don't know."

Across the Pearl River Delta, on Peng Chau, residents fear displacement as well. M is a community organiser and a local district council candidate. During our interview, he took me around Peng Chau for a tour of the main street, the waterfront, and up on a hill overlooking the waters upon which the LTV will be built. M told me that he was afraid that, with the development of the LTV and the central business district on it, the locally owned shops on Peng Chau would become commercialised, and the way of life on the island would change. The LTV would cut through the ferry route most residents take to get on and off the island, and the artificial island would obstruct the ocean-facing public facilities on Peng Chau. These public facilities, I noticed, were not only the typical benches and playgrounds put there by the government, but also an assortment of mismatched chairs, stationary bikes, and swings (Figure 5.3). These facilities were put on the waterfront and shared by the residents on Peng Chau. As a district council candidate who wants to provide community services to Peng Chau residents, M

uses these waterfront facilities as a space to help elderly residents take their blood pressure, demonstrating that the Peng Chau coastline is not only a space for transport, shipping, fishing, but also a space for leisure and community health and wellbeing. These waterfront facilities would not make sense if there was no waterfront, and M is afraid of the waterfront disappearing with the construction of the LTV:

> It will just wrap itself around Peng Chau, and then we would never be able to see the ocean or Hong Kong Island again. We'd only be able to see tall buildings everywhere. We'd be like those village houses over at Tung Wan [one of the beaches on Peng Chau]. Those houses were built there because they wanted a sea view, and now luxury apartments are built in front of it, and now all the village houses have is a view of luxury apartments.

Figure 5.3. A makeshift, crowdsourced "gym" of stationary bikes and an elliptical by the ocean on Peng Chau.

During the interview, M told me that most people on Peng Chau were against the construction of the LTV. Even the current pro-government district councillors disagreed with the government's decision to budget HKD 624 billion (USD 80.5 billion) towards this project. Indeed, other residents that participated in my public intercept interviews indicated that they shared this view. One of the interviewees, an expat pilot who had lived on Peng Chau for 19 years, said that he and his friends were anxious about losing the green spaces and hikes if the LTV would be built. A group of fishermen, when asked whether they supported the project or not, responded with a hostile, "What the hell do you think?" Later, I would learn that many of them had done press interviews earlier on in the year opposing the LTV, citing loss of fishing grounds as a reason. In Mui Wo, a town that was only a short ferry ride away, residents told me that the LTV would probably make travel more convenient, but that it "would change everything." In general, however, a sense of inevitability and powerlessness pervaded in my conversations. "But what can you do?" asked one Mui Wo and two Peng Chau residents.

The inevitability of megaproject development was brought up by other interviewees from Qi'ao as well. An officer working at the Chinese white dolphin conservation headquarters on Qi'ao talked in detail about the endangerment of these dolphins and how they were doing everything they could to prevent its extinction. However, when I pointed to how one of the GBA bridges cut across the Chinese white dolphin protected area, the officer said that kind of encroachment was inevitable. Dolphins, according to him, liked coastal areas, but coastal areas are always going to be the places where the most ocean-related human activities occurred. He implied that while the health of the dolphin population was important, the building of the megaproject would take precedence. The conflict of interest between conservation of species and

megaproject development was inevitable, and the stemming from this sense of inevitability stemming was multi-species loss.

A sense of inevitability about the actualisation of megaproject-related anxieties could also lead to transboundary inequities. W, a biodiversity educator and bed and breakfast owner on Qi'ao, said that while the GBA promised to spur the economies of smaller cities and towns and bring economic benefits to everyone, he feared that that would not be the case. "They're just going to bring in foreign capital and big corporations," said W. "The corporations will dominate the entire market. Those of us who own small businesses will have no chance. But the Big Boss says this must be the way, so what can we do? There's no place for us in this game." The solution, to W, lies in the Maritime Silk Road. W and his business partner will go follow the Maritime Silk Road to Southeast Asia because there is less development and competition. They would spur the local economies there. W's use of the phrase, "spurring the economy," was interesting to me, because it was the same rhetoric the GBA employed, which seemed to create economic inequalities. I asked W if him going to Southeast Asia would prevent the locals there from gaining employment opportunities. W responded that it would not, because then the population would slowly decrease if these countries employed the one-child policy. There would soon be enough opportunities around for everyone.

W's response to his anxieties of regional economic inequities was leading him to indirectly create a transnational parallel of the same situation. Still, other interviewees feared that the GBA would directly create such inequities. E, an organiser for a Hong Kong NGO concerned with the development of the LTV, said that not only would the LTV create local economic inequities by creating a land bank for developers similar to the original 1986 plan by tycoon Gordon Wu, but that artificial island would restrict Hong Kong waters, lands, and resources for

mainland use. E insisted that Hong Kong people had no use for a reclaimed area as big as 1700 hectares, and that the enormity of the project was to accommodate mainland-Hong Kong integration and mainlanders moving into Hong Kong. “So basically,” said E, “you’re taking Hong Kong people’s money and resources and waters and building a paradise for mainlanders. That’s not really fair. This kind of land injustice is one of my biggest concerns with the LTV.” While only a couple of my interviewees outwardly echoed E’s anxiety of mainland encroachment and subsequent environmental injustice, some other Peng Chau residents who were not interviewed clearly shared the same fear of political encroachment: on a Peng Chau Lennon Wall, a kind of ephemeral notice board that had sprung up in Hong Kong during the 2019 protests, someone had written: “Today, they gift us with the extradition bill; tomorrow, they will gift us the Lantau Tomorrow Vision.” The post on the Lennon Wall explicitly connected the LTV to the writer’s fear of mainland China’s political subjugation of Hong Kong.

5.5 Desires

Given the diverse set of opportunities that residents of Zhuhai and Hong Kong deem possible through the GBA, as well as the numerous anxieties the project elicits in other residents, it seems unlikely that all of the futures and ecologies these residents desire are similar to the coastal future envisioned by the *Outline Development Plan* (State Council, 2019). However, it is necessary to probe into these desirable futures, so as to understand how some might share commonalities with the *Outline Development Plan*, or how some might provide radically different alternatives to megaproject development. Here, I discuss three things many interviewees have said or implied that they want: a beautiful coast, humanistic development, and transparency. While interviewees are in general agreement with these three desirables, what these three desirables mean to each interviewee is contested. An investigation into the meaning

of these three desirables allows the separation of the different futures that are preferable to each interviewee.

To begin my discussion of a beautiful coast, I return to D (the community leader) and the bookstore he enjoys and desires to replicate. After doing a search on the Internet, I realised that the bookstore D directed me to was a few miles away from Tangjia Old Town. The bookstore was nestled within a maze of luxury condos built on reclaimed land. It was minimalistic and quiet, and it overlooked a private park and another newly built, lonely marina (Figure 5.4). By visiting and observing the bookstore, I was able to get a better sense of what kind of intellectual community and aesthetics D the community leader desired. Additionally, because one of the main features of *Wujie* was actually the long line of windows that gave customers a view of the coast, I was also able to get a sense of what kind of coastal environment that D found beautiful: minimalistic, quiet, and like Tangjia Old Town, intensely curated.

Figure 5.4 A view of the coast from Wujie bookstore in Tangjia, Zhuhai. Public waters sit in the distance, separated from public lands by a private park and marina.

A beautiful, desirable coast also came up in my conversation with B, another bed and breakfast owner on Qi'ao. We were on one of the beaches on Qi'ao, and we were facing the waters of the Pearl River Delta, muddy brown because of sediment from the estuary. During our walk to the beach, we had discussed why B set up her business on Qi'ao: she liked the quietness of Qi'ao, and the fresh air. However, as we stood by the water, B said, "We already have a lot of coastal resources, but Zhuhai's waters aren't beautiful. I wish the waters were bluer. That way, it would make us a more attractive tourist destination. But maybe these muddy waters are for the best, for I do like my peace and isolation." B's version of a beautiful coast included many things that were contradictory even in her own words: bluer waters, more crowds, but also more peace and quiet.

To M and the residents of Peng Chau, a desirable, beautiful coast already exists. The ocean-side gym set up, the chairs put along the coast by community members, and the lack of dissent on having this communal infrastructure among residents show that Peng Chau residents are actively creating the coast they desire. However, with the development of the LTV, the meaning of "desirable" might be changing. The LTV would erase Peng Chau's coastline. To Peng Chau residents, a beautiful coast in the future meant one that exists.

Another desirable was "humanistic development," a term that first came up in my interview with the officer at the Chinese white dolphin conservation headquarters. The officer said, "It does not really make sense to build gigantic buildings here. We just need to humanistically develop the beach area." By "humanistically developing" the island, he meant that he would like to see an improvement of existing facilities and hygiene. Combining "humanistic" with existing facilities, I interpret his articulation of "humanistically developing"

as making facilities more accessible to humans, i.e. to make facilities more public. This desire for most coastal public facilities is expressed even more bluntly by a shopkeeper in Mui Wo, Hong Kong, who said, “I want more facilities that are free, like that beachfront resting spot [next to her shop].”

Other interviewees, though also desiring public “humanistic” development, saw the need for more facilities other than those that pertained to coastal hygiene or leisure. L, a researcher who works at a similar NGO to E’s, reckoned that improvements to existing facilities would not solve any social problems. Instead of building an artificial island that would likely benefit developers the most, L said that he wanted a development policy that ensured enough public housing for all, as well as a development policy that accounted for all the alternatives to the development of the LTV. Not only did L desire more public facilities, he also wanted the process of decision-making regarding the megaproject construction to be made publicly accessible.

Thus, transparency was also a desirable thing that came up in interviews. However, it meant different things to different interviewees. L wanted evidence that the government had considered all alternatives to developing the LTV before deciding on constructing it. Z, the museum tour guide on Qi’ao, wanted transparency on what local officials were doing because they were all corrupt. To G, an owner of a cafe in Qi’ao who also knew J the bed and breakfast owner, transparency meant being realistic: “Those plans from the government are generally so grand, so spectacular, so big. It’s kind of irresponsible of them, really, to write something like this. They just copy from left and right and produce some beautiful document. But it’s not real. They need to go to the place and see it for what it really is.”

5.6 Discussion

Through their interviews, the residents of Hong Kong and Zhuhai present a mosaic of fragmented opportunities, anxieties, and desires. These are not all reconcilable with each other, though they are not mutually exclusive, and it is difficult to integrate them into one general discussion. In this section, I do not attempt to explain everything that my interviewees have told me, but instead highlight how the slippages and anticipatory landscapes they are creating for themselves or are experiencing because of the Greater Bay Area reveal some of the power dynamics that control who has access to the coast and ocean. I discuss these dynamics and how they create the certain ecologies outlined in Chapter Four, and I do so in relation to the three ideologies I introduce in Chapter Three - strong maritime power, ecological civilisation, and moderately prosperous society. I argue that despite slippages, or indeed, because of them, the Greater Bay Area megaproject strengthens the power of the capitalist authoritarian state.

In Chapter Three, I argued that *fuqiang* (富強; strength through riches) is a more relevant interpretation of "strong maritime power" in the context of domestic China than *qiangsheng* (強盛; great). In this chapter, I strengthen this argument through an investigation of the notion of aesthetics. Aesthetics come up in section 5.4, where I describe D the community leader's desires for a beautiful bookstore overlooking a beautiful coast. The bookstore, *Wujie*, as well as the coastline in front of it, is a visualisation of what is good in terms of space and society to D (Ranciere, 2004). These visual codes train a collective to employ a particular way of seeing; in their study of the aesthetics of an eco-city in China, Pow (2017) argues that the eco-aesthetic strategy is a "concerted effort to engender a collective form of eco-aesthetic sensibility that promotes the Chinese State's vision of a harmonious society." Because *Wujie* is not a fantasy, and because D has the opportunity to realise the Tangjia Old Town Brand of his desires despite

the zonation of Gaoxin District as a techno-innovation paradise, I would argue that his brand and his desired aesthetics - his way of seeing - matches how the state is imagining the Greater Bay Area.

But what exactly is D's - and thus the GBA's - aesthetic? D's recreation of the Tangjia Old Town involves seeing an old coastal village as a series of consumptive spaces: a winding road of shops that seem to exist as a different form of urbanisation and a nostalgia for a less commercialised way of globalised living are in fact owned by the same company for capital accumulation. *Wujie,* nestled in a series of luxury condos overlooking a private park and a marina, is a way of seeing a good coastline as a privatised and luxury coastline. The consumptive-space-as-aesthetic logic can also be applied to Qi'ao, despite how different the island may seem from Tangjia. On Qi'ao, the main street is populated by bed and breakfasts like J's; small establishments which sell the idea of quaint village life surrounded by shells and fishermen are owned by non-locals with disposable income. According to B's desire for a beautiful, blue coast, Qi'ao as a coastal island can be better consumed if its waters were more blue. There is no way, of course, for B to colour the waters of the Pearl River Delta blue, but her idea of a blue PRD as sellable is reinforced by other blue GBA visualisations (Figure 5.5), normalising the aesthetic of a blue, privatised coast and encouraging a consumptive relationship with the ocean (Jamali, 2013).

Figure 5.5 A billboard for a residential complex depicting an artist's sketch of a "blue" Greater Bay Area.

The privatised, luxury aesthetic of the GBA can be represented by how the coastal condos, privatised spaces, and luxury ecologies are cropping up in Tangjia. However, it can also be represented by how democratic spaces and community infrastructure are being demolished through the creation of the LTV. On Peng Chau, spontaneous, chaotic waterfront gyms and publics are in danger of disappearing because the threat of the world-class LTV engulfing Peng Chau waters. Thus, the idea of reclamation - which is what the LTV is built through - becomes an intriguing one. By erasing democratic ecologies and replacing them with a luxury artificial island speculated to be a "land bank" for privatised housing and financial elites (Toland, 2017), the state reclaims the management of such a space and the authority to administer what it considers "good" - that is, capital accumulation through privatisation. This reclamation of space and administering of "good" aesthetics is a direct correlation to state power and legitimacy (Pow, 2017). Thus, by both encouraging and administering a capitalist aesthetic in the anticipatory GBA landscape, the state reifies its status as a *fuqiang* maritime power. Underscoring the creation of this *fuqiang* maritime power, though, is the loss of broader access to the ocean and the possibility of alternate relationships with the coast other than a consumptive one.

The loss of broader access to the ocean and the dominance of a consumptive relationship with the ocean completely shatters the idea that the Greater Bay Area is a coastal space that ensures the building of "a moderately prosperous society in all respects" (Xi, 2017, p. 1). In his address to the 19th National Congress of the Communist Party of China, Xi Jinping described a moderately prosperous society as one that would fulfill not only people's material needs, but also cultural needs, fairness and justice, security, and a better environment (Xi, 2017, p. 10). However, security and justice are compromised in the creation of the luxury ecologies of the GBA. A, the mother of a hostel owner on Qi'ao, feels uncertain about the future of her housing security. Because of impending development of the coast for business and political elite, and because of her landlord's opportunity to profit off of it, A is in danger of being displaced a few years down the road. Similarly, while the reclamation of LTV will not displace anyone, L, a Hong Kong NGO representative, fears the artificial island would be used for government profit from private developers and that housing security for many people in Hong Kong will disappear in the process. On the other hand, contrary to feeling assured in Xi's (2020) promise of "leaving no one behind," W, a biodiversity educator and BnB owner, fears that he will be left behind when foreign capital and multinational corporations move into this "world-class bay area" (State Council, 2019). W's fear for the security and stability of his business is causing him to move to Southeast Asia, where he appears to perpetuate the same forces of economic inequality and neocolonial injustice that he feels are inflicted on himself.

In its world-class bay area-making, the Greater Bay Area, along with its allegiances with foreign investors, multinational private corporations, developers, and community-buying elites, generates and reinforces inequalities rather than solving them as promised. Pow and Neo (2013) call this "urban utopianism," and Pow elaborates in a later paper (2017) that utopic urban

projects, such as world class city-making, “is not oriented towards any radically progressive or alternative living arrangement but an already known conclusion...one already proclaimed by the Chinese State where urbanisation, capital accumulation, and nature can all coexist in a singular aesthetic urban experience” (p. 14). Such a singular, hegemonic urban experience - that of the “moderately prosperous” - can lead to dispossession (Chen, 2012; Ghertner, 2015). The spectacular spaces that being built remain disconnected from the everyday lives of certain residents despite impacting their lived realities and anticipated futures (Pow, 2017; Simone, 2014). The Greater Bay Area, therefore, makes moderately prosperous society a sham and an ongoing attempt to legitimise China’s increasingly capitalist turn. It is a poor veil for the highly apparent accumulation for Chinese elites and international capital (Muldavin, 1996).

Megaproject development for highly apparent accumulation has environmental consequences. The officer at the Chinese white dolphin conservation headquarters describes dolphin endangerment as an “inevitable” collateral damage from the building of a bridge intended for the creation of a “bridgehead economy.” An expat pilot living on Peng Chau mourns the inevitable loss of blue-green spaces. Peng Chau fishermen have given numerous interviews on how they will lose their fishing grounds if the LTV is built. However, these concerns have been dismissed by a group of 38 economists as “unreasonable and emotional.” These economists, on the other hand, claim that they are providing a rational and objective reasoning because they discuss the economic efficiency of the project and the environmental measures the project will take to assuage residents’ environmental concerns even as they dismiss them.

Escobar (1996) notes that it is essential for narratives of planning and development to be presented as rational and objective. This, according to Escobar, is the indication of a “blindness to the role of planning in the normalisation and control of the social world [that] is present in

environmental managerialism" (1996, p. 50). Normalisation and control, as well as rationalisation and a turn towards objectivity can also be interpreted as being "civilised." This kind of civilising echoes that in inland China, where backward and irrational villagers had to be educated and "civilised" to better manage or imagine their lands (Chen, 2017). This attempt at civilising and silencing concerns related to environmental degradation appears to run contrary to one of the general GBA development principles outlined in the "Framework Agreement on Deepening Guangdong-Hong Kong-Macao Cooperation in the Development of the Bay Area (深化粵港澳合作 推進大灣區建設框架協議)": "To prioritise ecology and pursue green development" (National Development and Reform Commission, 2017). It provides an alternate view or interpretation of ecological civilisation as a sustainable development ideology: that a harmonious relationship with nature is created and policed by with individuals in power. Additionally, the half-hearted reassurance from the economists to residents' environmental concerns show that development under the framework of ecological civilisation is more concerned with the effects of environmental degradation hindering the potential for growth. "Growth" under such a sustainable development framework, Escobar (1996, p. 52) observes, "and not the environment, has to be sustained." Environmental degradation in the Greater Bay Area, therefore, is "inevitable."

Finally, I must turn to the discussion of the authoritarian state. The kinds of slippage I outlined above may paint a picture of a more tolerant state that does not feel the need to exert absolute control. However, it is only the actions and imaginations that support the state's vision of an economically booming GBA that are allowed to "slip" past the tight, controlling grip of the Chinese state. Dissenting voices on environmental degradation are silenced through public dismissal as well as a lack of adequate public consultation on the matter (section 5.5). Dissenting

voices on the construction of material integration infrastructure are also silenced through similar means (Lin, 2018). Protests against the creation of political and legal integration structures between Hong Kong also suffered heavy crackdowns from the governments of Hong Kong and China (Wong & JS, 2020).

In this chapter, I have presented the fragments of opportunities, anxieties, and desires felt, imagined, or acted upon by residents who will be impacted by the Greater Bay Area megaproject. These fragments can be stitched together to present various versions of the future of the Pearl River Delta, some of which are compatible with the state's vision of the GBA, some of which are radically different. Despite how more equitable and sustainable alternatives are not lacking, an analysis into how these alternative visions are dealt with shows that the GBA creates a space with no breathing room for democratic ecologies and community infrastructure. Within the Greater Bay Area, within all its plans and slippages, there is only space for futures that aid in the development of a *fuqiang* maritime power, state capitalist accumulation, and a highly policed ecological civilisation.

Chapter 6. Discussion and Conclusion

Coastal spaces are highly diverse spaces. Historically, people have relied on coastal areas for food, livelihoods, wellbeing, trade, and other economic activities. Through these activities, we derive numerous relationships and connections with the coast and, through the coast, to each other (Allison et al., in prep). As a result, coastal residents can see different opportunities when it comes to coastal development, desire different coastal futures, and carry different anxieties towards it. Conflict of interest and competition for coastal use have always existed among users. These conflicts and competitions can exist between individuals (Bennett, Dearden, and Peredo, 2015), between communities and industries (Bavinck et al., 2017), between a state and its people (Scaramelli, 2019), and between nations (Xu et al., 2019).

Through megaproject development, only certain opportunities and desires can be realised, and not all fears can be assuaged. In Chapter 4, I demonstrated that development of the centrally planned Greater Bay Area megaproject shifts in the landscape that would either increase emissions or pollution within the region or that would contribute to enhancing sustainability through technological innovation and profit-making. I also showed that the Greater Bay Area megaproject would create ecologies that are increasingly access-limited, privatised, and state-controlled. In Chapter 5, I showed how these landscapes and ecologies are further enhanced by local actors whose agenda aligns with the central plan (though not necessarily following it strictly), and by the demolition of agendas, desires, and infrastructure that contest it. Economic opportunity remains firmly in the hands of those who already have resources. Those who have less resources, mobility, or those who have alternative visions on how the coast can be used,

have increasingly limited access to coastal spaces. Avenues to demanding access have also become scarce.

I have argued in my introduction that megaproject development can make visible the social and environmental inequities that result from the three ideologies that inform Chinese coastal planning: maritime strong power, moderately prosperous society, and ecological civilisation. Here, I briefly return to how studying the Greater Bay Area has helped us better question or interpret each.

First, the Greater Bay Area does make China *fuqiang*, or, at least, appear to be. By planning for infrastructure that boosts technological innovation, as well as bridge-head and airport economies, China is investing in high value-added industries that have great potential to increase its GDP (Ding et al., 2014; Mallory, 2015). Other industries that China is investing in, such as the yacht industry - as shown through the construction of yacht marinas - also has potential for "explosive growth" (Wang et al., 2018). However, such marinas in the Greater Bay Area remain relatively empty and unused by local residents (Fig. 5.5), and while there is potential for great economic growth, there is also a possibility of such spectacular infrastructure to remain merely a spectacle. Like the ghost city, the yacht marina and cruise terminals represent large-scale investment in modernising and urbanising construction (Jiang et al., 2017). But like the ghost city, these infrastructures also remain isolated from the everyday lives of most citizens; some even oppose its development (Chapter 5). Jiang et al. (2017) note that these infrastructures represent a "development goal of wealth creation" (p. 46), as well as the creation of a small-circle economy, where local governments gain by selling coastal land, and developers gain by selling to investors who might use these spaces, and in the end, investors never use these spaces at all. By trying to urbanise into a world-class super-region, these GBA infrastructures take up

coastal space and limit public access to the coast through privatisation while excluding coastal residents from its accumulated benefits from "value-adding." Through the GBA, the *fuqiang* maritime power demonstrates that it is a coastal grabbing one.

The lack of benefits distribution points at how the original concept of moderately prosperous society that leaves no one behind (Xi, 2020) cannot be realised in the Greater Bay Area megaproject. What, then, does moderately prosperous society mean in this context? In Chapter 4, I discuss the proliferation of techno-industrial parks. Their propensity for economic growth and their technocratic nature appear to adhere well to the modernising development principle of "moderately prosperous society." However, they also create a luxury ecology that excludes those with no technocratic expertise. And yet, in Chapter 5, I also run into Z, the museum tour guide who believes that the "upgrading" to her district brought about by techno-industrial parks will provide her with economic opportunity. In this case, the moderately prosperous society is the *belief* that one can become moderately prosperous through the GBA, not actual prosperity itself. Those who are disillusioned with this version of trickle-down economics feel that they have no choice but to leave for other opportunities. In the case of W, the biodiversity educator and bed and breakfast owner on Qi'ao believes that he will find prosperity in Southeast Asia through the maritime silk road (MSR), despite bringing with him the same kind of trickle-down model he has become disenchanted with. W is the only one in my interviewees who has expressed interest in engaging in the MSR, but his disillusionment and decision to seek greener pastures (or bluer waters) elsewhere is an important one. The MSR, which is another megaproject itself (Schindler et al., 2019), has been under scrutiny of whether it is peaceful development or imperialism (Tsui et al., 2017). W's plan on developing his business in countries along the MSR and possibly intervening in local livelihoods and environments push

the idea of the MSR firmly into the territory of the latter. The GBA therefore shows that moderately prosperous society for all is difficult to achieve domestically, and while it is officially about equity and redistribution, it can also indirectly create a form of imperialism, whether planned or unplanned by the state.

On the other hand, the Greater Bay Area shows that ecological civilisation, while promoting its ecological priorities on paper, is very much concerned with practicing a civilisational politics domestically. In Chapter 4, I have remarked on the rise of surveillance infrastructure being embedded into the landscape, and, on a seemingly unrelated note, the way a nature reserve provides a space not for local species, but for non-native plants to grow in a beautiful, curated landscape. In Chapter 5, I wrote that environmental concerns outside planned ecological priorities are dismissed as "unreasonable and emotional." These observations show that environmental governance under the concept of ecological civilisation is an aestheticised and a policing one. Promoting both a certain "natural" aesthetic and enforcing appreciation of state environmental management through surveillance tactics allows for normalisation and control of not only the natural world, but also the social (Escobar, 1996). Zuev et al. (2019) call this a "civilisational" form of governance, where governance actors - in this case the Chinese state and its proponents - get to define what environmental concerns and ecologies are "civilised." In the case of the Greater Bay Area, where very real concerns of the endangerment of a dolphin species and the loss of common green space are dismissed in favour of a curated environment designed for the consumption of its "natural" aesthetic only, ecological civilisation normalises a consumptive relationship with coastal ecologies. It encourages the ecologically civilised citizen to be only superficially engaged with and educated on (certain aspects of) the

environment, which makes more large-scale and gradual environmental degradation for the sake of economic growth more easily justifiable.

Coastal megaprojects like the Greater Bay Area inform how Chinese coastal development has evolved. It is easy to dismiss ideologies like strong maritime power, moderately prosperous society, and ecological civilisation as Chinese propaganda at first; they all seem grandiose, slightly self-congratulatory, and potentially environmentally and socially transformative. These ideologies are tinged with Chinese characteristics, not only in terms of rhetoric, but also in their manifestation. The way the Chinese state is embedding in the megaproject certain technologies, such as surveillance, is a very "China" issue as perceived in the West (e.g. Campbell, 2019; Mozur & Krolike, 2019). However, the luxury ecologies the megaproject promotes, as well as the privatisation of coastal spaces is not just a "China" issue. Elsewhere, large-scale coastal developments for national economic purposes have similarly restricted coastal access and the distribution of benefits of using the coast. In *No Word for Welcome*, Wendy Call (2011) writes about the Trans-Isthmus megaproject in Mexico, where fishers, farmers, and timber workers are pushed out in favour of a $300 million infrastructural project of roads, highways, ports and high-rises, and a Special Economic Zone supported by an influx of investment. In another paper, Jamali (2013) writes about how the development of a spectacular port and subsequent megacity in Gwadar, Pakistan, promotes state-oriented ecologies and exacerbates racial and class-based tensions. Chinese coastal megaprojects are as utopic and undemocratic as megaprojects elsewhere.

What the Greater Bay Area and other coastal megaprojects are doing is similar to coastal grabbing. A coastal grab refers to "the contested appropriation of coastal space and resources by outside interests" as part of globalisation and urbanisation (Bavinck et al., 2017). It results in the

exclusion of communities from the space and resources they depend upon, and it lowers motivations and capacity of communities to resist such exclusion (Bavinck et al., 2017). In the context of this thesis, coastal grabbing is perhaps most tangibly felt when M details the way community infrastructure and waterfront spaces on his island will be gone to make way for a GBA artificial island. It is also evident when public intercept interviewees express how inevitable they feel the situation to be. However, while Bavinck et al. (2017) detail the ways coastal spaces are grabbed by outside interests, coastal spaces in the Pearl River Delta can also be grabbed by local actors such as community developers and business owners. What results, then, is a kind of "homegrown" coastal grab that has a similar kind of "homegrown-ness" as Roy and Ong's (2011) homegrown neoliberalism. Just as homegrown neoliberalism allows for "global circulations of market rule find a home in national contexts of development" (Roy & Ong, 2011, p. 262), homegrown coastal grabbing in GBA infrastructural slippages allows for national maritime and economic interests to find a home in local contexts of coastal development.

To further thrust the GBA and Chinese coastal development into conversation with global maritime development, let us discuss how grabbing – ocean grabbing and coastal grabbing - is now entangled with conversations about blue growth and the blue economy (Barbesgaard, 2018). Like China's three ideologies, blue economy or blue growth initiatives see the ocean as rich economic space, and its development principles imply an alignment with environmental concerns and social objectives (Cohen et al., 2019). However, just as this thesis contests the promises of the GBA, many have also been deeply critical of the blue economy for delivering similar false win-win logic (Barbesgaard, 2018; Silver et al., 2015). Just as blue economy initiatives can displace marginalised fishers through conservation policies or investment opportunities (Cohen

et al., 2019), the GBA can also displace coastal residents through land acquisition for luxury infrastructure development. Chinese coastal megaprojects, and thus at least some of Chinese coastal development policies, therefore seem part of this blue economic push to capture ocean spaces from some social groups while legitimising economic growth through various forms of socially and environmentally responsible rhetoric (Barbesgaard, 2018).

A close study of the Chinese coastal megaproject has revealed that Chinese coastal spaces are regulated by not only authoritarian top-down control from the state, but also local forces that take advantage of the capitalist, privatising nature of coastal development. Coastal futures in China are increasingly capitalist and tightly controlled, but so are the coastal spaces in many places. Thinking of Chinese coastal development not as only hegemonic and authoritarian with Chinese characteristics, but instead part of a global push to grab coastal regions for economic growth is helpful. This places Chinese coastal residents and local actors in a similar playing field as coastal peoples in other territories and creates an opportunity for trans-national dialogue on how to tackle capitalist coastal development and promote "humanistic" human-scale infrastructure.

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Appendices

Appendix A. Content analyses supplementary tables

Table 1. 75 most common words in the *Outline Development Plan of the Greater Bay Area* (The Plan 2017)

Relative Frequency	Term	Count	Frequency
1	hong	324	0.015609192
2	kong	303	0.014597485
3	macao	289	0.013923014
4	development	266	0.012814954
5	cooperation	162	0.007804596
6	area	151	0.007274654
7	bay	147	0.007081948
8	support	139	0.006696536
9	greater	134	0.0064556533
10	guangdong	134	0.0064556533
11	develop	129	0.006214771
12	innovation	118	0.0056848293
13	international	114	0.0054921233
14	services	103	0.004962181
15	section	82	0.0039504743
16	industries	81	0.003902298

17	enhance	76	0.0036614155
18	strengthen	75	0.003613239
19	promote	68	0.0032760033
20	new	66	0.0031796503
21	high	61	0.0029387677
22	mainland	60	0.002890591
23	shenzhen	58	0.002794238
24	technology	58	0.002794238
25	forward	56	0.002697885
26	jointly	55	0.0026497084
27	developing	50	0.002408826
28	leverage	49	0.0023606494
29	cultural	48	0.0023124728
30	financial	47	0.0022642964
31	economic	46	0.0022161198
32	management	46	0.0022161198
33	Prd?	46	0.0022161198
34	improve	44	0.0021197668
35	service	44	0.0021197668
36	boundary	43	0.0020715904
37	explore	43	0.0020715904
38	guangzhou	43	0.0020715904
39	protection	43	0.0020715904

40	cross	42	0.0020234138
41	national	41	0.0019752372
42	industry	40	0.0019270608
43	tourism	40	0.0019270608
44	areas	39	0.0018788843
45	enterprises	39	0.0018788843
46	resources	39	0.0018788843
47	transport	39	0.0018788843
48	trade	38	0.0018307078
49	centre	36	0.0017343546
50	establish	36	0.0017343546
51	information	36	0.0017343546
52	chinese	35	0.0016861781
53	city	35	0.0016861781
54	major	35	0.0016861781
55	regional	35	0.0016861781
56	social	35	0.0016861781
57	systems	35	0.0016861781
58	talents	35	0.0016861781
59	projects	34	0.0016380016
60	environment	33	0.0015898251
61	level	33	0.0015898251
62	marine	33	0.0015898251

63	zone	33	0.0015898251
64	platform	32	0.0015416486
65	provide	32	0.0015416486
66	quality	32	0.0015416486
67	education	31	0.001493472
68	exchange	31	0.001493472
69	reform	31	0.001493472
70	region	31	0.001493472
71	global	30	0.0014452955
72	manufacturing	30	0.0014452955
73	municipalities	30	0.0014452955
74	water	30	0.0014452955
75	fully	29	0.001397119

Table 2. Planned projects mentioned in the *Outline Development Plan* (State Council, 2019), as well as the ecologies they contribute to: Democratic/Luxury/State-oriented - as represented by columns 3-5, and Green/Grey/Black - as represented by the colour of the dots. Rationale behind categorisation is also presented

Infrastructure	Page	Location	Democratic	Luxury	State	Rationale
High speed railways	11,21,22	Regional		●		Grey: Public transit infrastructure, relatively low carbon Luxury: Public transit infrastructure, not as affordable or accessible as intercity railways
Intercity railways Shenzhen Maoming Railway	11, 21	Regional Shenzhen, Maoming	●			Grey: Public transit infrastructure, relatively low carbon Democratic: Public transit infrastructure, affordable and accessible to most
High-grade motorways Scenic coastal drive	11, 21	Regional Chaozhou, Zhanjiang, Hong Kong, Macao	●			Black: Public and private transit infrastructure, not low carbon Democratic: Public (buses) and private (cars) transit infrastructure, affordable and accessible to most
Bridges	11, 22	Hong Kong, Zhuhai, Macao Shenzhen, Zhongshan Humen	●			Black: Public and private transit infrastructure, not low carbon Democratic: Public (buses) and private (cars) transit infrastructure, affordable and accessible to most
Greater Bay Area Big Data Centre	15	No info	●		●	Black: Does not reduce pollution Democratic/State: Citizens have better access to Internet and can be more connected, but big data also allows for state surveillance and censorship
Technological infrastructure facilites	16	No info		●		Black: Nothing explicitly about environment Luxury: If these technologies are successfully deployed, then everyone benefits from more eco-friendly products, but right now, it seems that it is these manufacturing companies that will immediately benefit

			Hong Kong, Shenzhen Guangzhou Nansha Hengqin Hong Kong Hengqin No info Lok Ma Chau Loop Lok Ma			Black: Nothing explicitly about environment Luxury: If these technologies are successfully deployed, then everyone benefits from more eco-friendly products, but right now, it seems that it is these manufacturing companies that will immediately benefit
National high-tech industrial development zones		17	Chau/Shenzhen		●	
State Key Laboratories		17	Hong Kong, Macao		●	Grey: Because it could lead to pollution-reducing technology or industrial development Luxury: The people who get hired by, or are involved in this park, are "high-end"
Technology incubators		18	Hong Kong, Macao		●	Black: Nothing explicitly about environment Luxury: If these technologies are successfully deployed, then everyone benefits from more eco-friendly products, but right now, it seems that it is these manufacturing companies that will immediately benefit
Ports		20	Hong Kong	●	●	Black: Nothing explicitly about environment Democratic/Luxury: Employment opens up access to jobs and goods. But also luxury because in the end, companies/corporations benefit
Airports	20-21		Hong Kong Macao, Zhuhai, Guangzhou, Shenzhen Guangzhou, other Shenzhen, Zhuhai Guangzhou, Shenzhen		●	Black: Aviation industries are heavy polluters. Also, the building of airports have paved over a lot of marine ecosystems. Luxury: mainly provides retail space for consumer brands and mobility benefits for the social classes that can afford air travel
New boundary crossings		22	Heung Yuen Wai (HK) Qingmao (Macao/GZ) West Kowloon (HK)		●	Black: Does not reduce emissions or enhance "natural aesthetic" State: An integration infrastructure (for detailed explanation, see item 38)

Data centres, ubiquitous high-speed Internet	23	Regional	●	●	Black: Does not reduce pollution Democratic/State: Citizens have better access to Internet and can be more connected, but big data also allows for state surveillance and censorship
Surveillance infrastructure	23	Regional		●	Grey: Ecological social behaviour could be enforced through the social credit system State: This is implemented by the state and encourages state-vetted behaviour. So it mostly benefits state legitimacy
Low-carbon energy infrastructure	24	Regional	●		Grey: Definitely supports pollution or emissions reduction, but does not enhance or provide access to nature Democratic: When renewable energy is produced, there is no distinguishing factor of who it is supplied to
Petroleum reserve bases	24	No info		●	Black: pipeline to pollution or emissions Luxury: revenue of these infrastructure goes to the energy companies (mostly state owned), a select few of the population. One could say that it supplies energy to the masses, but the environmental cost for the masses is also very high
Liquified natural gas terminals	24	No info		●	Black: pipeline to pollution or emissions Luxury: revenue of these infrastructure goes to the energy companies (mostly state owned), a select few of the population. One could say that it supplies energy to the masses, but the environmental cost for the masses is also very high
Coal reserve bases	24	Guangzhou, Zhuhai		●	Black: pipeline to pollution or emissions Luxury: revenue of these infrastructure goes to the energy companies (mostly state owned), a select few of the population. One could say that it supplies energy to the masses, but the environmental cost for the masses is also very high

Oil and gas pipelines	24	Regional		●	Black: pipeline to pollution or emissions Luxury: revenue of these infrastructure goes to the energy companies (mostly state owned), a select few of the population. One could say that it supplies energy to the masses, but the environmental cost for the masses is also very high
Water conservation infrastructure	24	Regional	●		Grey: It does not enhance/provide more access to nature, but conservation of rainwater is ecologically beneficial Democratic: When more water is conserved, more people can be more water secure. There isn't anything in the document that says the water is going to richer neighbourhoods. So I am assuming the best intentions here.
Water supply pipeline	25	Macao	●		Grey: It does not enhance/provide more access to nature, but it enhances access to natural resources necessary for public health, Democratic: Seems to be broadening their public good access network
Seawall and riverwall flood control infrastructure	26	Regional	●		Grey: It does not enhance/provide more access to nature, but it protects people and places from natural hazards Democratic: public good that protects people and places from natural hazards
Advanced equipment manufacturing industrial belt	26	Zhuhai, Foshan, west bank of Pearl River		●	Black: Nothing explicitly about environment Luxury: If these technologies are successfully deployed, then everyone benefits from more eco-friendly products, but right now, it seems that it is these manufacturing companies that will immediately benefit
World-class manufacturing industries cluster	26	Shenzhen, Dongguan, east bank of Pearl River		●	Black: Nothing explicitly about environment Luxury: If these technologies are successfully deployed, then everyone benefits from more eco-friendly products,

Dongguan Binhaiwan New District			Dongguan			but right now, it seems that it is these manufacturing companies that will immediately benefit
Green manufacturing infrastructure		27	Regional	●		Grey: Definitely supports pollution or emissions reduction, but does not enhance or provide access to nature Luxury: Obviously if these technologies are successfully deployed, then everyone benefits from more eco-friendly products, but right now, it seems that it is these manufacturing companies that will immediately benefit
Industrial belt of energy conservation and environmental protection technologies	28 57		No info Yinhu Bay (Jiangmen)	●		Grey: Definitely supports pollution or emissions reduction, but does not enhance or provide access to nature Luxury: Obviously if these technologies are successfully deployed, then everyone benefits, but right now, it seems that it is these international corporations that will immediately benefit
Macao-Zhuhai cross-boundary financial cooperation demonstration zone		28	Macao, Zhuhai	●	●	Black: Nothing explicitly about environment (unlike green finance) Luxury: Finance is highly paid and populated by graduates from elite universities
Green finance centre		29	Hong Kong	●		Grey: Because it could lead to pollution-reducing technology or industrial development Luxury: The people who get hired by, or are investing, or profit off of green finance are highly likely people who have disposable income and are wealthy enough to move around if investments go awry"
Pilot zone for green finance reform		29	Guangzhou	●		Grey: Because it could lead to pollution-reducing technology or industrial development Luxury: The people who get hired by, or are investing, or profit off of green finance are

					highly likely people who have disposable income and are wealthy enough to move around if investments go awry
Pilot zone for development in insurance innovation	29	Shenzhen		●	Black: Nothing explicitly about environment (unlike green finance) Luxury: Not everyone can afford insurance. And those who profit off of insurance are a select few
Base for modern marine industries Including: port and logistics, coastal tourism and marine information services, marine technology innovation	31	Regional	●	●	Black: Nothing explicitly about environment Democratic/Luxury: Employment opens up access to jobs. How much the these industries being mostly service sector jobs restricts who gets employed is unknown. So this could potentially be luxury.
Ecological corridors and biodiversity protection networks	33	Regional	●		Green: Increases access to nature by protecting it Democratic: Most people can access these ecosystem services
Ecological barrier	33	The North	●		Green: Increases access to nature by protecting it Democratic: Most people can access these ecosystem services
Coastal ecological belt	33	No info	●		Green: Increases access to nature by protecting it Democratic: Most people can access these ecosystem services
Green aquatic ecological network	34	Regional	●		Green: Increases access to nature by protecting it Democratic: Most people can access these ecosystem services
Blacklist system for environmental pollution	34	Regional	●		Grey: Does not look like nature but reduces pollution. Democratic: Does not only target elite; pollution reduction benefits everyone
Walking infrastructure such as urban greenways and pedestrian walkways	35	Regional	●		Green: Increases access to nature Democratic: Free; accessible to most everyone

School and university infrastructure to set up an international demonstration zone for education, especially for students whose parents take up cross-regional employment	36-37		Regional	●	Grey: Given ecological civilisation, it is highly possible that curriculum taught at these schools could contain an environmental component and increase environmental awareness of students in all parts of the Pearl River Delta State: The stated purpose of building these educational infrastructure is integration. As mentioned, integration is politically fraught here. To the state, it is highly likely to be a strategy to extend its influence on politically semi-autonomous special administrative regions
National-level human resources services industrial park		37	No info	●	Grey: Because it could lead to pollution-reducing technology or industrial development Luxury: The people who get hired by, or are involved in this park, are "high-end"
Major cultural infrastructure					Black: Does not reduce pollution, nor does it enhance the "natural aesthetic" State: The stated purpose of these cultural projects is to enhance cultural soft power and to enhance residents' cultural sophistication, to absorb Chinese cultural essence. Soft power is political, and if cultural sophistication is defined by the state, then to cultivate citizens who possess state-endorsed cultural ability is to cultivate citizens obedient to the state.
Xiqu Centre			West Kowloon (HK)		
Hong Kong Palace Museum		39	West Kowloon (HK)	●	
Youth integration and exchange projects			Hong Kong, Macao		Grey: It is possible that curriculum taught at these schools could contain an environmental component and increase environmental awareness of students in all parts of the Pearl River Delta State: The stated purpose of building these educational infrastructure is integration. To the state, it is highly likely to be a strategy
In eco-industrial parks		39	Dongguan	●	

						to extend its influence on politically semi-autonomous special administrative regions
International cruise terminals	40	Hong Kong, Macao, Guangzhou			●	Black: Does not reduce pollution, nor does it enhance the "natural aesthetic Luxury: Only certain people who earn a certain income can go on a cruise and therefore access this piece of infrastructure
International yacht infrastructure	41	No info			●	Black: Does not reduce pollution, nor does it enhance the "natural aesthetic Luxury: Only certain people who earn a certain income can own yachts and therefore access this piece of infrastructure
Experimental zones for entrepreneurship and employment	41	Hong Kong, Maco, Qianhai (SZ), Nansha (GZ), Hengqin (ZH)	●	●		Grey: Does not necessarily increase access to nature, but the entrepreneurship could be environmentally focused. Democratic/Luxury: Creates access to jobs. How much the centre being entrepreneurial restricts who gets employed is unknown. So this could potentially be luxury.
Green agriculture base	43	Huizhou, Zhaoqing	●	●		Grey: Does not necessarily increase access to nature, but the green component of agriculture could reduce pollution Democratic/Luxury:The green agriculture base is also a distribution site. So it could be improving access to more ecologically produced produce. However, it could also be totally industrial and at a high price point. There is little info. So both democratic and luxry could apply.
Social assistance information infrastructure	44	Regional			●	Grey: Social assistance = better healthcare State: However, this is not an additional social assistance program. It just integrates social assistance information in the region. For more info on why integration projects are state projects, see item 38.
Public/Private elderly homes	44	Regional			●	Grey: Care for elderly can mean providing them a safe environment

					Luxury: The plan states that it wants to build private elderly homes for investors to invest in. Seems that investors are the group that immediately benefits. Also, if the homes are privatised, then it is likely that only elderly of a certain income level can have access.
Social credit system	47	Regional		●	Grey: Ecological social behaviour could be enforced through the social credit system State: This is implemented by the state and encourages state-vetted behaviour. So it mostly benefits state legitimacy
					Black: Does not reduce emissions or enhance "natural aesthetic" Democratic/Luxury: On one hand, not a public good; on the other hand, could make better imports more accessible to people
Quality traceability centre	47	Nansha (GZ)	●	●	
Qianhai Shenzhen-Hong Kong Modern Serivce Industry Cooperation Zone	52	Qianhai, Hong Kong		●	Grey: Could lead to pollution-reducing technology or industrial development Luxury: The people who get hired by, or are involved in this zone/centre, are "high-end"
					Black: Does not reduce emissions or enhance "natural aesthetic"
Boundary control point	53	Qianhai (SZ)		●	State: An integration infrastructure
					Black: Does not reduce emissions or enhance "natural aesthetic" Democratic/Luxury: On one hand, not a public good; on the other hand, could make better quality imports more accessible to people
Logistics park	55	Hengqin	●	●	

Appendix B. Additional information about interviews and interviewees

Table 1. List of interviewees by occupation, pseudonym, gender, the interview location and the type of interview conducted

#	Occupation	Gender	Location	Date Interviewed	Interview Type
1	Dessert Shop Owner	F	Qi'ao	10 July	Public Intercept
2	Qi'ao Resident	M	Qi'ao	10 July	Public Intercept
3	Hostel Owner's Mother	F	Qi'ao	18 July	Intentional conversation
4	Retired Qi'ao Resident	F	Qi'ao	19 July	Public Intercept
5	Qi'ao History Museum Host	F	Qi'ao	20 July	Elite Interview
6	Coffee Shop Owner	F	Qi'ao	20 July	Elite Interview
7	Fish Trader	F	Qi'ao	21 July	Intentional conversation
8	Coconut Seller	M8	Qi'ao	18 July	Public Intercept
9	Dolphin Conservation Department Officer	M	Qi'ao	22 July	Elite Interview
10	Community Leader	M	Qi'ao	23 July	Intentional conversation
11	Airbnb Owner	F	Qi'ao	3 Aug	Intentional conversation
12	Airbnb Owner	M	Qi'ao	4 Aug	Elite Interview
13	Airbnb Owner	M	Qi'ao	5 Aug	Elite Interview
14	Zhuhai Government	F	Qi'ao	7 Aug	Elite Interview
15	Future Airbnb Owner	M	Qi'ao	8 Aug	Intentional conversation
16	Mangrove MPA Officer	M	Qi'ao	20 Aug	Elite Interview
17	HK NGO Representative	M	Hong Kong	10 Aug	Elite Interview

18	Peng Chau Resident	M	Hong Kong	13 Aug	Public Intercept
19	Peng Chau Resident	M	Hong Kong	13 Aug	Public Intercept
20	HK NGO Representative	M	Hong Kong	16 Aug	Elite Interview
21	GBA Economics Research Assistant	M	Hong Kong	21 Aug	Elite Interview
22	Peng Chau Community Organizer	M	Hong Kong	09 Sep	Intentional conversation
23	Mui Wo Hotel Employee	F	Hong Kong	07 Sep	Public Intercept
24	Mui Wo Resident	Unknown gender identity	Hong Kong	08 Sep	Public Intercept
25	Mui Wo Shopkeeper	F	Hong Kong	07 Sep	Public Intercept
26	Mui Wo Tour Participant	F	Hong Kong	08 Sep	Intentional conversation

Table 2. Total number of interviews conducted, differentiated by interview type, gender of interviewee, and location of interview

Types of Interview	**Total**
Public Intercept	9
Elite Interview	10
Intentional Conversation	7
Total	26
(Attempted and failed)	(5)
Gender	
Female	11
Male	14
Unknown gender identity	1
Location	
Qi'ao	16
Hong Kong	10

Appendix C. List of interview questions

Table 1. List of questions that were posed during interviews. In elite interviews and purposeful conversations, the full set of questions, or at least one question per theme, was posed to the interviewee. In public interception interviews, only a subset of the questions, depending on the interviewee's availability and positionality, was asked.

Theme	Research Question	Posed Question	Translated Question
Personal history	What is the interviewee's nature of work, positionality, and perspective they are offering to this study?	Why are you doing the thing you're doing? What is your work like?	可以告訴我你的工作崗位是什麼呢？可以描述一下通常你工作裡的一天會幹什麼呢？
Personal history	What is the interviewee's level of expertise in the work that they're doing?	When did you start doing this line of work?	你在這崗位工作了多久呢？
Mobility	Is the interviewee a resident at the field sites? Or are they relatively mobile and commute to work?	Are you a resident here? How long have you lived here?	你在這裡住嗎？你住了多少年?
Mobility	Is the interviewee a resident at the field sites? Or are they relatively mobile and commute to work?	Do you come here often?	若不在這裡住？你是經常來往這裡嗎？
Place attachment	What does the interviewee value at the field site?	What are your favourite things about this place?	你最喜歡這裡的什麼東西呢？
Place attachment	What does the interviewee not value at the field site?	What are the things you don't like as much?	這地方有些東西你或這裡居民不太喜歡嗎？
Historical changes	Has the interviewee seen past changes to place that could potentially impact the way they see the changes that are happening now with the Greater Bay Area development?	How has this place changed since you started working here?	在你開始在這裡住或工作到現在，這地方有發生其他大的變化嗎？可以簡單描述這些變化嗎？
GBA development	Does the interviewee know of the Greater Bay Area development?	Have you heard of the Greater Bay Area development?	你知道政府要推行建設大灣區嗎？

Perceptions of the future	Does the interviewee think that the Greater Bay Area developments will benefit or hinder them?	Do you think the GBA will bring opportunities for you? Do you think the current and future infrastructure developments will benefit you?	大灣區發展會對你帶來影響嗎？
Perceptions of the future	Does the interviewee think that the Greater Bay Area developments will benefit or hinder them?	What sorts of development are you noticing around this place? Do you like it?	有留意到這地方有什麼發展建設開始了嗎？你喜歡這些改變嗎？
Perceptions of the future	Is the interviewee already perceiving changes to their immediate environment or surroundings?	How do you think this place will change in the next 10 years?	你覺得十年後這地方會變成一個怎樣的地方？
Perceptions of the future	Are these perceived changes something they like or dislike?	Do you see yourself working or staying here 5-10 years in the future? Or, where do you see yourself working 5-10 years in the future?	你認為你五至十年後還會留在這裏工作或生活嗎？若不會，你回去哪裡呢？
Perceptions of the future	What is the kind of future the interviewee would like to see?	If it were up to you, what sort of changes would you like to see around here?	如果你可以作主，你會保留或改變這地方的什麼呢？
Relationship with environment/sustainability	What is the interviewee's attitude towards their surrounding environment, including nature and the coast?	You're living on a designated eco-island or a non-urban area. What does eco-island or nature mean to you?	你住在／工作在一個生態島上／郊區裏。你覺得一個地方怎樣才算生態或郊區呢？
Relationship with environment/sustainability	Is the way the region is developing sustainable? How will it impact the interviewee's future?	Have you heard of "sustainable development?" Does it mean anything to you?	有聽過可持續發展這概念嗎？你認為什麼才算可持續發展呢？