Critical Cartographies of Transnational Infrastructure-led Urbanization

by

Jehanzeb Shoaib

B.Arch

Beaconhouse National University, 2018

Submitted to the Department of Architecture in Partial Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE IN ARCHITECTURE STUDIES

at the

Massachusetts Institute of Technology

JUNE 2023

© 2023 Jehanzeb Shoaib. All rights reserved.
The author hereby grants to MIT a nonexclusive, worldwide, irrevocable, royalty-free license to exercise any and all rights under copyright, including to reproduce, preserve, distribute and publicly display copies of the thesis, or release the thesis under an open-access license.

Authored by: Jehanzeb Shoaib
Department of Architecture
May 1, 2023

Certified by: Azra Aksamija
Associate Professor of Art, Culture, and Technology
Thesis Supervisor

Accepted by: Leslie K. Norford
Chair, Department Committee on Graduate Students
Professor of Building Technology

Thesis Supervisor

Azra Aksamija, M.Arch, PhD
Associate Professor Art, Culture, and Technology

and reader

Mohamad Nahleh, B.Arch, SMArchS
Lecturer, Architecture and Urbanism

Critical Cartographies of Transnational Infrastructure-led Urbanization

by

Jehanzeb Shoaib

Submitted to the Department of Architecture on

May 1, 2023

in Partial Fulfillment of the Requirements for the Degree of

Master of Science in Architecture Studies

ABSTRACT

This thesis is a manifesto that traverses the binaries of land and sea to mediate between the preconceived notions of boundary and territoriality. The contextual landscape of this mediation is within the littoral territory of Gwadar, in the southern coastal region of Baluchistan, in Pakistan. This port city acts as a gateway to the China-Pakistan Economic Corridor, which, because of its deep-sea edge, has been subjected to China's infrastructure-led urbanization. As a result, the local fishing community – numbering close to 36,000 - and its eco-system have been impacted and displaced, triggering large-scale protests that have been censored by the state-run media. This thesis is thus a manifesto that gives voice to the littoral landscape and the indigenous community, inviting participatory forms of dialogue on the role of design and its agency. At issue here is the conception of Gwadar as an edge on which a highway has been built, restricting the fishing community's access to the sea. For this community, known as nomads of the sea, Gwadar is not an edge but a gateway to the sea – just as its name implies: an amalgamation of two Balochi words, Guad means wind and dar means gateway, aggregating to mean the gateway of winds. By providing evidence of their territorial claims through critical cartographic methods of ethnography, photography, and mapping, this thesis frames the spatial-temporal thresholds of the littoral which, like the winds, morph with time. The manifesto argues, to view the coastal landscapes as thresholds, rather than mere coastlines. Moreover, it proposes re-learning from the indigenous collectives of rural commons towards creating a subsistent coastal community by circulating a zine pamphlet that legitimizes the claims of the indigenous inhabitants of the littoral landscapes, both human and non-human.

Thesis Supervisor: Azra Aksamija
Title: Associate Professor Art, Culture, and Technology

CONTENTS

The Littoral Manifesto

Context | 6-9
The Littoral Dialogue | 10-13
State of the Field and Methodology | 14-17

Part I - Constricting the Threshold

The Inherited Line | 22-37
The Imposition of Line | 40-49
The Multiplication of Line | 52-65

PART II- Expanding the Threshold

Spatializing Geo-Thresholds | 72-83
Spatialzing Nature-Culture Thresholds | 86-97

PART III- Literal Manifesto

Redirecting the Winds of the Threshold | 102-109

BIBLIOGRAPHY

110

LIST OF FIGURES

115

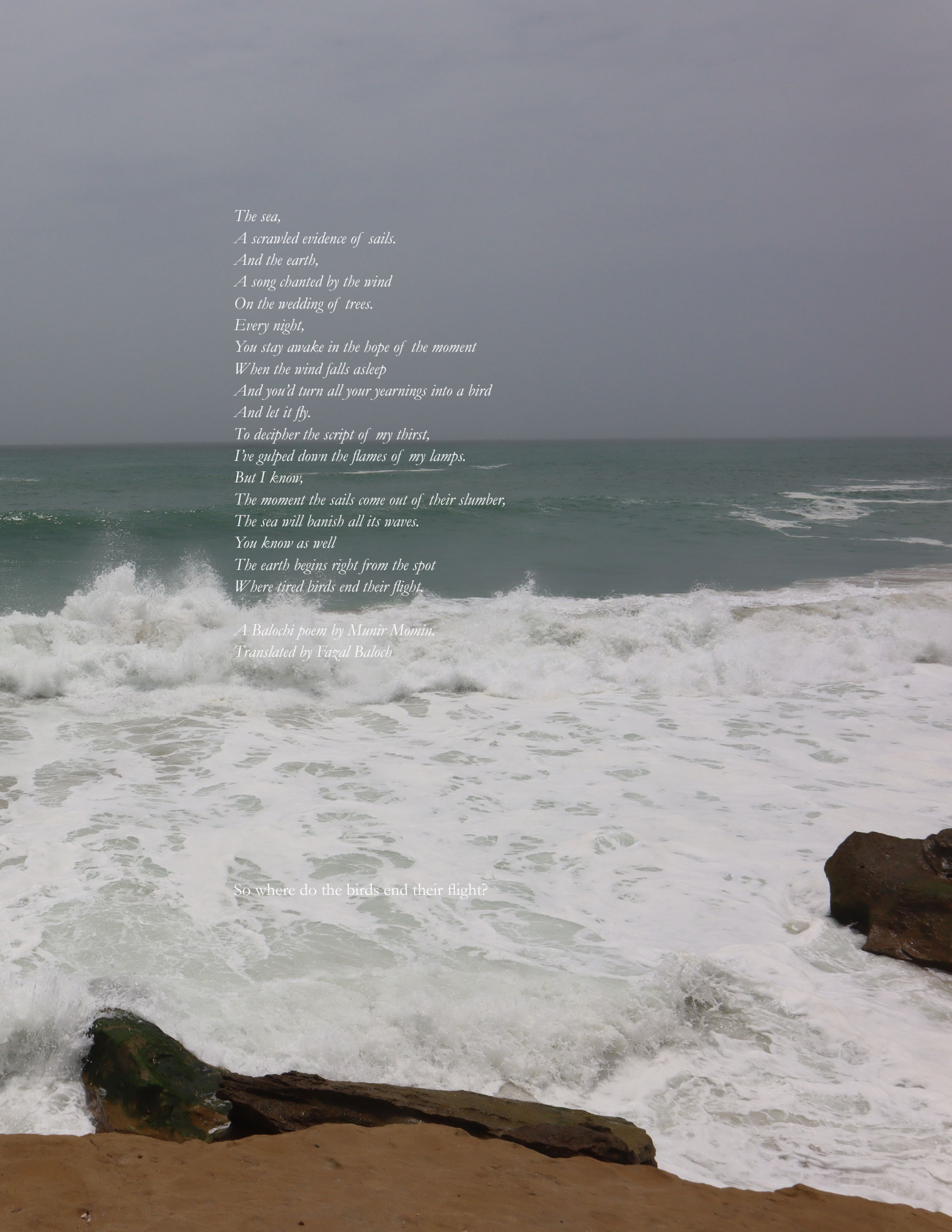
Acknowledgements

I would like to thank my committee; Azra and Mohamad for showing their unwavering support and helping shape this thesis. Moreover, I am grateful to Brent, Gabriella, Huma, Nasser, Arindam, and Marilyn for their input. I am also indebted to Beth from Graduate Education Office for checking up on me during my sickness and being a constant support.

I am grateful to Aga Khan Foundation for the fellowship and travel grant award that allowed me to conduct the fieldwork. Moreover, Harris Chowdary and Shaheera Pesnani for being gracious with their help.

I am also grateful to my friends Olivia, Saad, Selin, Pramada, Demircan, Rohit, Mrinalini, Ashmi, Dhwani, Tamar, and Boshra. I am thankful to Sohel Nana, Shaheen Nani, and Diana for their kindness. Most importantly, my family for being my anchor throughout this journey, Mama, Baba, Nermeen, and Shahzeb.

Still from the Video, Author



The sea,
A scrawled evidence of sails.
And the earth,
A song chanted by the wind
On the wedding of trees.
Every night,
You stay awake in the hope of the moment
When the wind falls asleep
And you'd turn all your yearnings into a bird
And let it fly.
To decipher the script of my thirst,
I've gulped down the flames of my lamps.
But I know,
The moment the sails come out of their slumber,
The sea will banish all its waves.
You know as well
The earth begins right from the spot
Where tired birds end their flight.

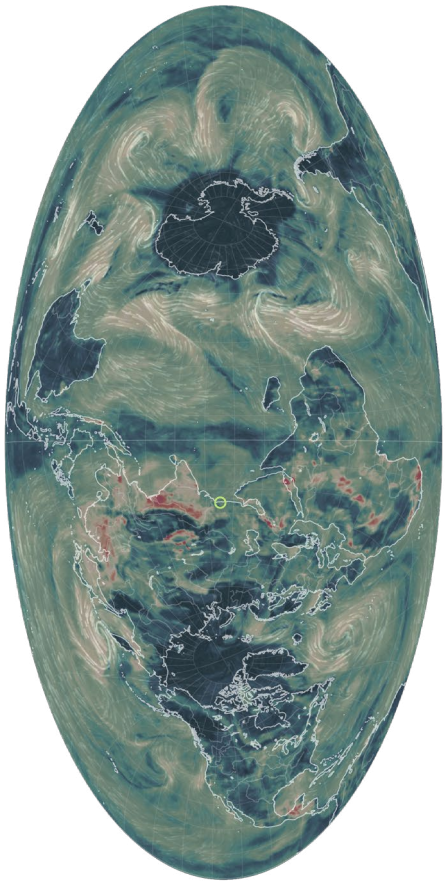
A Balochi poem by Munir Momin.
Translated by Fazal Baloch

So where do the birds end their flight?

Gwadar 2022, Image by Author.

The earth begins right from the spot where the tired birds end their flight, is how the Balochi poet defines the coast to be. This is echoed by the poetic frame painted on the wall captured in the photograph above which depicts two tired birds ending their flight, along the edge of a resting wooden boat. For the birds, and many others the coast is not a line but rather it is a threshold. It is a threshold for the flow and movement.

The poem and photograph, lay the foundations of this thesis inquiry which looks at a coastal threshold in the South of Pakistan, to dislodge the land and sea binary that continues to be preceived within our imaginaries.



World Map cylindirical projection marking Gwadar, Image by Author.

Site-ing the Map

The map above marks Gwadar, through a projection that centers Gwadar, decentering the colonial meridian centered map projections. The territorial coordinates of Gwadar are marked by 25.1313° N, 62.3250° E, facing the Arabian Sea and extending out into the Indian Ocean.

Gua-(Winds) Dar-(Threshold): Gwadar, 2022. *Image by Author*

Sand and Foam
by Kahlil Gibran

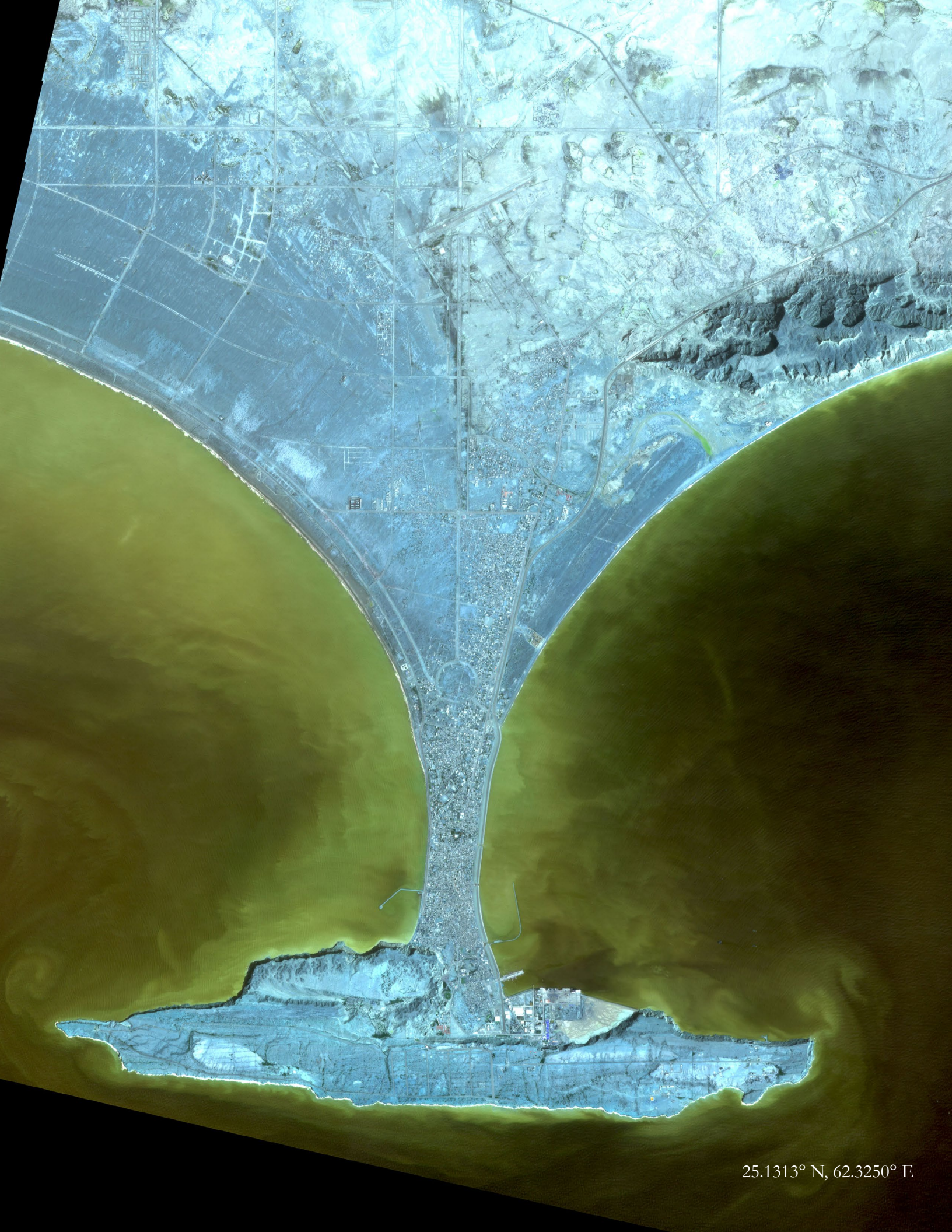
I am forever walking upon these shores,
Between the sand and the foam,
The high tide will erase my foot-prints,
And the wind will blow away the foam.
But the sea and the shore will remain
Forever.

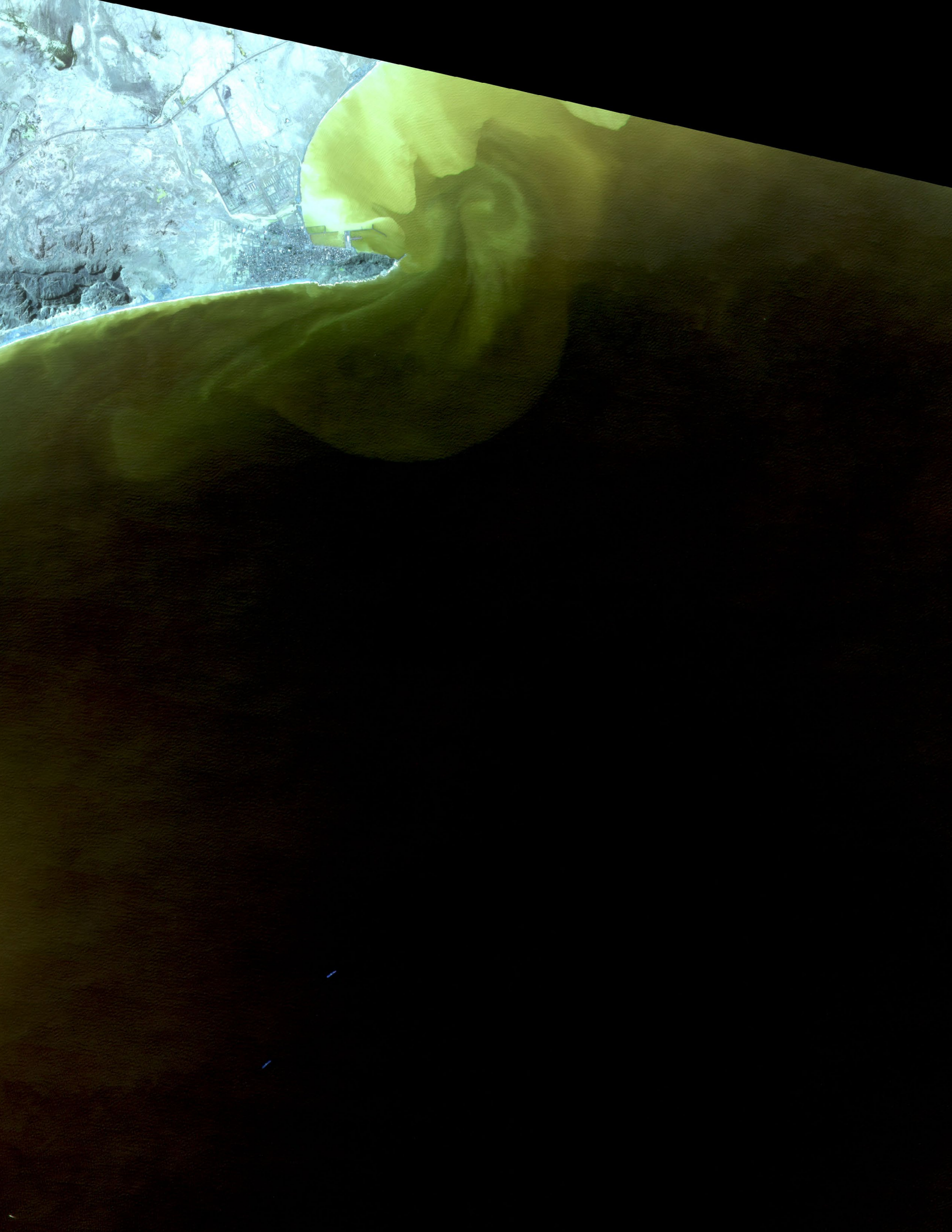
LITTORAL DIALOGUE

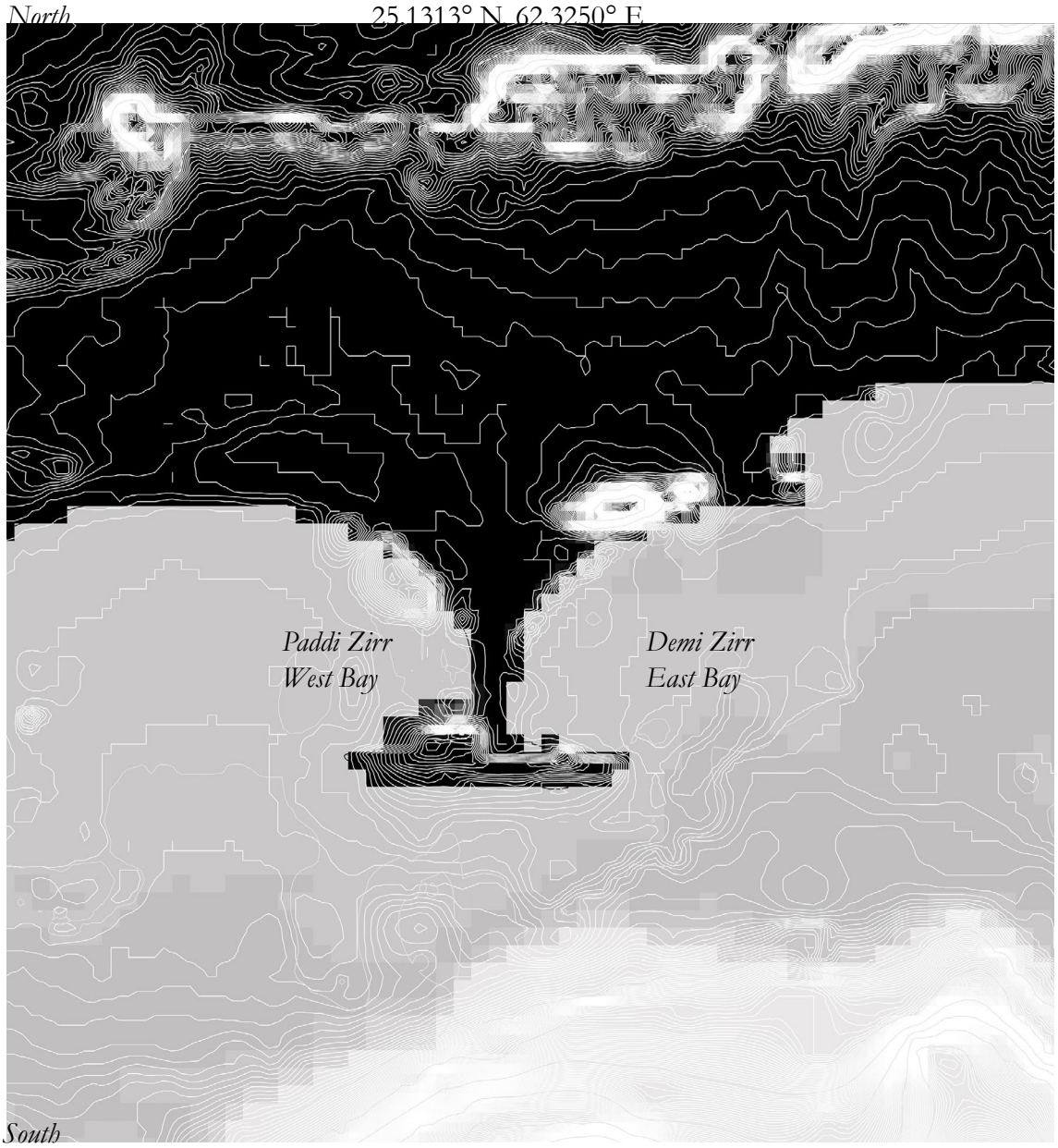
On the wet sand, where the water marks its territority for a breif moment. The waves come and withdraw marking their presence to have a fleeting dialouge.

In the local Balouchi language, the sea is called Zirr. Gwadar's deep connection with Zirr is natural as it is covered by Zirr on three sides, the elongated piece of land, divides the sea between Paddi Zirr and Demi Zirr. Moreover, it the edge of the sea, which is special too, where the water meets the land is a deep crevasse, hence it is called a deep seaport. In today's context where the size of the shipping containers has been exponentially increasing with large Panamax to post-Panamax, the value of a deep seaport exponentially increases to dock large containers. The littoral boundary, although viewed as an edge in the maps, is always changing and shifting with the winds. The cartographic practice continues to view the global spatial order through the binaries of land and sea rather than viewing it as a threshold, hence this manifesto focuses on this paticular issue. To not only dislodge this binary but to also frame it as a threshold, the manifesto is divided into three chapters.

The first chapter unfolds the agencies that are constricting the threshold whereas the second chapter highlights the forces that expand it. The third part is the literal manifesto, that is in the form a zine which aims to legitimize the claims of those which have been impacted by the urbanization in the region and invites reviving commons solidarity.


25.1313° N, 62.3250° E





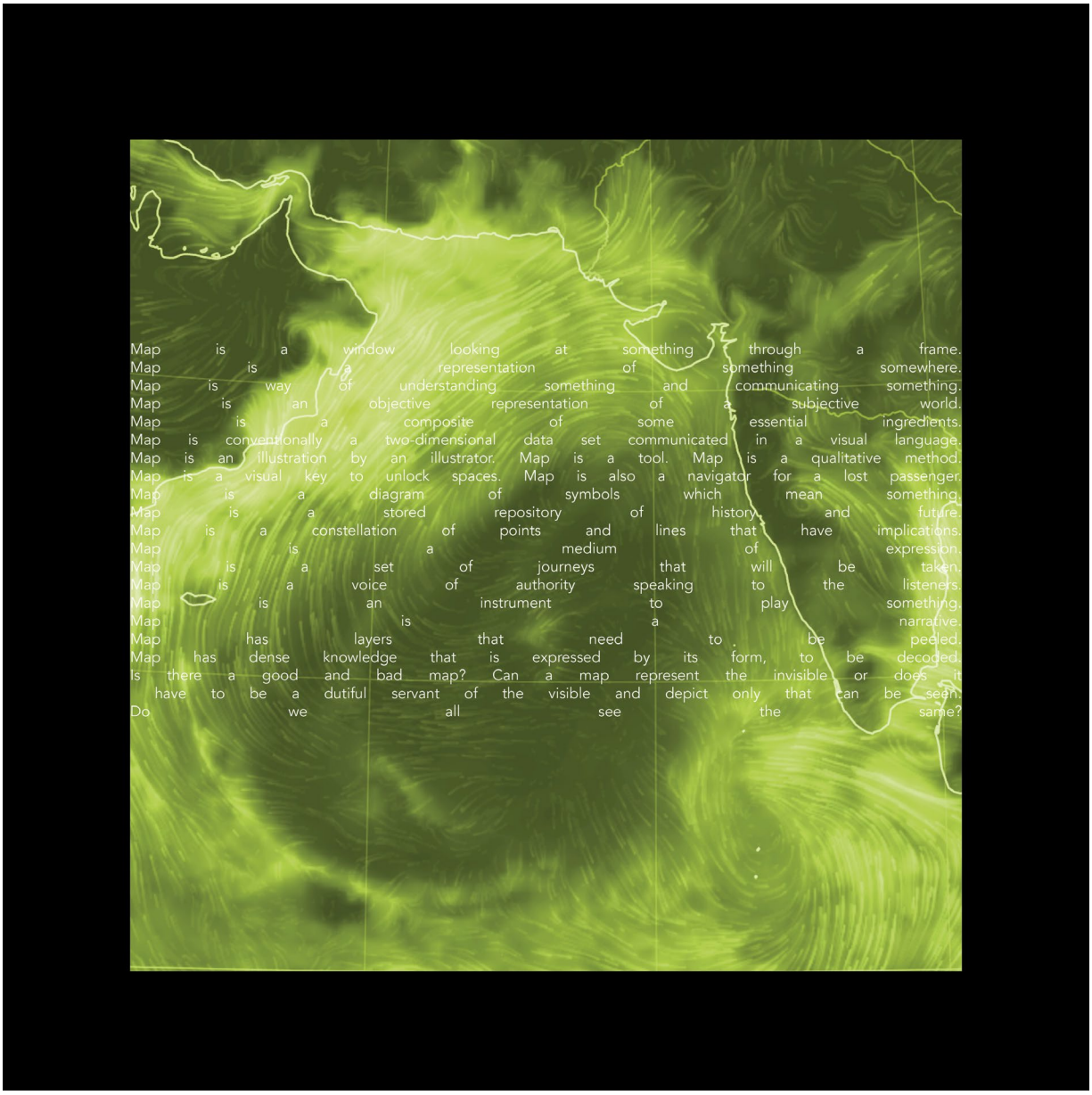
Bathymetry topographic lines: the hammerhead peninsula divides sea between Paddi Zirr and Demi Zirr, Image by Author

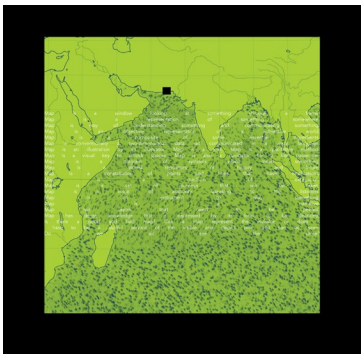
Mouritz, 2016.

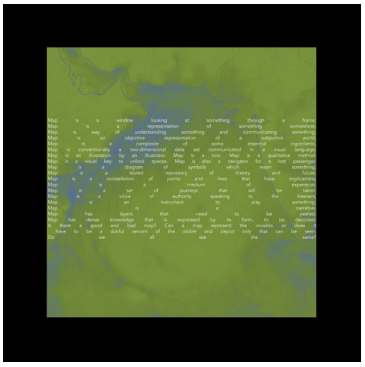
Building on to what Mouritz argues, that the land-sea binary is a social construct that has been reinforced by Western thought and literature, but that it does not accurately reflect the complexity of coastal environments and the relationship between human societies and the marine world.

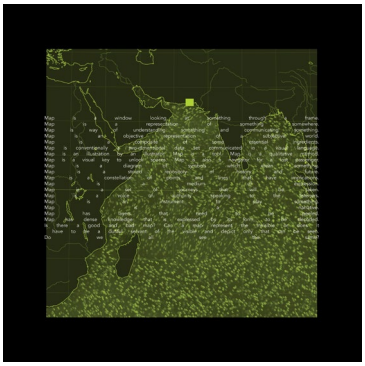
Mouritz notes that the land-sea binary has traditionally been used to reinforce the idea of human exceptionalism, with humans seen as separate from and superior to the natural world. He argues that this view has contributed to the exploitation and degradation of marine ecosystems, and has prevented us from fully appreciating the ecological and cultural richness of coastal environments. Instead, Mouritz suggests that we need to embrace a more fluid and interconnected view of the relationship between land and sea. Moreover arguing that the coastal environments are characterized by a complex web of interactions between terrestrial and marine ecosystems, with the boundaries between them often blurred or indistinct. His analysis emphasizes the importance of recognizing the cultural and spiritual connections that many human societies have to the marine world, and the need to integrate this knowledge into our management and conservation efforts.

Moreover, Anuradha Mathur and Dilip da Cunha, engages with ideas of wetnesss, to question the land and sea binary and consider the ocean waters as insider than outsider. Ocean space and its conception remains, a problem to this age as we build infrastructure on it, around it but not with it.


Map is a window looking at something through a frame.
Map is a representation of something somewhere.
Map is way of understanding something and communicating something.
Map is an objective representation of a subjective world.
Map is a composite of some essential ingredients.
Map is conventionally a two-dimensional data set communicated in a visual language.
Map is an illustration by an illustrator. Map is a tool. Map is a qualitative method.
Map is a visual key to unlock spaces. Map is also a navigator for a lost passenger.
Map is a diagram of symbols which mean something.
Map is a stored repository of history and future.
Map is a constellation of points and lines that have implications.
Map is a medium of expression.
Map is a set of journeys that will be taken.
Map is a voice of authority speaking to the listeners.
Map is an instrument to play something.
Map is a narrative.
Map has layers that need to be peeled.
Map has dense knowledge that is expressed by its form, to be decoded.
Is there a good and bad map? Can a map represent the invisible or does it have to be a dutiful servant of the visible and depict only that can be seen.
Do we all see the same?





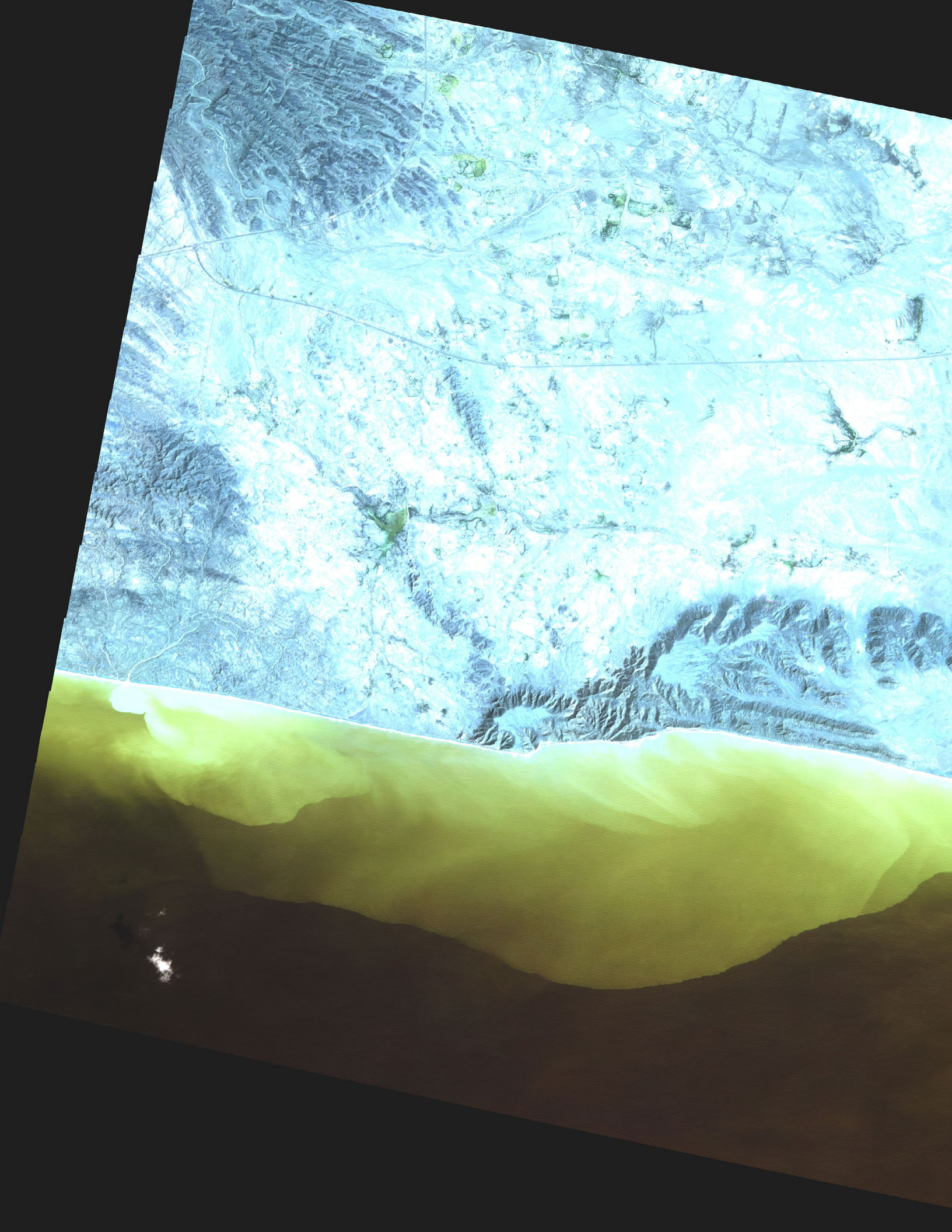


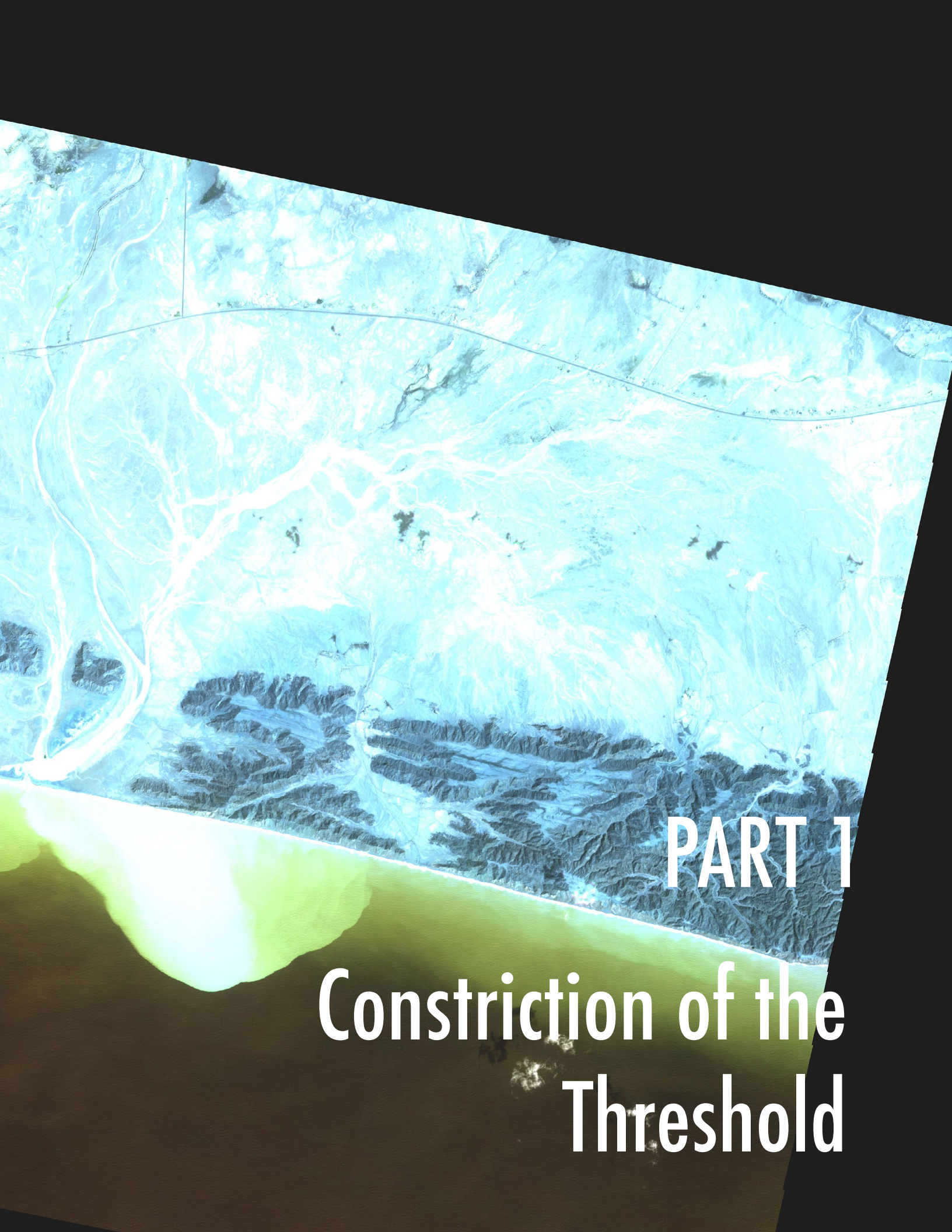
METHODOLOGY

Complex territories require different methodological tools to map and narrate the multi-dimensional network of visible and invisible spatial boundaries that encroach upon the natural flow of water.. These boundaries need to lend a visual language which can communicate more effectively. Within the ocular-centric world photography remains a powerful tool to convey and communicate the phenomenological and affective qualities of places and spaces. Hence, this thesis uses photography along with maps as important tools of not just evidence, but they help situate the reader within the context. The additional text accompanied by the images scaffolds it to provide more detail and address the limitations of the frame of the image.

Design research framework, is adopted as the principle mode of inquiry within this thesis. The contemporary scholarship of using research as an agency for advocacy is foundational in framing this journey. Critical cartography offers a powerful tool for challenging dominant narratives and power structures, and for highlighting the experiences and perspectives of marginalized communities. By using maps as a medium for social and political critique, critical cartography can contribute to the development of more inclusive and equitable spatial representations.

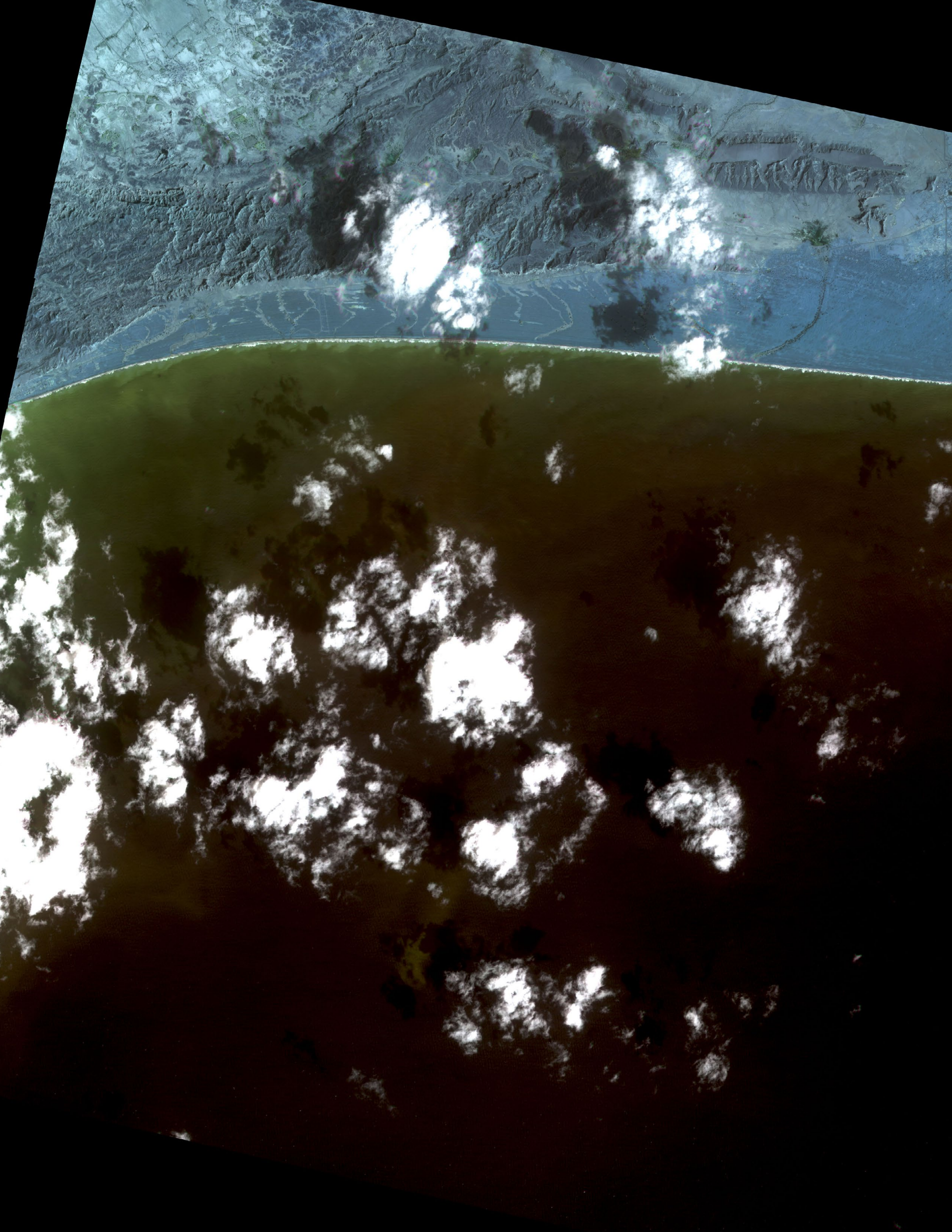
Most of the qualitative data was collected during the one month long fieldwork conducted in Gwadar by the author in the summer of 2022 . Moreover, the archival work was done through the digital archives at various locations and various secondary sources were consulted. It was challenging to work on this region as there is very little scholarship that exists on this area. Most of the research is from political economists and social scientists who are mainly interested in Gwadar's role in geo-politics. Some ethnographic accounts and historical accounts have been helpful in scaffolding this research.

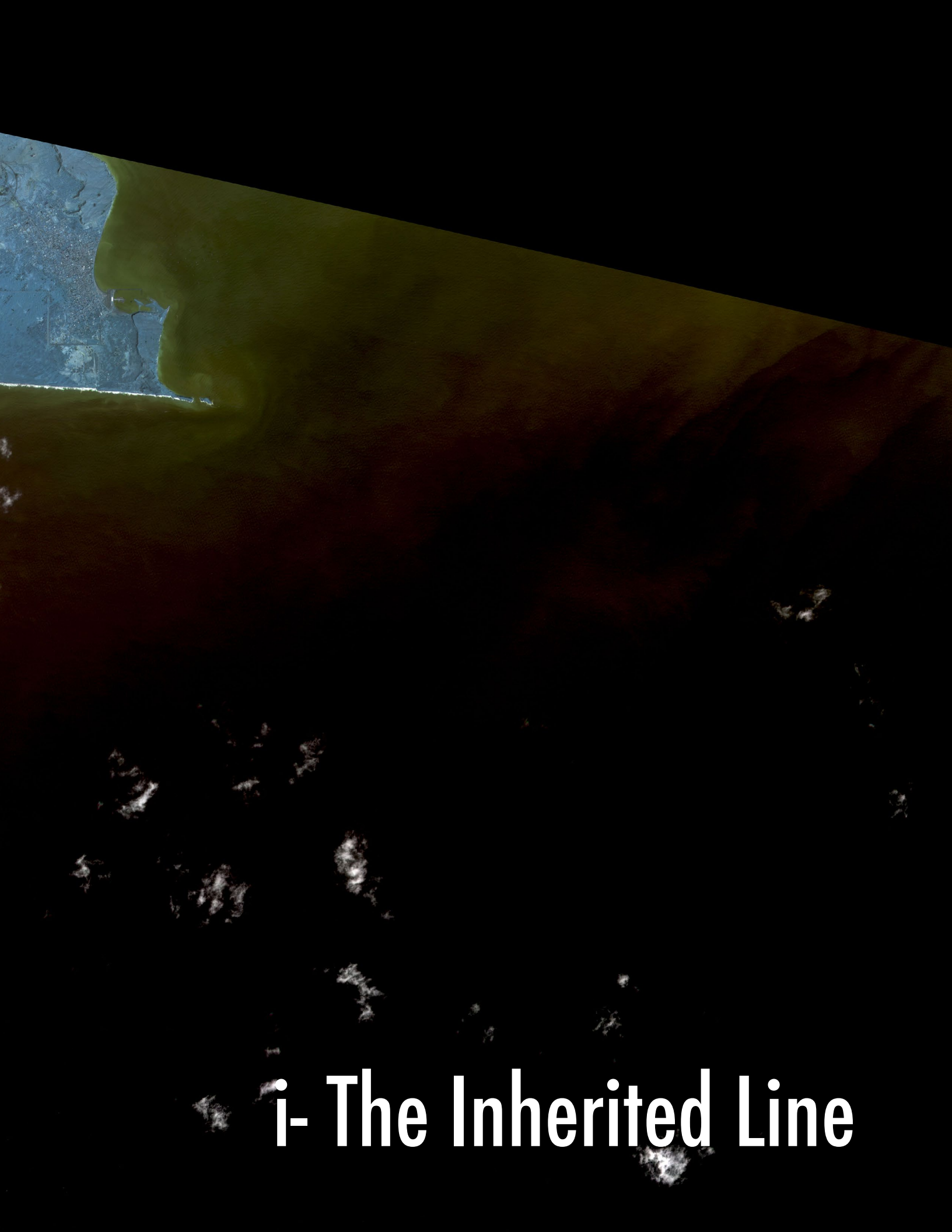




PART 1

Constriction of the Threshold





i- The Inherited Line

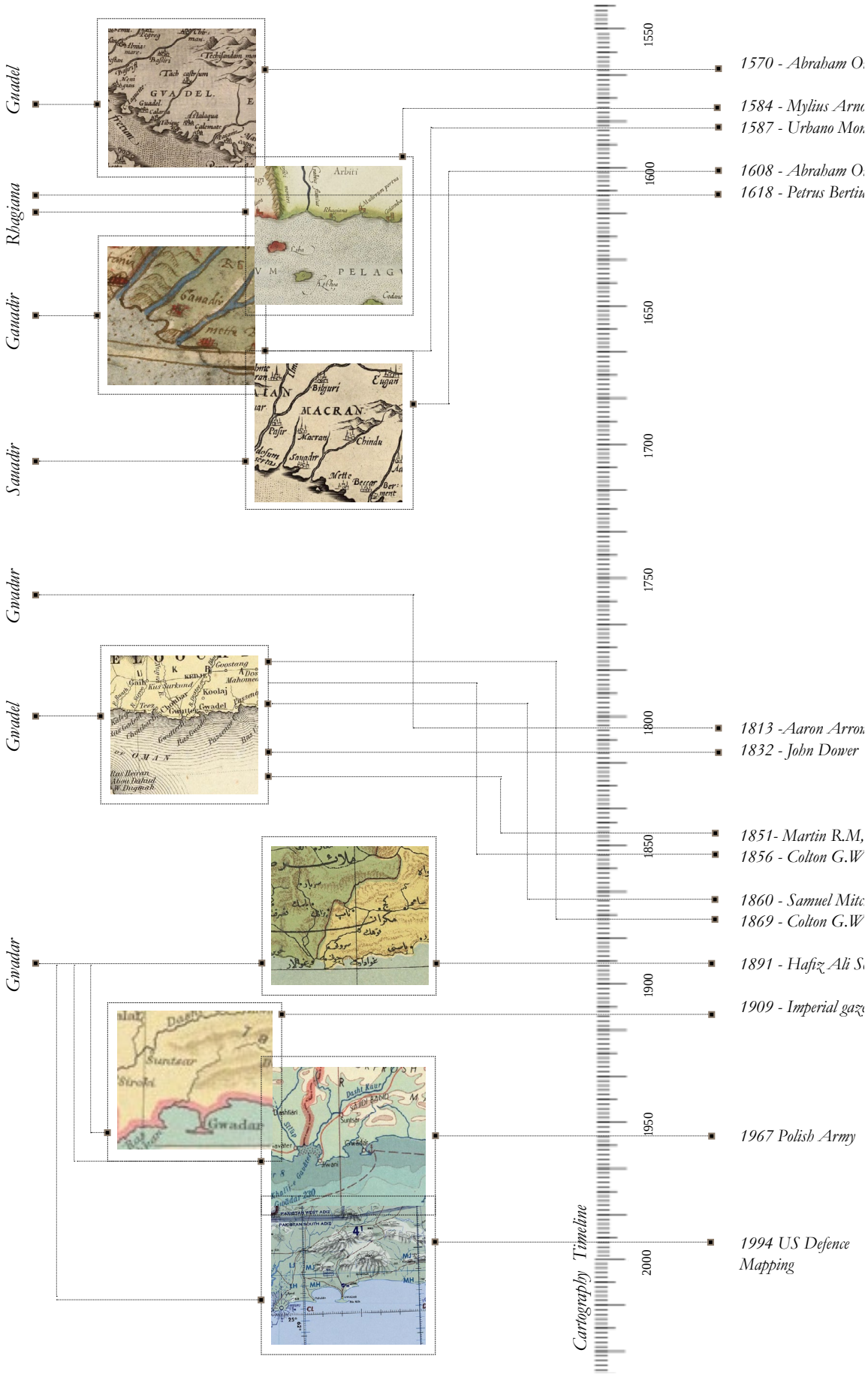
THE INHERITED LINE

The historical cartographic analysis of this region reveals not just the binary understanding of land and sea but also the inaccuracies of the colonial maps and its practices that we have continued to inherit. The case point being Gwadar being listed under different names. Gwadar is listed as Gvadel in a map dated in 1570 made by cartographer Abraham Ortelius. It is one of the earliest maps I could find within the David Ramsey Historical Map Archives. The analysis of the various maps shows multiple names that this geographic location is listed as. The other listed names are Gauadir, Rhagiana, Sauadir, Gwadur and Gwadel. An Arab map made by the cartographer Hafiz Ali Seref in 1891, identifies it as Gwadar, after which, other maps started listing it as Gwadar too

But it's not just the cartographic inaccuracies but the western oriented technological notions that continue to view coastal regions as a boundary condition.The land-sea binary is a social construct that has been reinforced by Western thought and literature, but that it does not accurately reflect the complexity of coastal environments and the relationship between human societies and the marine world.

However, Gwadar has a long historical presence, marked by a few historians. The detailed historical timeline is documented by Azhar Ahmad, "During the British times, Gwadar was considered an important outpost in the overall imperial strategy. In the 18th century, Gwadar changed hands from the Khan of Kalat to the Sultan of Muscat and it remained under the Omani Sultan's rule until 1958 when Pakistan reclaimed the area through an agreement with the British."

Piacentini, 2003.



Cartography Timeline of Maps of Gwadar, Image by Author.
Maps accessed through David Rumsey Historical Map Collection and Qatar Digital Library

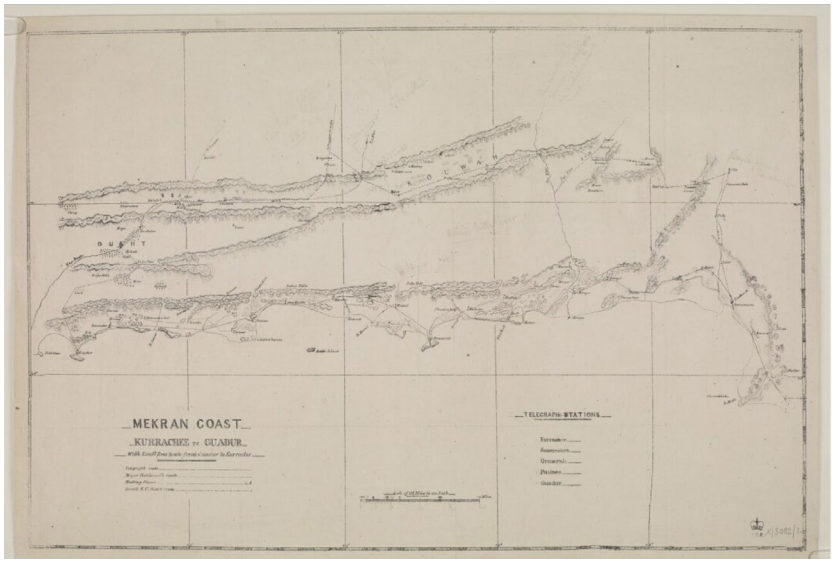
Stuart Elden, 2013

The fluid and transient nature of territoriality remains of interest to spatial thinkers. As the political theorist Stuart Elden, defines the concept of territory, beyond the conventional understanding of physical space to view it as a complex social and political construct, shaped by power relations and processes that are always contested and negotiated. Therefore, what constitutes as territory changes over the course of time. Within the constructs of nation-based statehood, the politics of what is remembered and what is forgotten, remains at the mercy of collective memory which is curated and governed by the State and its power hierarchies.

The territory of Gwadar serves as an apt case to understand the renegotiating territoriality and its amorphousness. It a thick palimpsest worth inquiry, as it has undergone many territorial shifts, which depict the nomadic nature of political boundaries. Gwadar's unique historical palimpsest and shifting confluence of boundaries is what intrigued me to investigate this territory.

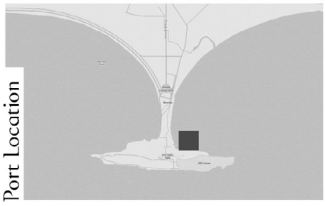
Official maps serve as important tools of evidence that highlight the importance given to a particular region. As the historian Valeria Fiorani, argues that Oxford Atlas for Pakistan used to teach within local schools, listed the vast expanse of Baluchistan region as Terra Incognita. The largest province of the country, although less densely populated than others, certainly legitimized the region to be listed on the maps especially with such historical and geographical significance. This omission serves as a symptom of the collective national amnesia

local schools, listed the vast expanse of Baluchistan region as Terra Incognita. The largest province of the country, although less densely populated than others, certainly legitimized the region to be listed on the maps especially with such historical and geographical significance. This omission serves as a symptom of the collective national amnesia that the State of Pakistan suffered from and considered Baluchistan as a land of wild, ruthless smugglers, traffickers, mercenaries, engulfed in tribalism, banditry, and violence. Gwadar, as part of Baluchistan, remained a victim of being omitted from the collective memory until the recent transnational development started and identified it as a deep port and realized it having a strategic importance within the region. There is scarce historiography of the region, and quite a lot of it lacks analytical rigor. With scarce engagement within this region, I use archival maps collected through my research to retell the story of the nomadic nature of boundaries within the region, which is also reflective of the nature of dwelling and building within the region.



Map Shows telegraph stations in Kurarachee (Karachi), Sonmeauce (Sonmani), Ormarali (Ormara), Pusinee (Pasni) and Guadur (Gwadar) , 1864, 'Mekran coast - Kurrachee to Guadur with Lieut. Ross route from Guadur to Kurrachee' (1/2), British Library: Map Collections, IOR/X/3082/1, Accessed through Qatar Digital Library

The Gwadar port has been in operation since 2008, which is situated in the east bay of the hammerhead- shaped peninsula , which was originally a fishing village. This development of a deep-water port has a long history which dates to the 1950's. A United States Geological Service survey in 1954 highlighted the suitability of the site's natural coast for the development of a port, due to which the Pakistani government negotiated the purchase of the site from the Sultanate of Oman for $3million in 1958. (It had been under the rule of Oman for 200 years.) Pakistani authorities pitched Gwadar's future port to foreign companies over the past few decades, and in the late 1990s, almost signed a contract with U.S. oil and gas company Unocal, which allegedly targeted Gwadar as a hub for the natural gas pipeline, but the idea was shelved. In 1992, Pakistan's ministry of communications advertised in newspapers an 'expression of interest', to which around 30 companies responded but were not asked to move forward. Pakistani leaders were unable to raise capital and technical expertise to develop the port until China's Prime Minister Zhu Longi promised China's support for the project in August 2001. China Harbor Engineering Company (CHEC) was the first development general contractor for the site, which began construction in March 2002. CHEC inherited the design from companies in the United Kingdom but decided to redesign it according to China's port construction standards.



1958 Gwadar transfered to Pakistan Control

The Sultanate of Muscat and Oman transfers control of Gwadar to the Islamic Republic of Pakistan, which purchased the territory for a sum of $8.4 million

1982 Khunjerab Pass Opens for China-Pakistan Traffic

The Karakoram Highway — completed in 1979, after two decades of construction and the loss of hundreds of lives — opens for two-way traffic at the Khunjerab Pass border crossing. Four years later, the Khunerjab Pass would be open to foreign tourists.

2001 China agrees to Finance Gwadar Port and Makran Coastal Highway

During a state visit to Pakistan, Chinese Premier Zhu Rongji agrees to finance the first phase of the construction of the Gwadar port and the Makran Coastal Highway that connects Gwadar to Karachi, Pakistan's largest city

2002 Groundbreaking for Gwadar Port Construction takes place

Pakistani military ruler Gen. Pervez Musharraf and Chinese Vice Premier Wu Bangguo attend groundbreaking ceremony for the Gwadar Port. Musharraf describes the port as a gateway for "Central Asia and also China's western region."

2007 PSA operation at Gwadar Port begin

The inauguration of PSA International's operation of the Gwadar port takes place. The Singapore-based company was awarded the port concession in December 2006, though Dubai's DP World was seen as the favorite.

2008 Gwadar handles first bulk shipment

The Gwadar port receives its first shipment: 72,700 metric tons of wheat — well above its capacity of 50,000 DWT. As a result, a portion of the shipment had to be offloaded onto another vessel before the ship was able to dock.

2013 Gwadar leasing rights transferred to Chinese Company

Leasing rights for the Gwadar port are transferred from PSA International to China Overseas Ports Holding Company, registered in Hong Kong. Direct talks between PSA and China Harbor Engineering Company, another Chinese state-owned enterprise, began in 2012.

2013 China and Pakistan to develop Economic Corridor

During the visit of Chinese Premier Li Keqiang to Islamabad, China and Pakistan agree to develop an "economic corridor." Li arrived in Islamabad after a trip to New Delhi, where he had discussed the Bangladesh-China-India-Myanmar economic corridor.

2013 China and Pakistan Agree to develop CPEC Long Term Plan

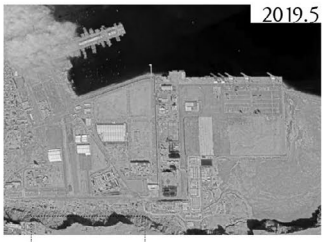
Newly-elected Prime Minister Nawaz Sharif makes a multi-day state visit to China. Beijing and Islamabad agree to "develop the long-term plan for [the] China-Pakistan Economic Corridor."

2015 XiJinping visits Pakistan formally inagurating CPEC

Chinese President Xi Jinping begins a two-day visit to Pakistan, where he formally inaugurated the China-Pakistan Economic Corridor project

2018

2019


2019.5

2020

2021

2022

The development of the Gwadar port has been a precursor to the adjacent free trade and export processing zone, 'Gwadar Free Zone' which is modeled on Shekou, the port complex at the heart of the PRC's Shenzhen Special Economic Zone. Surrounded by logistics and free trade areas, the 'Shekou Model' is a port that is reinforced by the dedicated commercial and residential town to support the workforce of the entire complex. This 'Port Park city' is designed to recreate the thriving Chinese business ecosystem that can generate and process the trade needed for the port and its hinterland to thrive. Chinese companies are advocating a similar approach in Gwadar. The free zone is an essential part of the overall port project and is meant to attract Pakistan and Chinese firms. 'Incentives include the possibility of 100 percent ownership for foreign investors, a 23-year tax holiday on any revenues from operations in the zone, 99-year land leases, duty-free imports and exports, a world-class infrastructure and security arrangement and other promised business perks like flexible visas and ready-to-use office, industrial, and warehousing space.'

Throughout the contemporary world this obsessive recipe of coupling the port and free zones in developing regions to create more 'Dubai's and Shenzhen's' is being pursued especially in the developing world. There is a substantial critique available on the zones as hubs for exploitative economic models which serve to create this enclave as a 'one stop' or 'clean slate' for entering foreign economies and lands.

However, the development of the port and the free zone in Gwadar raises questions over the influence of the Chinese in the development of Pakistan's deep-sea port. The economic cost of this development is on the shoulders of Pakistan but during the development of the project, 'most of the Chinese funds went from Chinese financial institutions to Chinese companies that built the infrastructure. Although Pakistani companies only marginally benefitted from these sums, it is the Pakistani state's responsibility to pay back the loans.' These facts highlight the importance of looking at these developments critically, Easterling defines such acts as 'pandas' within her book as these so called 'gifts' by the developed nations to the developing countries are heavy handed and tainted with exploitation. Chinese investment has an extractive nature which is evident in its development in African countries. There is significant anxiety among many towards the neocolonial ambitions of China and many ask, "Is CPEC becoming another East India Company?"

On the other hand, some are of the opinion that it is rather a strategic alliance between China and Pakistan. The Pakistani diplomats reaffirm by poetic declarations such as, "Pakistan China friendship is higher than mountains, deeper than the ocean, stronger than steel and sweeter than honey." On the other hand, the Chinese administration claims it "has pledged for a 'blood transfusion' to shore up Pakistani instability… Chinese analysts describe the connection of the port to China as "a large artery" supporting Pakistan's health – and China's too." This strategic partnership in the development of this port is fundamental to understand in the larger geopolitical domination of the region and influence. As many articles and papers highlight, this port has enormous economic potentials for China as it can provide a direct route to China through the port into the Arabian sea from its landlocked western end.

Shanghai's port is around 100000km away from the Strait of Hormuz, while through Gwadar - Kashgar route the distance is only 2800km. This port not only has economic but potential military utility for China as well. The neighboring countries like India realize the importance of this port and hence are building another port close to Gwadar which is the Chahbahar port and funding it. It is in interesting to analyze the position of Gwadar on the 'global chessboard'.

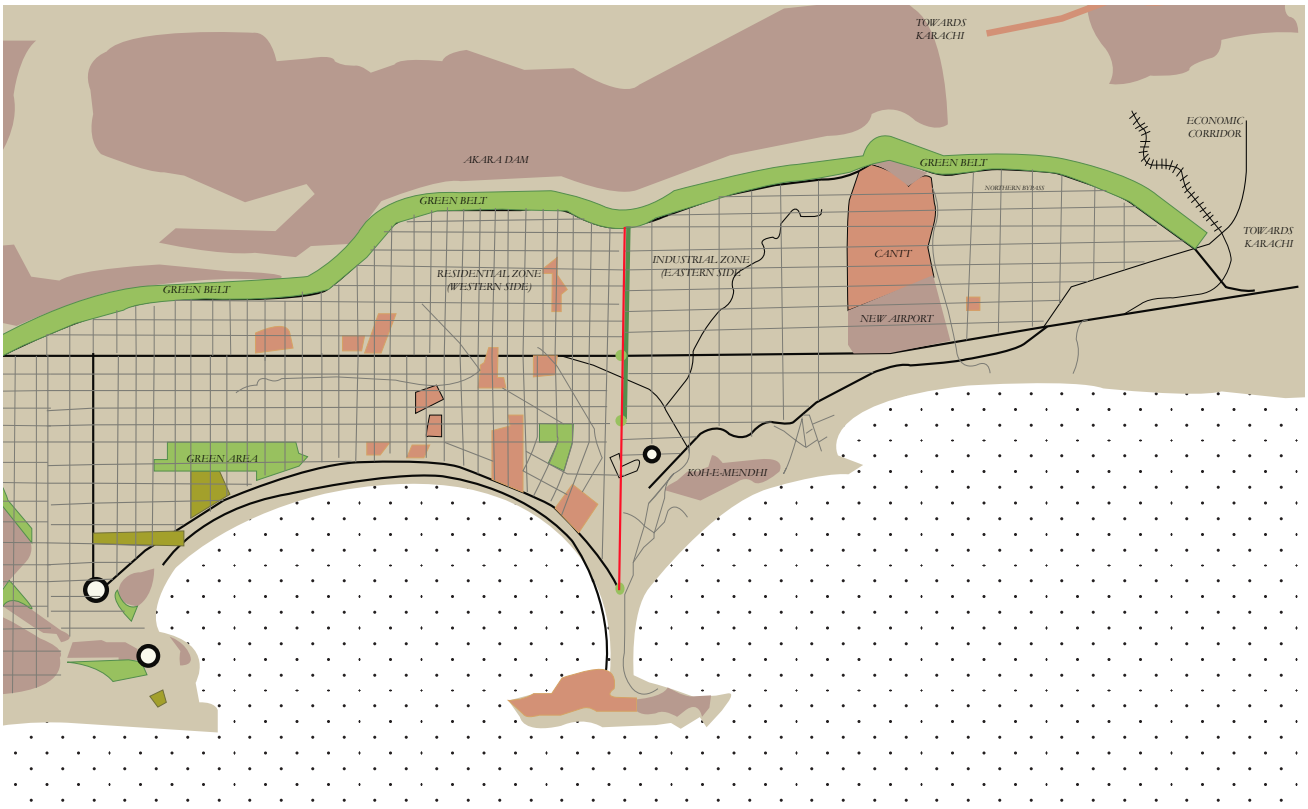
The port is being connected to the larger transport infrastructural grid that is laid out to connect it in the grand network of roads. The road network along with the Gwadar port has been strategically laid out across Pakistan under the name of 'China Pakistan Economic Corridor' (CPEC) project. It has three corridors which run through Pakistan, the eastern ones run through Punjab and Sindh province and the western ones run through the Khyber Pakhtunkhwa and Baluchistan province. There are only two roads connecting Gwadar to Pakistan's road network: the Makran Coastal Highway (N-10) that runs east towards Karachi and west to the Iranian border, and the incomplete M-8 highway, which runs north-east towards Sindh and Punjab. At present, the only thoroughfare connecting the port to the other roads is a 16-foot-wide local road lined by restaurants, mosques, and food stalls. This route is being widened for trucks by land reclamation and construction along Gwadar's east bay which will be 6-lane expressway. The planned 'East-Bay Expressway' which is under construction is a point of contention by the locals. As far as the development of rail network is concerned it is very limited in the province of Baluchistan but in the large scheme plans of CPEC there are two routes planned along the road network. The air transport linkage is being strengthened by the construction of the 'New Gwadar International Airport' by the Chinese firms since 2019 to replace the old airport.

It is vital to track the urban development within the city of Gwadar along with the port and the road networks. The Gwadar old city settlement has been a conglomeration of fishing villages that were set up along the Makran coast. The dwellings were built of mud and reed. The old city has developed into large settlements made of brick-and-mortar houses that are developed along the hammerhead peninsula. The formal planning started with the talks about the development of the port. Gwadar's first master plan was created by the state-owned NESPAK (Pakistan National Engineering Service) in 2002 and has been changed several times since then. The latest official title, "Gwadar Smart Port City Masterplan," (Figure.x) is the most comprehensive and approved by the federal and state governments at the end of 2019. It is divided into several zones such as industrial, residential, and commercial areas, including free trade zones and land reserved for military purposes. The proposed city is about 15 times larger than the existing city and extends far beyond the narrow land leading to the hammerhead that forms the Gwadar Peninsula. The hammer head consists of shelves that act as natural windbreak walls. Although uninhabited, it is an important recreation area used by the local community for gatherings. These plots were acquired by private developers after the port was built before CPEC was officially launched. They planned hotels and housing estates, and a naval base was built in the southeast of hammerhead; it was declared a strategic location for surveillance. On the inhabited strip leading to the hammerhead are the old town and existing new town of Gwadar, where fishing communities displaced by the construction of the port were relocated.

Most of the Gwadar master plan images distributed by the state and realtors focus on spectacular views from above that open towards the dramatic Hammerhead Peninsula and the Arabian Sea in the north-south direction. But the world of the local fishing community is completely neglected. What is now called East Bay and West Bay in the Master Plan is locally known as Demi Zir and Padi Zir: the front and back seas, or more precisely behind the sea. The name illustrates the importance of the so-called Front Sea or East Bay, where the richest fishing grounds are located and where the life of a mahiger (fisherman) takes place. In West Bay, behind sea level, fishermen repair boats and protect them from winter storms. As journalists and scholars have commented as well, the coveted geopolitical location of the port of Gwadar in East Bay is also a naturally deep port that can accommodate the largest ships. However, what is not much discussed outside of Gwadar is that this area is the most fertile and valuable breeding area for tiger shrimp. Once the area was rich in precious shrimp and the fishermen were able to catch hundreds, but the construction of a harbor at the main hatchery has drastically reduced catches.

Pakistan's neoliberal housing market exists in Gwadar, which makes money by acquiring land, taking advantage of volatile land ownership, and buys land as cheaply as possible. However, this model was developed by others long before the private sector started this here. The Pakistani army was free to acquire land under regulation and used lucrative developments such as the Defense Housing Authority (DHA) to make huge sums of money. Some locals made money by selling ancestral lands, while others felt they lost huge amounts of money because they couldn't prove ownership of the land, and their "own" land was sold to the people of Karachi. While some locals have refused to sell, on the other hand many non-existent plots have changed hands for a huge amount of money. The process of owning land in Pakistan is by no means a simple business, involving multiple brokers and stakeholder groups, all seeking profit. Land enclosures have changed the atmosphere of the place, whether under military or private control. The site that was once open and used for grazing is now blocked and shared access removed. Many lands have been cordoned off and turned into heavily guarded posts for Chinese delegations and dignitaries exclusively.

This sense of restriction and consequential deprivation is central to the argument here, the sealing off indigenous lands to its own people and controlling their accesses to the seas, which are substantial to their livelihood is not only unjust but violent. This adds to their already bereaved emotions of Balochi seclusion. Their planned exclusion from the developments in the region at the urban level is worthy of protest.



Map of Gwadar Smart Plan 2050. Retraced by *Author from official Documents*

The politics of infrastructure are unfolding within the boundaries of Gwadar region in various modes. The forms and scales of infrastructure vary from the port to hotels and zones to the underpasses, but they are all part of the complex hierarchies of control and influence which have ramifications on the international, national, and local level. Although these infrastructures are still in the process of development, but it is extremely important to analyze them through a critical lens as they head towards the trajectories of other similar cases where the polity of 'extra statecraft' has deeply manifested itself- the Dubai's and Schenzen's of the world.

Moreover, the city of Gwadar needs to be understood as embroiled in a network of actors- foreign powers, state administrators, planners, developers, unions, citizens and locals who all are imagining a certain image of Gwadar which is often in contradiction with one another. I believe the contesting images of a single reality is the main bone of contention which needs to be addressed to reach an equitable and just reality for all the stakeholders. No doubt, the development of any region is necessary for it to cope up with ever evolving needs of the time but one needs to question the pursuit of this haste development at the expense of others, especially the natives, who rightfully claim as their right over these lands. Their exclusion from the development is bound to cause more instabilities that the region has already faced for decades. The questions of soverenity are extremely important to ponder over and analyze who controls these politics of infrastructure as the development continues.

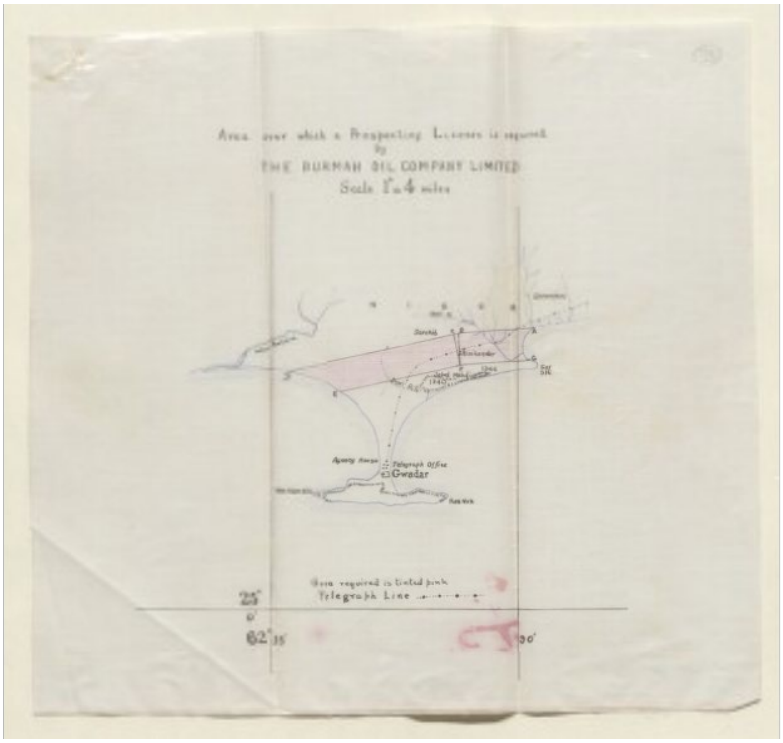
Description below- Image by Author

The white flex canvas stretched across the width of the old rickety shop with a semi closed shutter, which advertises a fake imported bottled drinking water company titled as Dubai. The pixelated black and white visualization boasts the famous Burj Khalifa and the dense composition of skyscrapers accompanying it. The intentional seducing imagery as a marketing strategy placed in this context builds the developmental imaginaries. When I googled the company, with url mentioned- it doesn't exist and the only evidence of Alpina drinking water is a Facebook page with eight followers and an unnamed location tag.

ii- Imposition of the Line

Description below- Image by Author

A sepia tinted frame caught my attention as I was conversing with the Mufti, the Jamat head (local Ismaili community leader). The tilted frame was sandwiched between the switch board and the framed picture of the owner of the shop (a younger version of him, probably taken in his prime youth). The visualization on the frame was a computer-generated rendering by the local artist of how he imagined the future of Gwadar to be. The tones of colored picture suggested that it was an old rendition, and the thick layer of accumulated dust and semi peeled trims confirmed that fact. The perspectival aerial view of the city faced away from the sea and towards the peninsula. The background, semi blurred, managed to capture the sculpting heights of Koh-e-Batil, the rocky plateau that stood firm on the right edge. Whereas the foreground was populated by mid-rise modern buildings separated by the wide asphalt paved road that curved along the edge on the east side and another which ran through the center. However, the most interesting part about the visualization was the overhead bridge that stretched across the breath of the peninsula connecting both sides of the waters, built for the boats and the fisherman to access both the fishing grounds, depending on the season and winds.

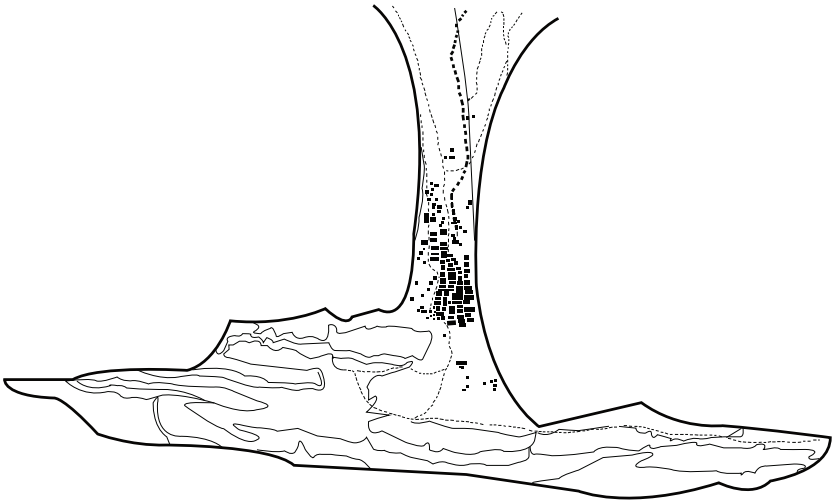


Archival Map showing Telegraph Line, Source: Qatar Archives

In 1862 the Indo-European Telegraph Line, like many other colonial projects, was laid across the Makran belt by the British to 'tame the wild and lawless region' and to keep it under surveillance. Although the region was under Omani Rule at that time it had a treaty with the British. The archival map above shows the European line that was laid across the region. Infrastructure as an imposed boundary project in Gwadar has roots embedded in its history.

In a similar vein, roughly along the same route a new infrastructural boundary has been drawn within the contemporary period is the Gwadar East Bay Highway, built for fast speed traffic to transport the goods to the port. This project has been greatly opposed by the fishermen community within the region. This six-lane highway being built, is almost completed along the bay. This project had to be built by displacing many

many locals, many houses of the old fishing village had to be razed to the ground. The Highway connects to the coastal road leading to Karachi, aiming to provide a speed corridor for the flow of the logistics to the port. It was built by China Communication Construction Company, a major stakeholder in all the Chinese State led Projects.



Old settelment in Gwadar - Image by Author

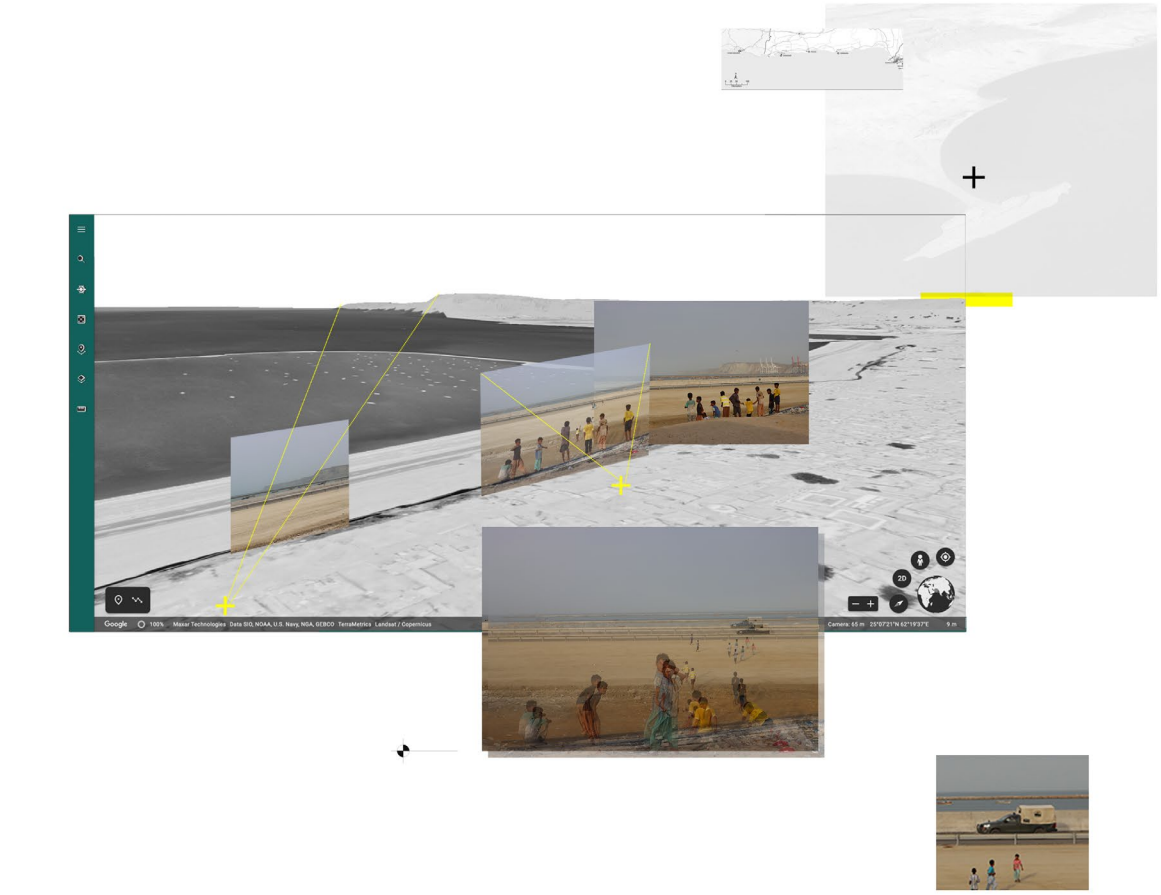
The main concern of the project is how the road effectively blocks fishermen's access to the sea, truncating the natural harbor and dividing the old city and economic zone is essential for the livelihood of the local population depends on this important link and imposition of severe restrictions on the use of the East Bay by the local fishing community has created a sense of marginalization within the region. This limitation is a direct result of the master plan's spatial planning and highlights how it fails to take the local context of the fisherman into any consideration. There have been several protests by the locals but to no avail. The local government in response to these claims said that it provided many local jobs within the region and pointed to the two small inlets given to access

Hussain, Awan 2019

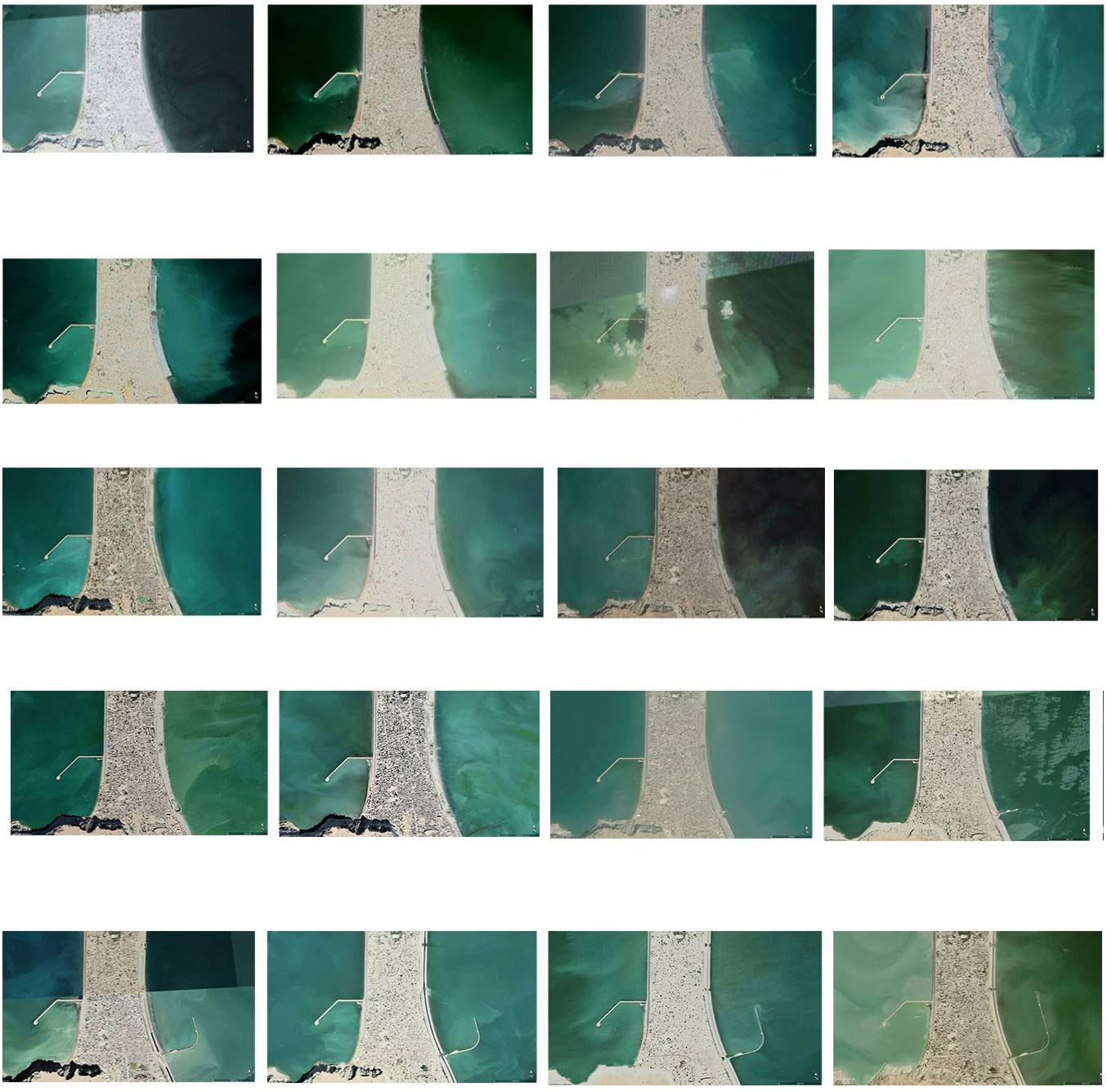
the small boats. The fishing activity thus has been shifted from the west side where the fishing harbor was to the east side along the Marine Driveway. The local fisherman within the region carries their boats each day from the bank to their houses as the old city as no infrastructure to store the boats within the harbor.

Map showing new road network - Image by Author

The East-Bay Expressway case is a symptom of a larger problem that the State fails to acknowledge the legitimacy of the imaginaries of development that the local indigenous community hold. The infrastructure led development sympathizers feel that these people are a hinderance to the future development of the region, hence, their voice is censored. There have been a great number of protests by the fisherman within the region and many have been silenced. The leader and activist of the fisherman coalition, Maulana Hidayat Ullah has been held in custody by the state for protesting.



Images by Author



Maps Data: Google, Image Copy right 2022, Maxar Technologies
Accessed 2022.

A local resident said that the old Gwadar city lacks necessities like gas pipeline, proper sewage lines and electrification of the region is not stable. Most importantly, the people don't have water to drink in the arid region. On the other end, large road networks are being laid across the larger extent of the city, much of it awaiting the promised development. The existing limited infrastructural capacities of the region by the local governments are insufficient that allow transnational organizations to lure the governments for leverage. The Chinese state has built a hospital and vocational training center for the locals. However, Keller Easterling calls these projects as 'pandas' given by the Chinese government to the be built for the locals to posture commitment to the development of the region. There is a vast amount of literature that discusses the economic zone as an enclaved boundary, however what makes Gwadar economic zone unique is the involvement of the state, which creates more boundaries for the locals in the name of security of the region. It's an enclave within an enclave as it is heavily guarded along the region and its adjacent areas are occupied by military bases. During the fieldwork, visiting the enclave was a unique experience it felt as if visiting a military prison facility which had several check posts and huge walls bordering the edges. The zone from the inside was very different as opposed to the outside environment and was lined with paved roads and trees along. The street names were all listed in Chinese language, which signaled that the free trade economic zone was geared to cater to a very specific audience; mainly Chinese. Moreover, within the free trade zone I was not allowed to take any photographs of the port and the zone. The only place I was allowed to photograph was the Chinese Business Hotel, a large oriental structure erected within six months by the Chinese prison labor that was used to build it. This fact was confirmed by a senior military official accompanying me as he gave me a tour of an empty hotel.

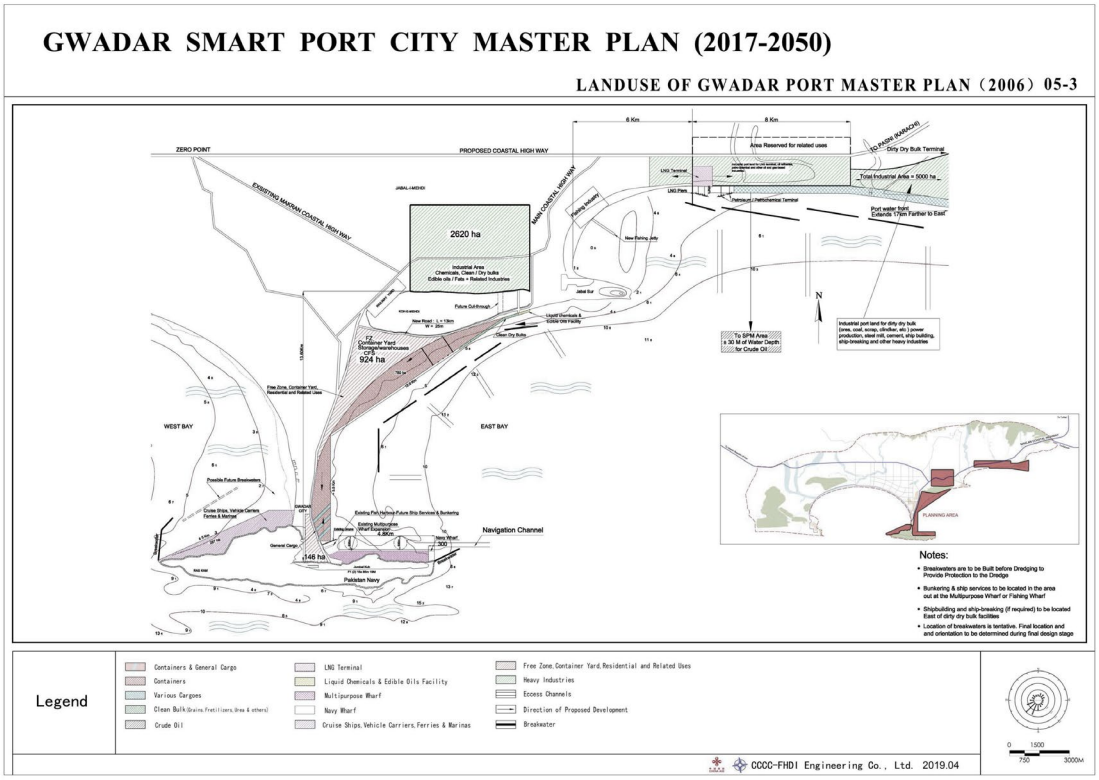
Moreover, within the free trade zone I was not allowed to take any photographs of the port and the zone. The only place I was allowed to photograph was the Chinese Business Hotel, a large oriental structure erected within six months by the Chinese prison labor that was used to build it. This fact was confirmed by a senior military official accompanying me as he gave me a tour of an empty hotel. Within the conversation he shared that he was greatly impressed by the work ethic of the Chinese labor as they 'worked like robots'.

Economic zone architecture is a new form of urbanism that is quite homogenous in nature and dispersed across the globe as the 'zone fever'. The proliferation of this similar kind of temporary industrial architecture as a typological feature gives rise to the multiple questions about the aesthetics of globalization. Bland corrugated steel sheds line up making temporary factory spaces and warehouses that populate the zone environment. This logistical infrastructure catering to the speed-based supply chain is designed to cater to the ideas of speed and efficiency which translate into modular architecture. These spaces are not just designed for machines but also for human activity, the poorly lit and ventilated spaces don't reflect that. The poor labor workers who spend an extensive time doing labor intensive tasks bear the physical brunt of these spaces. Deborah Cowen, in her book, Learning from Logistics analyzes the infrastructural elements within the network of logistics.

The designs of the built environment of zone have categorically similar characteristics, yet they have certain oriental design motifs which try to emulate the localization within the region. The Islamic arches and geometric patterns are pasted on the facades of these buildings to show sensitivity to the region. The Chinese built hotel building reflects, an image of an eclectic mix of oriental symbols with a hybridized kitsch

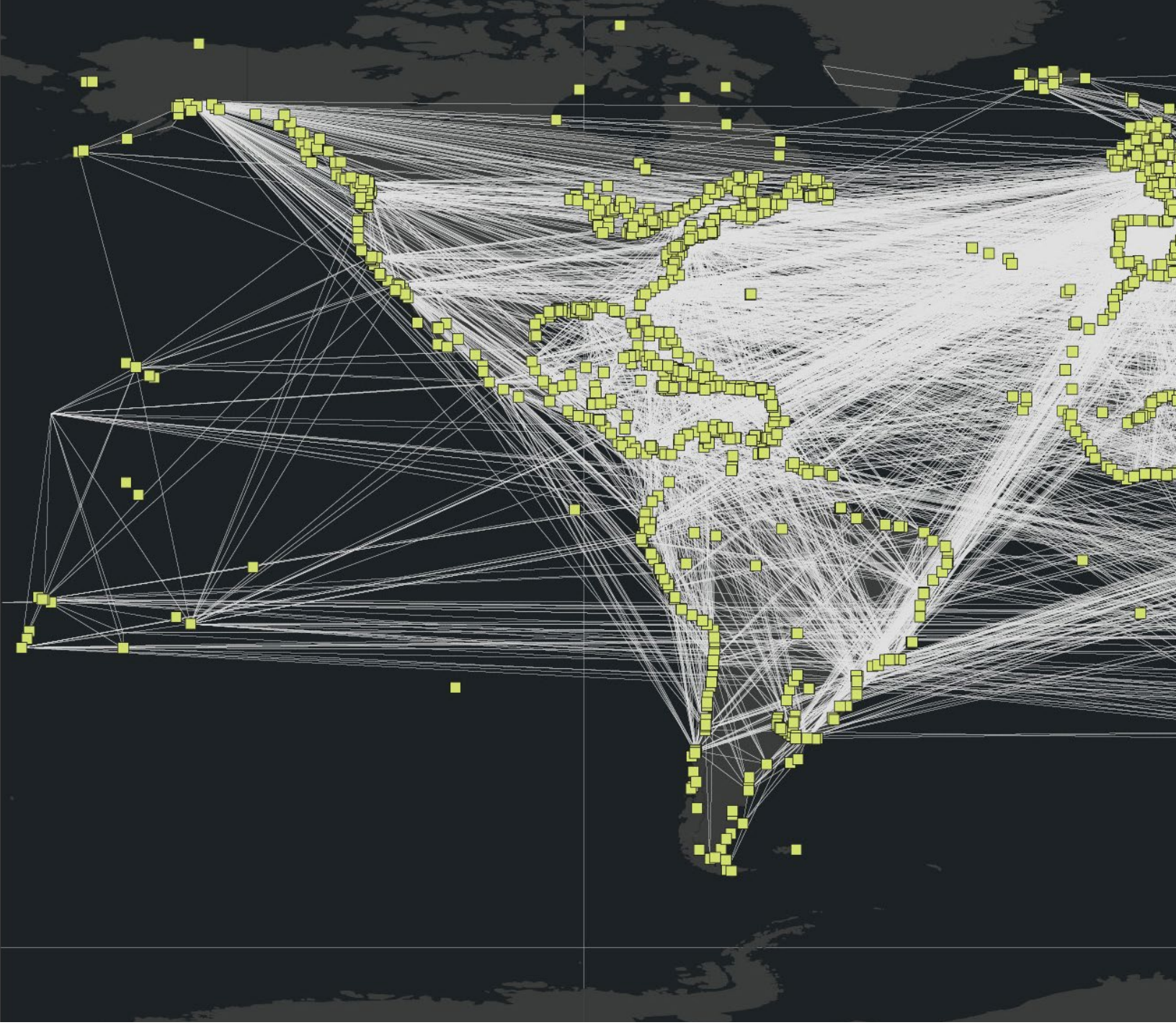
aesthetic of postmodernism. Most of the construction projects reflect cheap materials, yet they are designed to give a highly polished look. This style is reminiscent of many economic zone buildings built in Africa as the companies building the projects are the same, mostly Chinese state owned.

Each of the seminar halls inside the hotel building had Chinese and Pakistani flags trying to reaffirm the mutual friendship. A large model of the economic zone was placed in the lobby for marketing purposes, speculating on what the future of the free trade zone would look like. Chinese locals walked the streets who were mostly government officials visiting the Zone. There were a few industries that were setup in the economic zone which included beauty products, leather, pharmaceuticals etc.



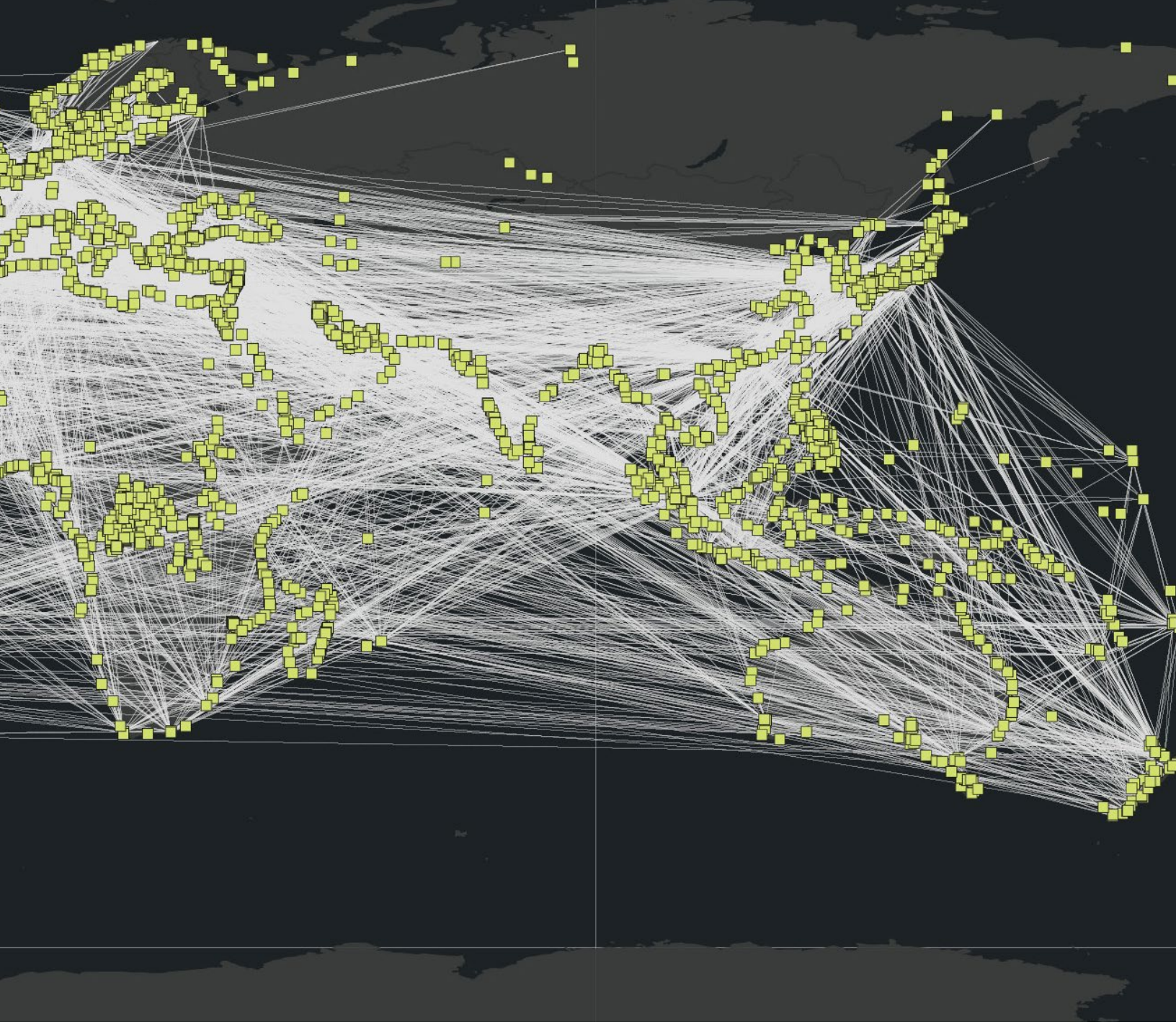
Land use Gwadar Port Master Plan, Source: Gwadar Development Authority

iii- Multiplication of the Lines



Global Network of Ports and its Flows I*mage by Author*

Contemporary political economy is carving new logistical corridors across the globe as geo- networks primarily led by transnational infrastructure development narratives that morph urban landscapes into new borders. These corridors sculpt and shape geographies into networks driven for speed-based supply chains. Manuel Castell emphasizes that in today's world continental urbanism is driven by the space of flows. Speed and logistics dictate urbanization and urban models in the post globalized world. Clare Lyster in her seminal book, Learning from Logistics states network has replaced geography as the context for urbanism.

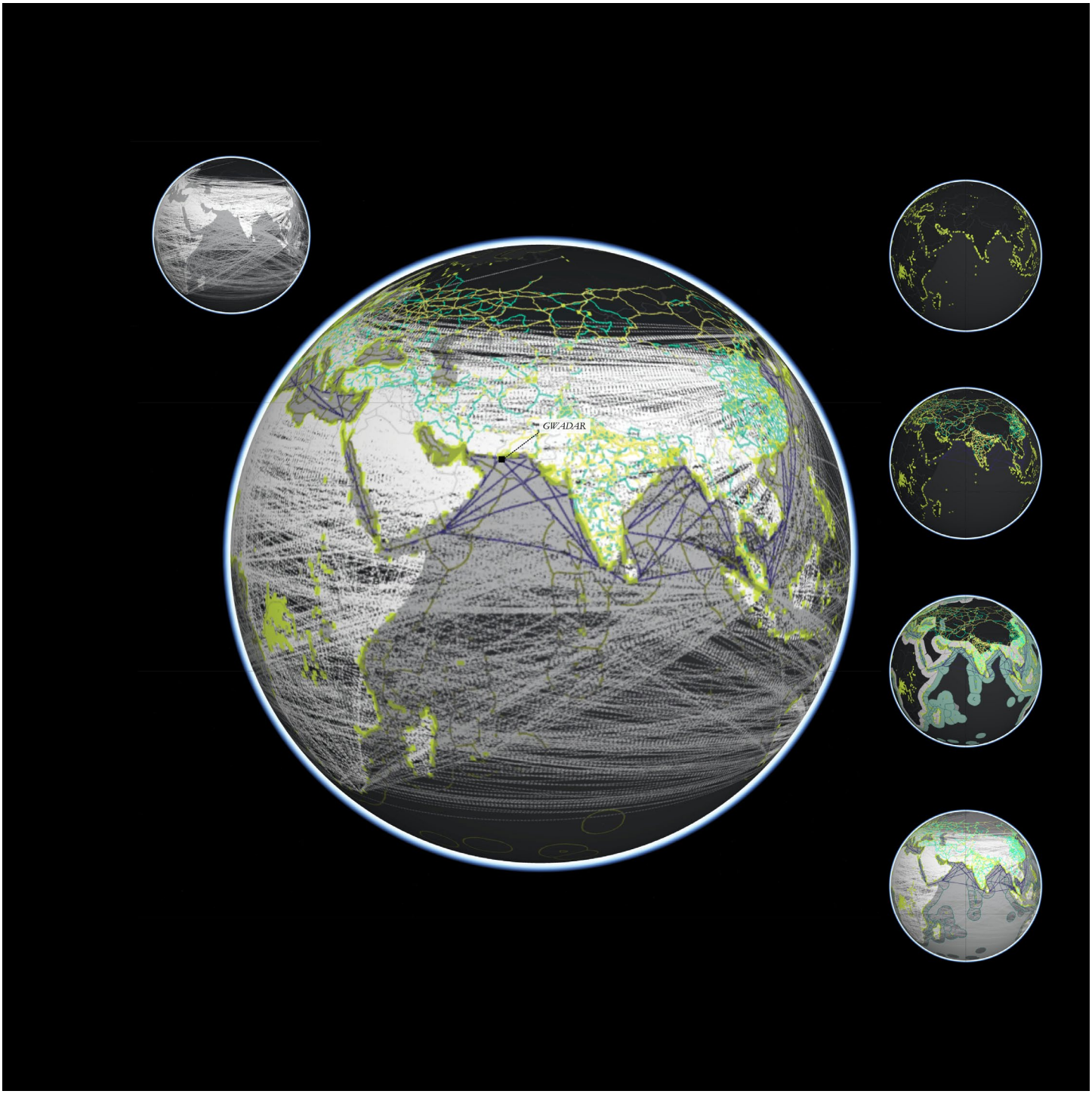


Global Network of Ports and its Flows I*mage by Author*

The map shows a dense network of lines which converge at certain points to depict the shipping flows across the ports, these invisible lines are rendered visible through this map. The squares marked in green show the ports which dot across the coastal region defining new lines across the coastal regions.

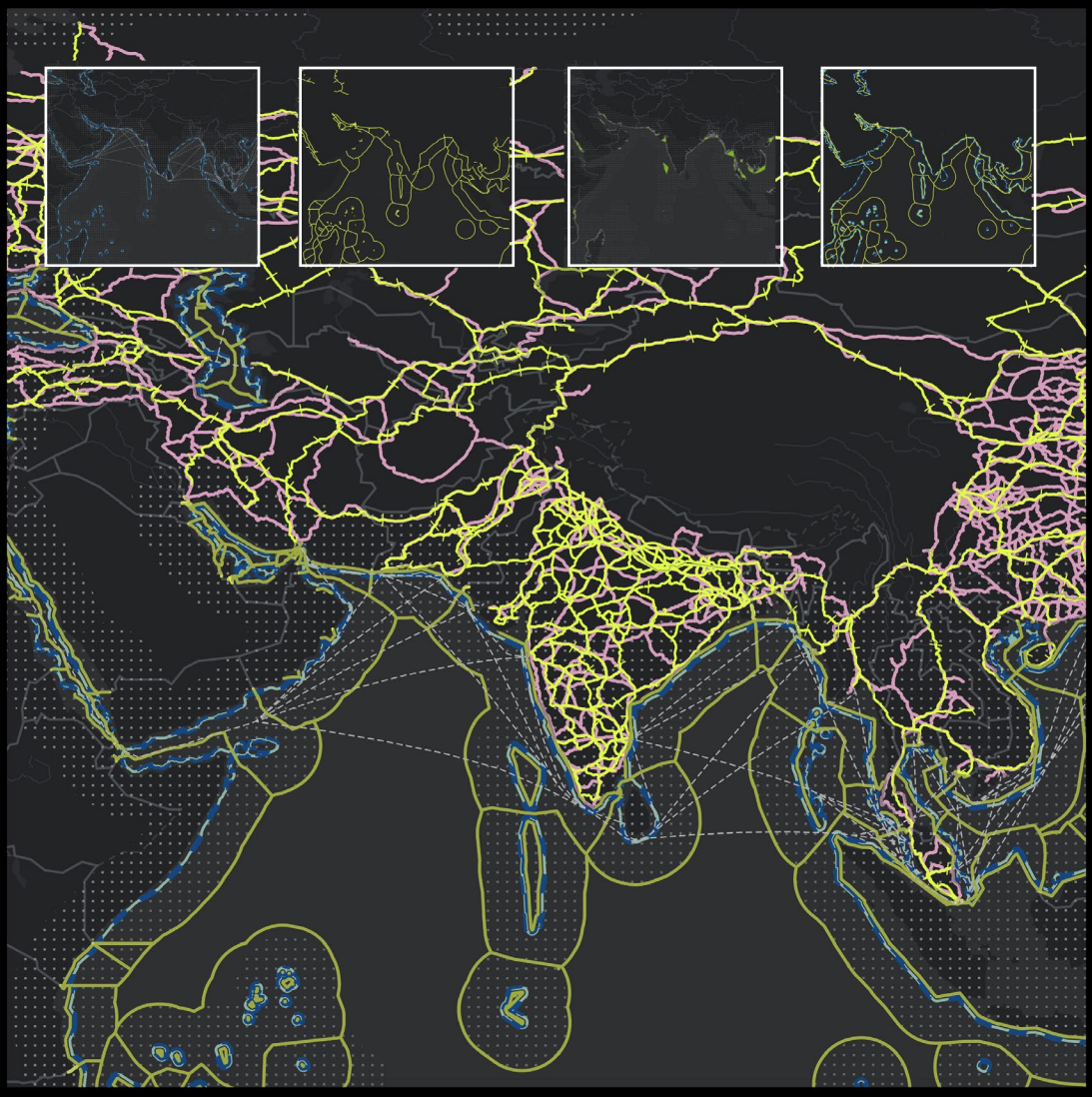
Surface of Earth- I*mage by Author*

Moving beyond the land and sea binaries, the map intentionally highlights the surface of the earth like the image of the moon, revealing earth with its natural contours and craters. Depiction of earth beyond its conventional representation needs to be rethought to highlight the geographic sensitivity.



Global Network of Ports and its Flows I*mage by Author*

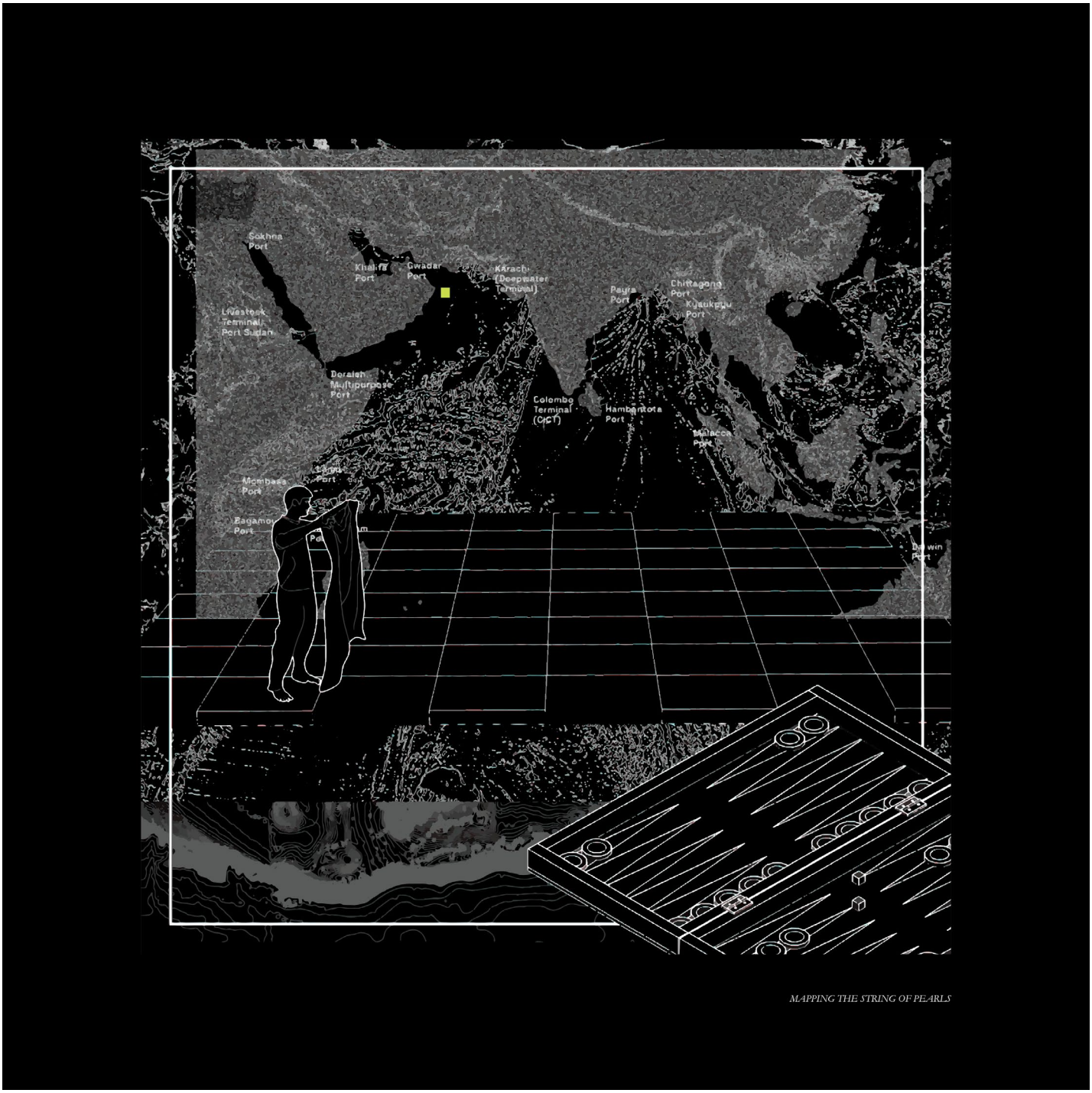
As opposed to the last map this map shows geography replaced by a network of lines. The globe view intentionally contrasts the previous image, overlaid by Belt and Road Initative masterplan and global flow of ports across the globe in this projection.



Mapping the changing territoriality with belt and road inititaive masterplan

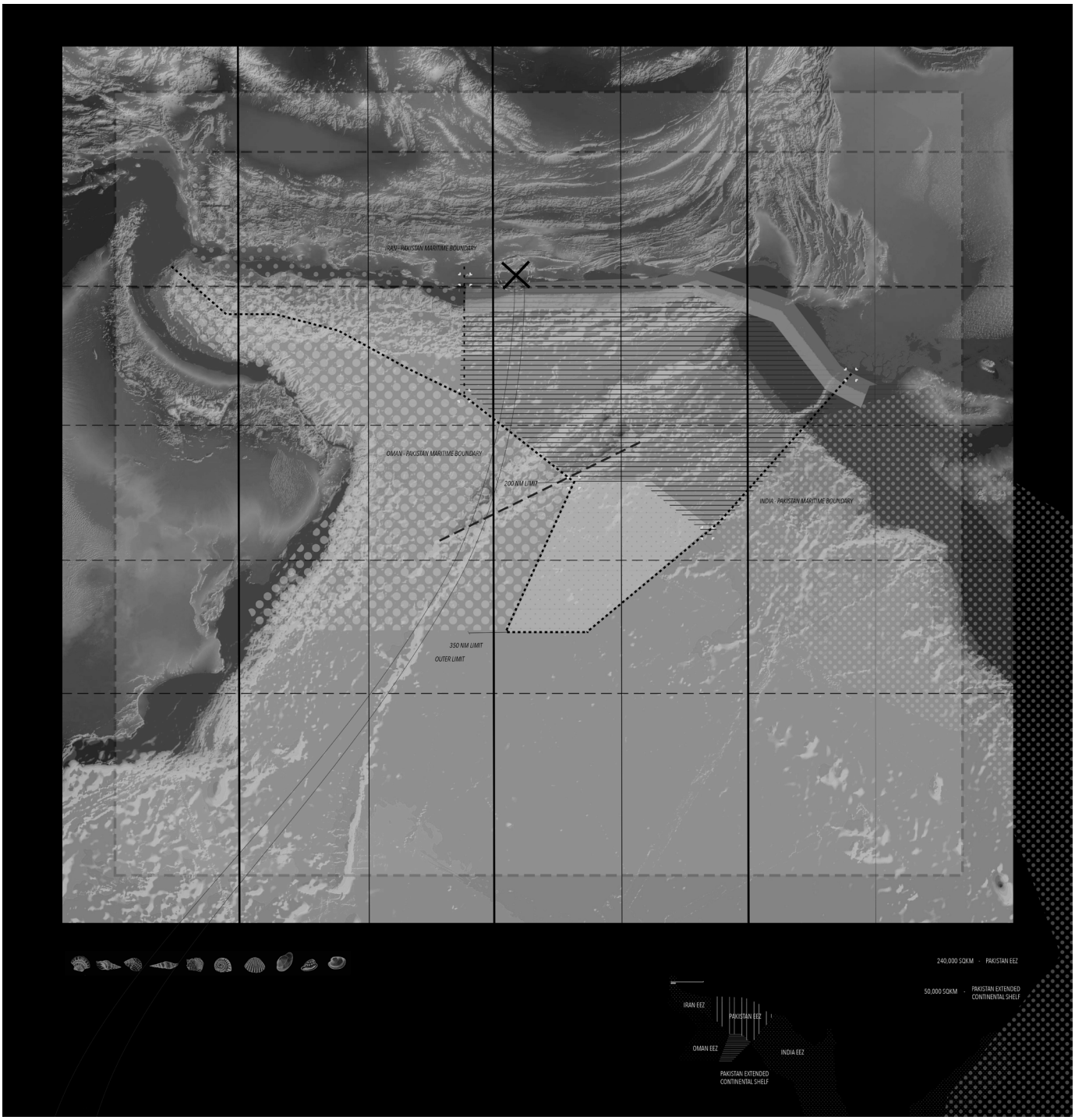
Belt and Road Initiative MasterPlan- I*mage by Author*

The map highlights the changing territoriality in the Belt and Road Intiative masterplan overlaid on marine ecological coastal edges across the Indian Ocean.

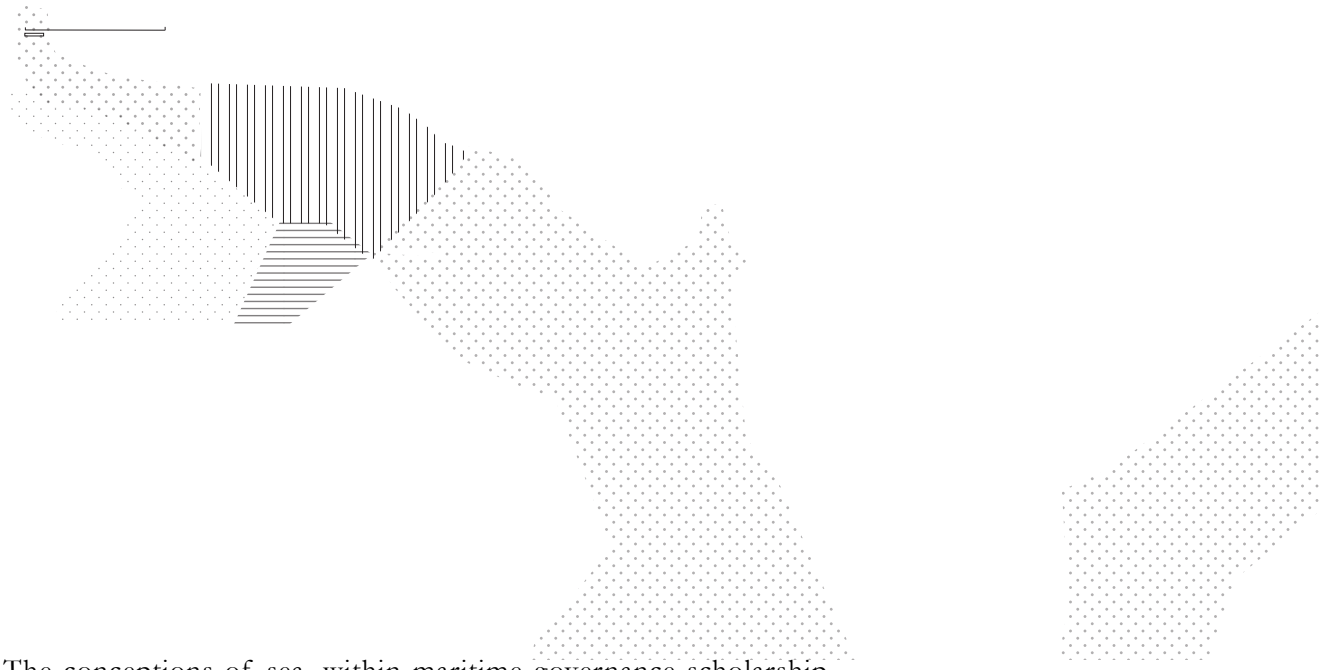


Chinese Ports in Indian Ocean- String of Pearls- I*mage by Author*

The map highlights the current ports under the Chinese flag often touted as the string of pearls, as the dominance over the maritime region continues to be contested. The ocean space beomes a chessboard for different vying powers seeking geo-political control.

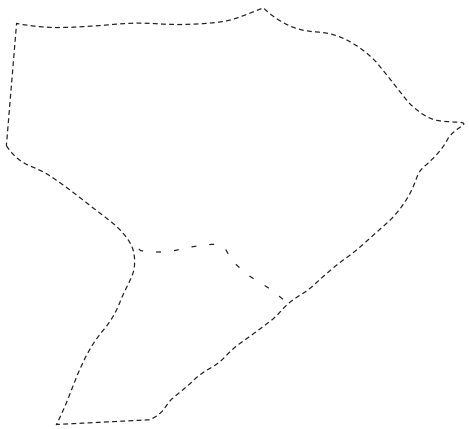


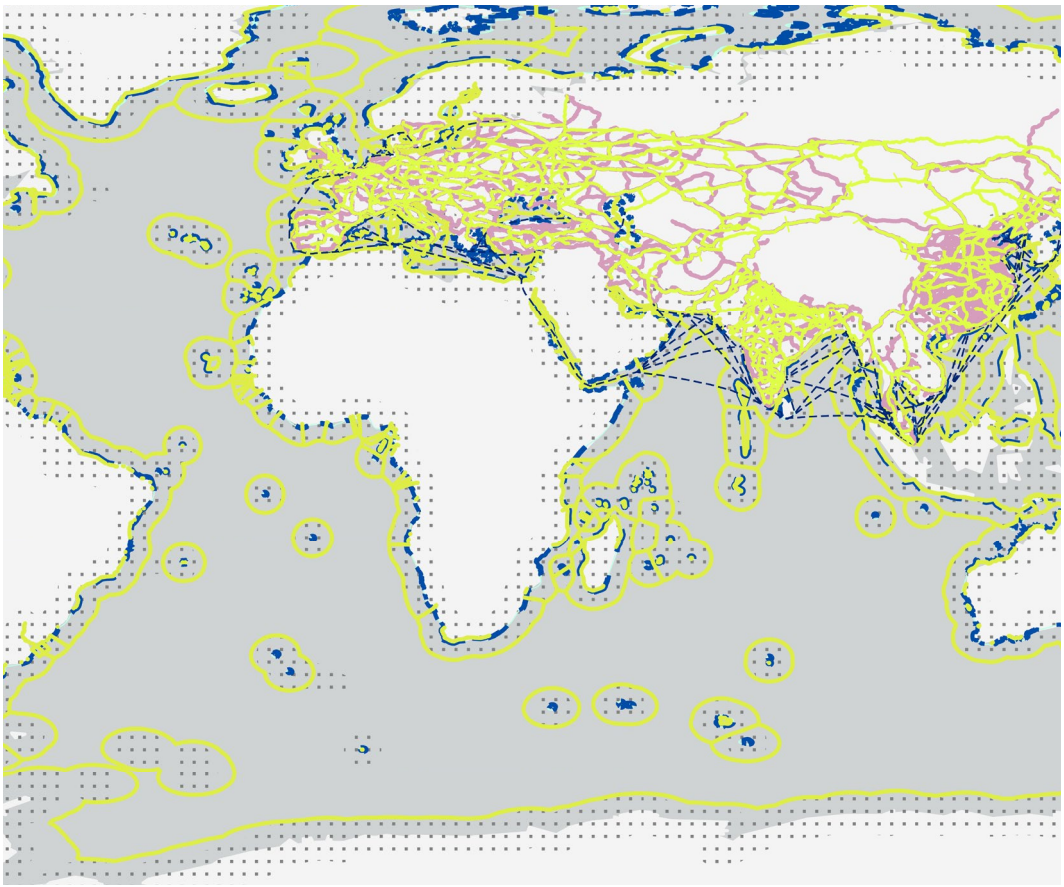
Pakistan changed outerlimit from 200 nautical miles to 350 Nautical Miles-
Image by Author



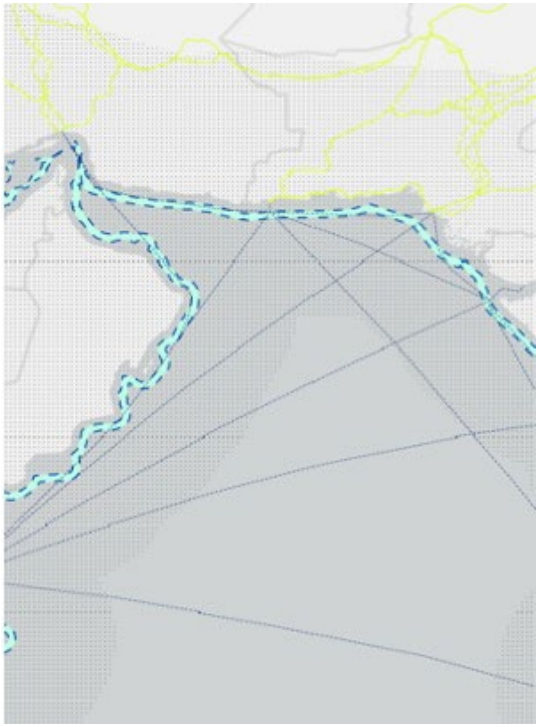
The conceptions of sea, within maritime governance scholarship, have transformed from the lawless and empty region to overlapping jurisdictional appropriation. . Historically, technological abilities restricted systematic regulation of the vast distances of oceans, but with the advent of contemporary technological apparatus the sea is viewed as an interwoven network of competing territoriality and sovereignty with selective policing. The Indian Ocean is not absolved from this contestation and within it the Arabian Sea, is shared by many coastlines each of which have their respective "exclusive economic Zone' (EEZ), as highlighted in the figure. The territorial rights of each country extend up to 200 nautical miles including the territorial sea 12 nautical miles and the contiguous zone up to 24 nautical miles, beyond which are the high seas. These territories operate as free for all space, yet this 'elastic and unbundled' sovereignty exploited by illegal trawling, international terrorism, pollution, and illegal migration.

Heller and Pezzani 2017

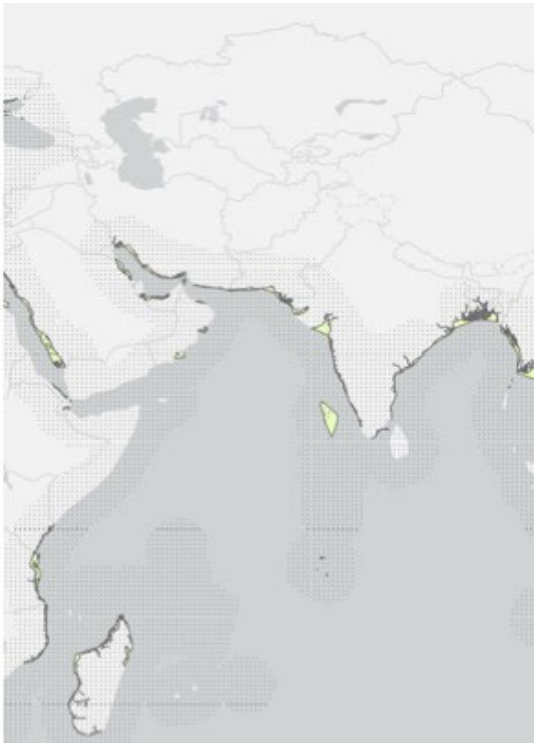




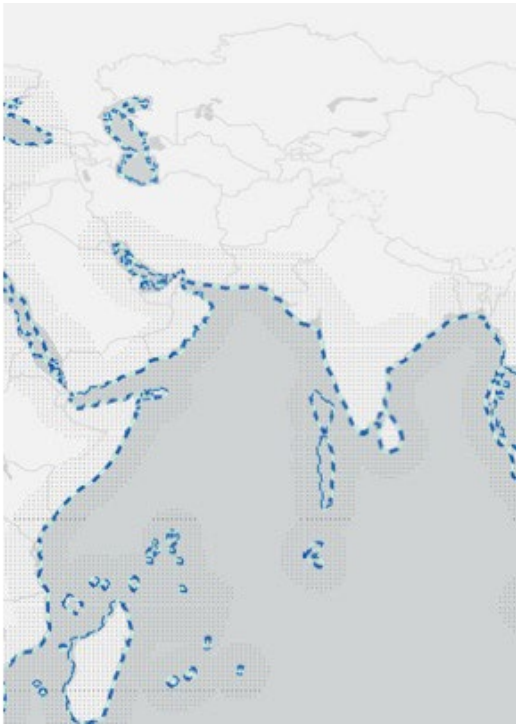
Changing territoriality with Belt and Road Inititaive Masterplan



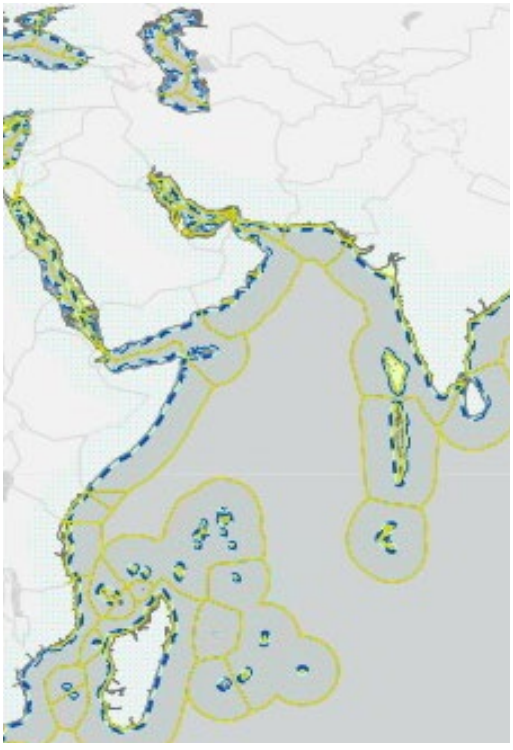
Gwadar's Port Connectivity- Image by Author



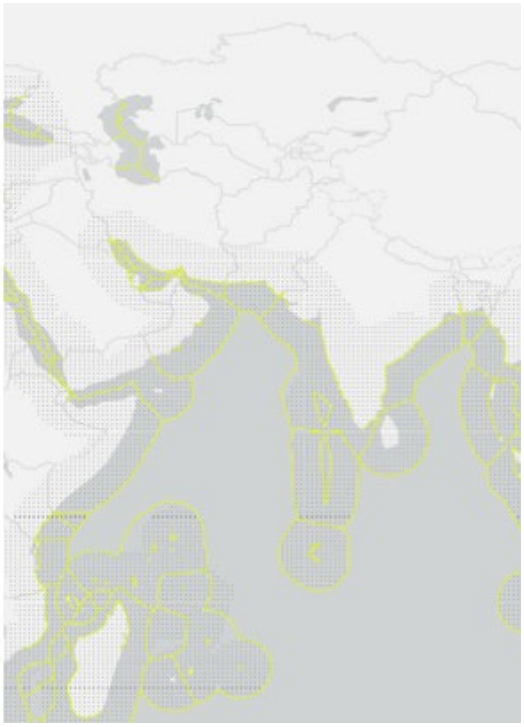
Internal Waters- Image by Author



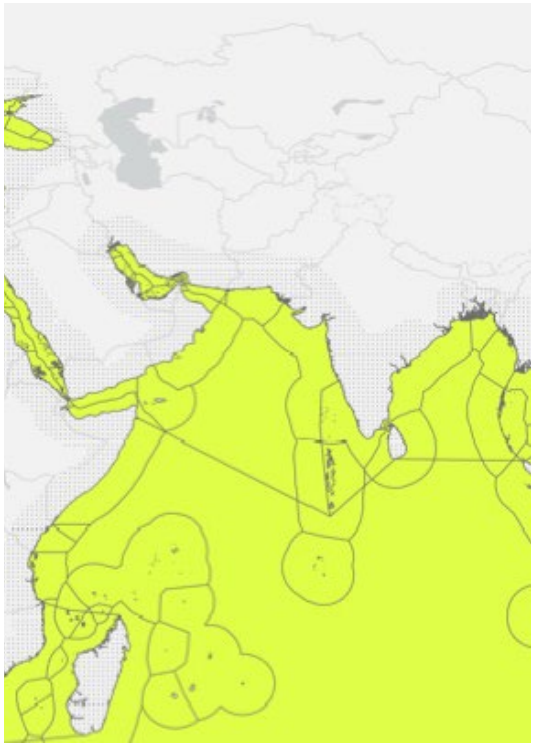
12 and 24 Miles Contigous Zone - Image by Author



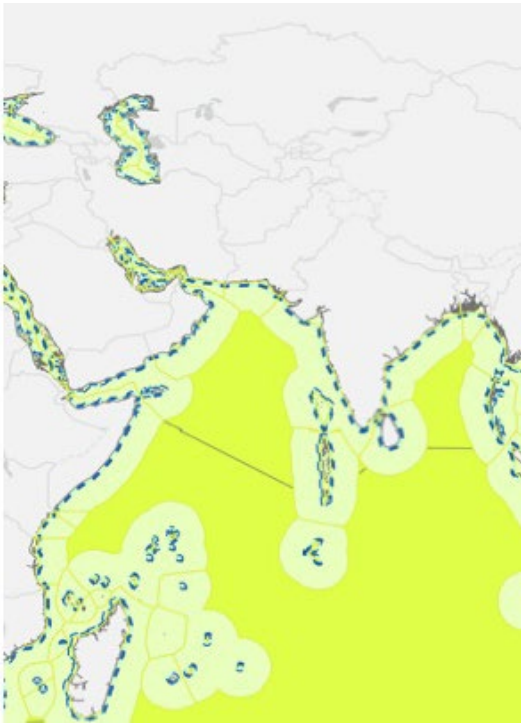
200 Nautical Miles Continental Shelf - Image by Author



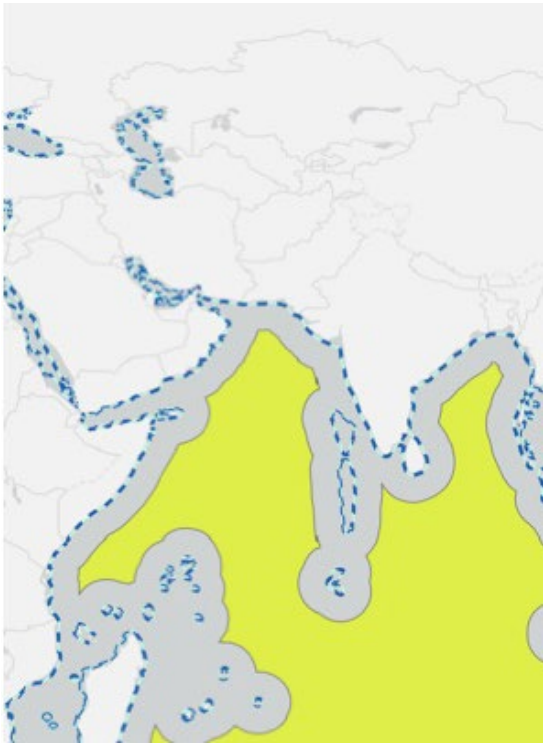
EEZ Boundaries Image by Author



Contested EEZ Boundaries - Image by Author

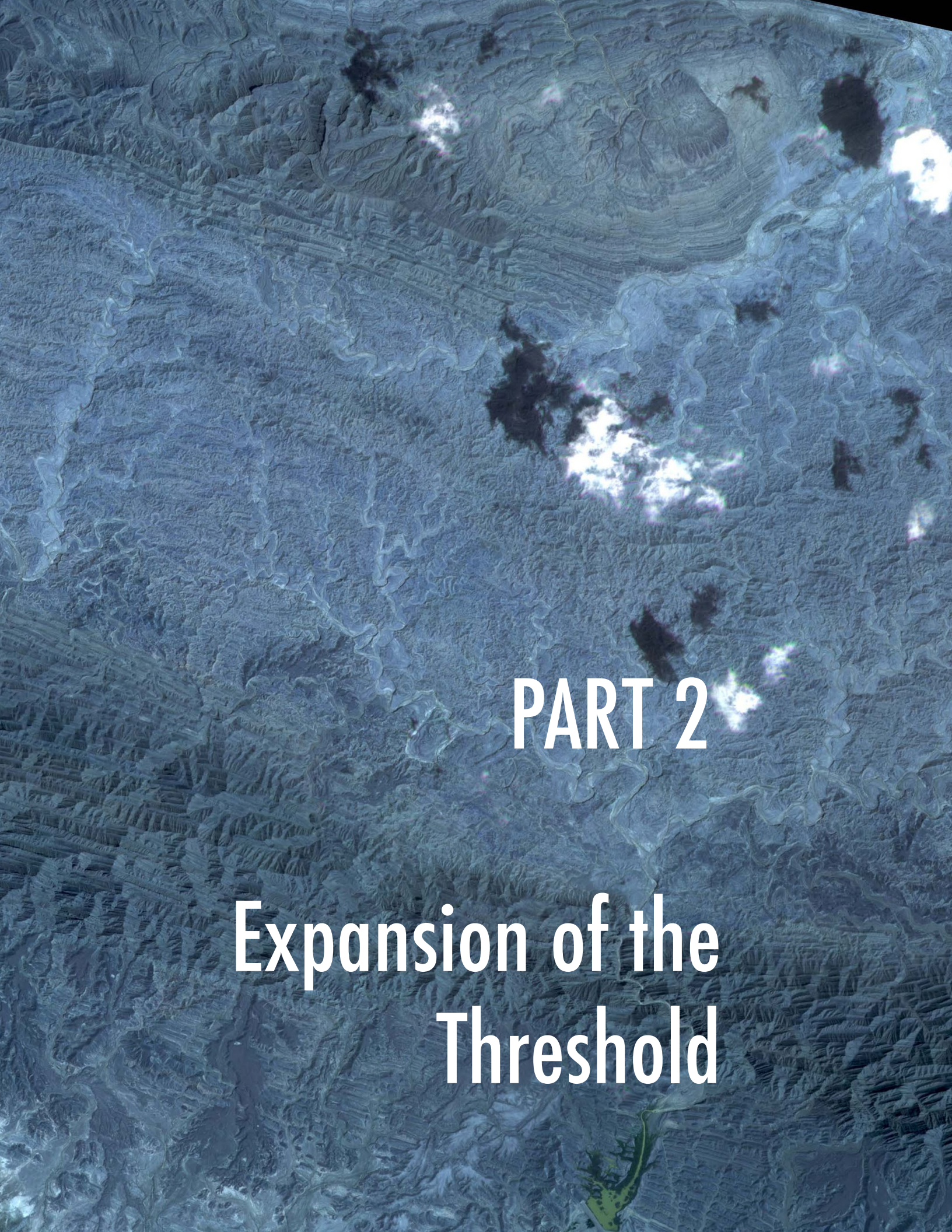


Open Seas of Indian Ocean with EEZ,- Image by Author



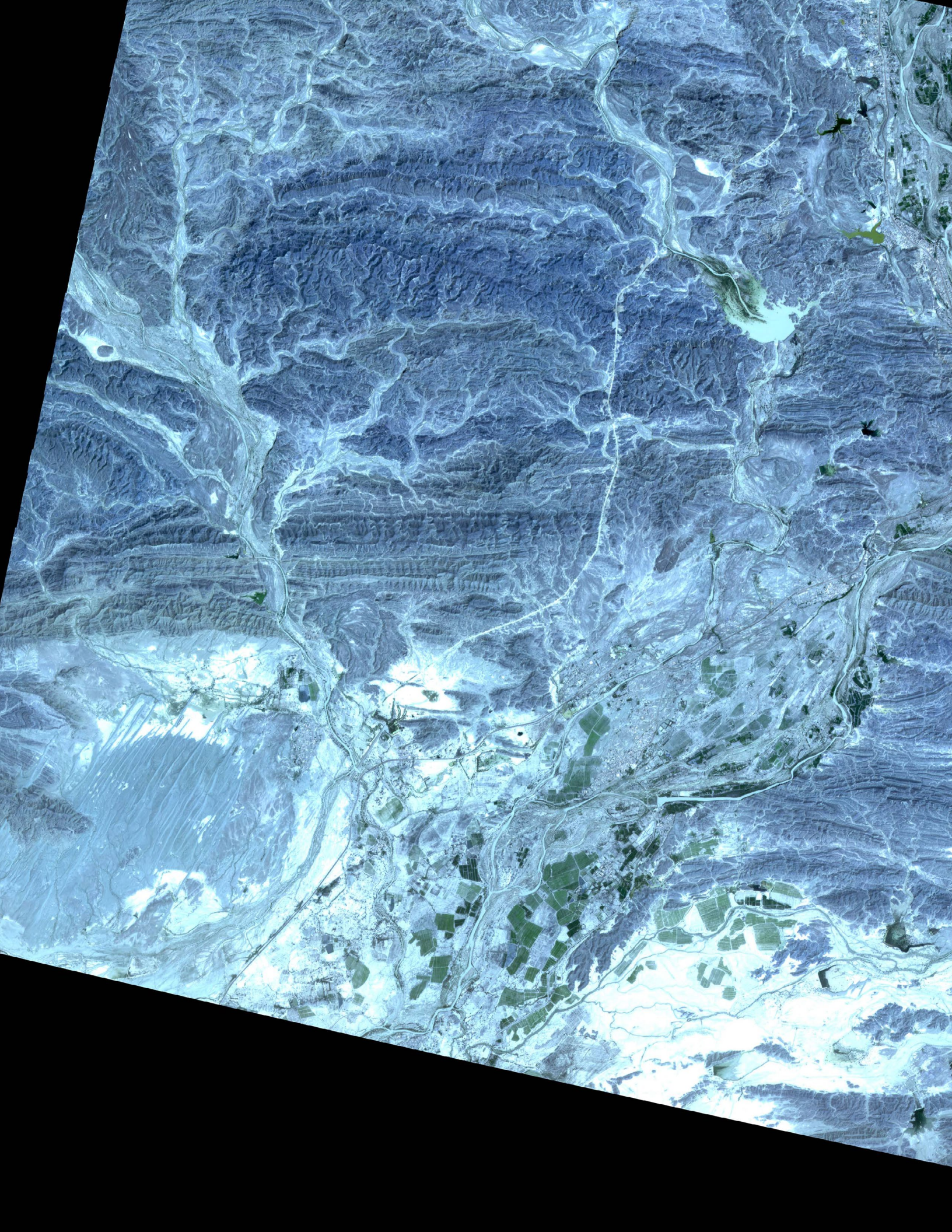
Open Seas of Indian Ocean,- Image by Author

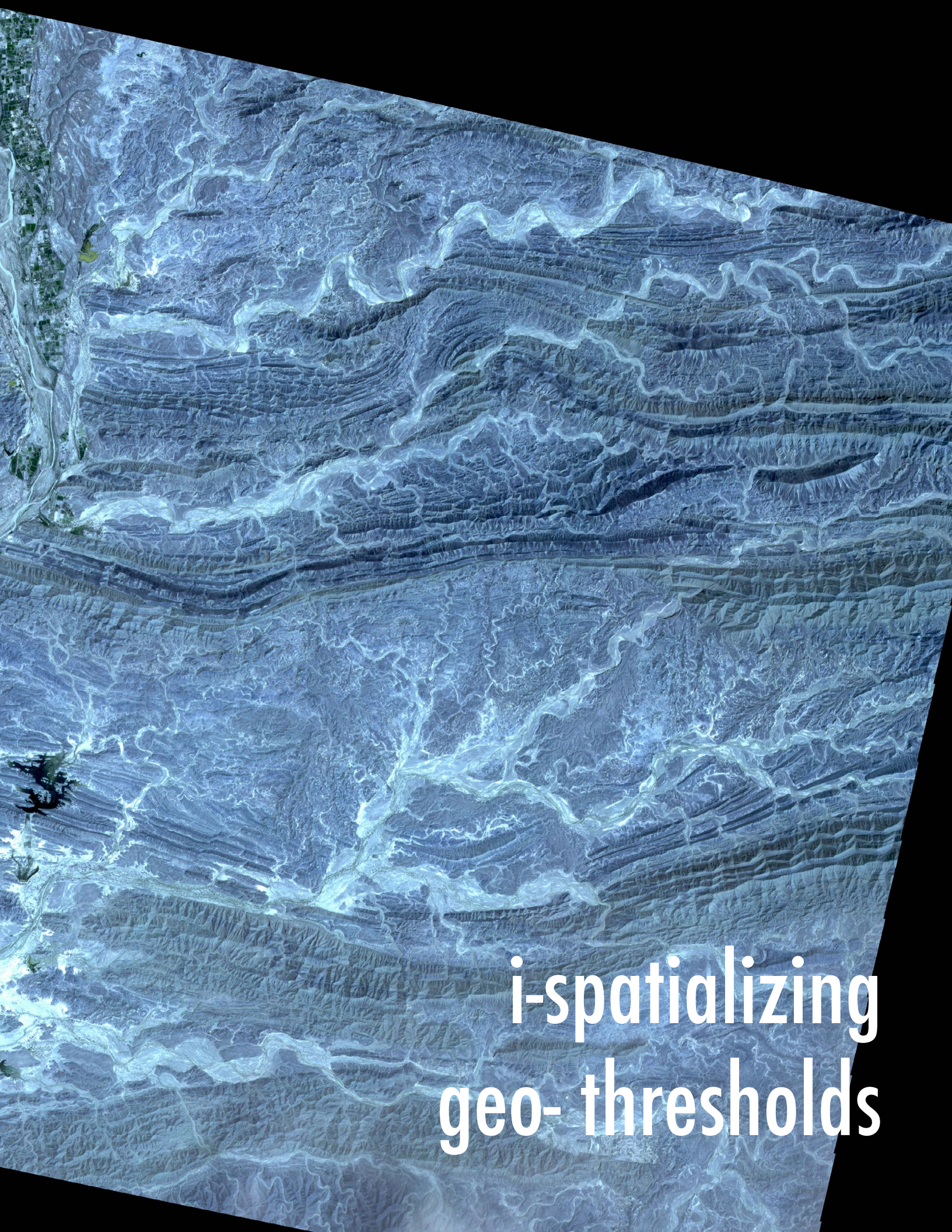
Territorial sovreignity along with coastal shelf in Indian Ocean, Image by Author

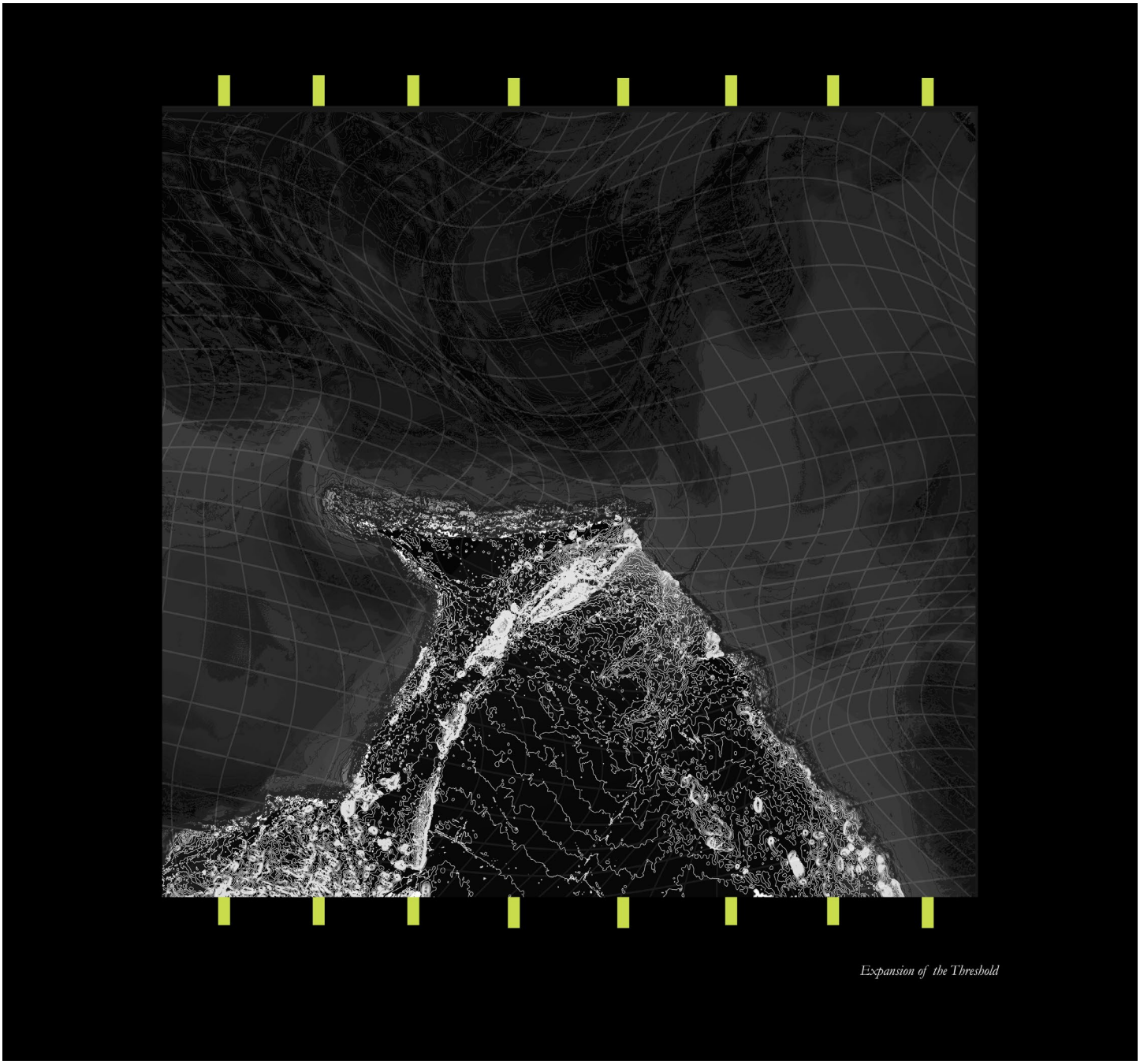


PART 2

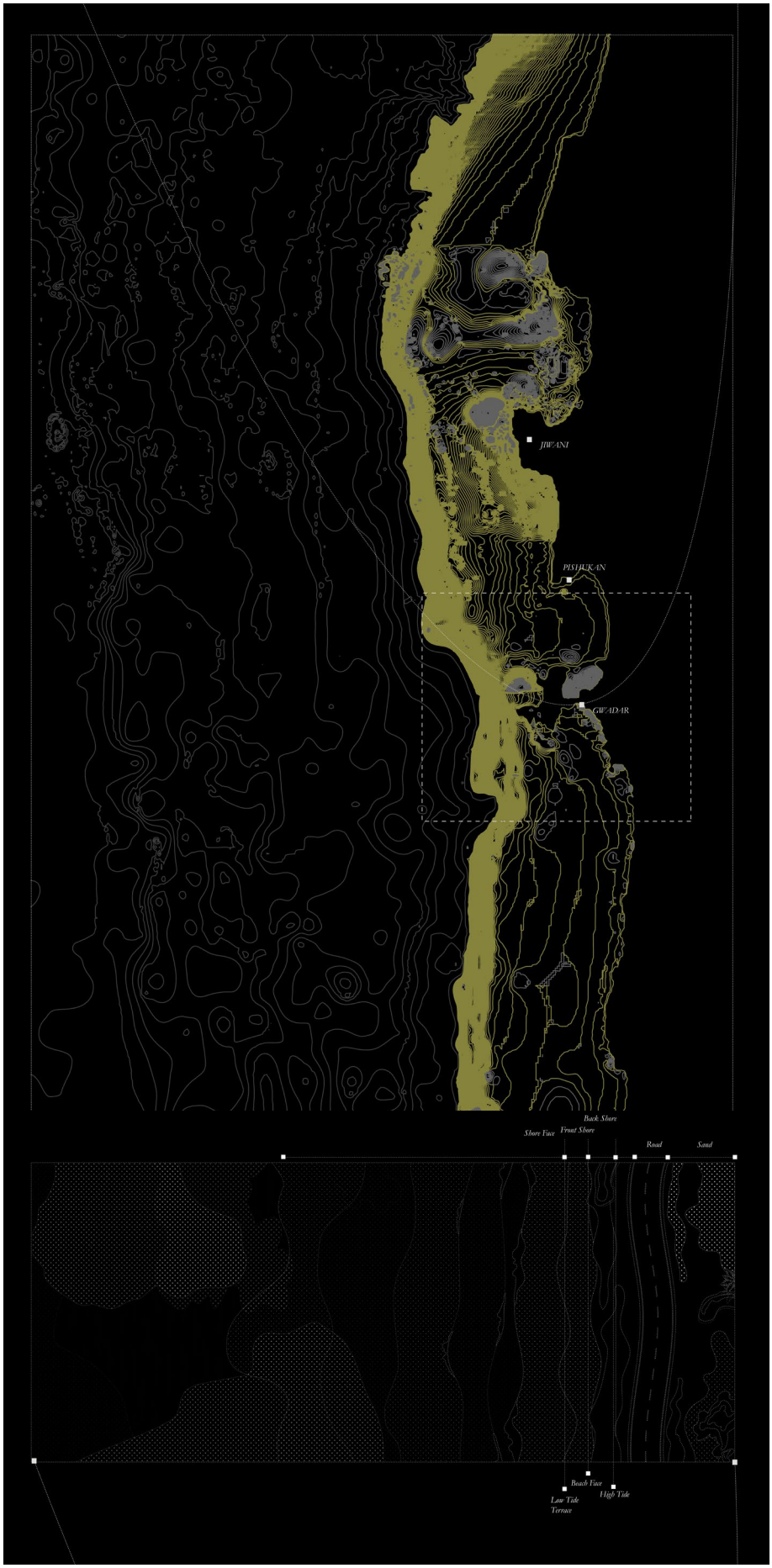
Expansion of the Threshold

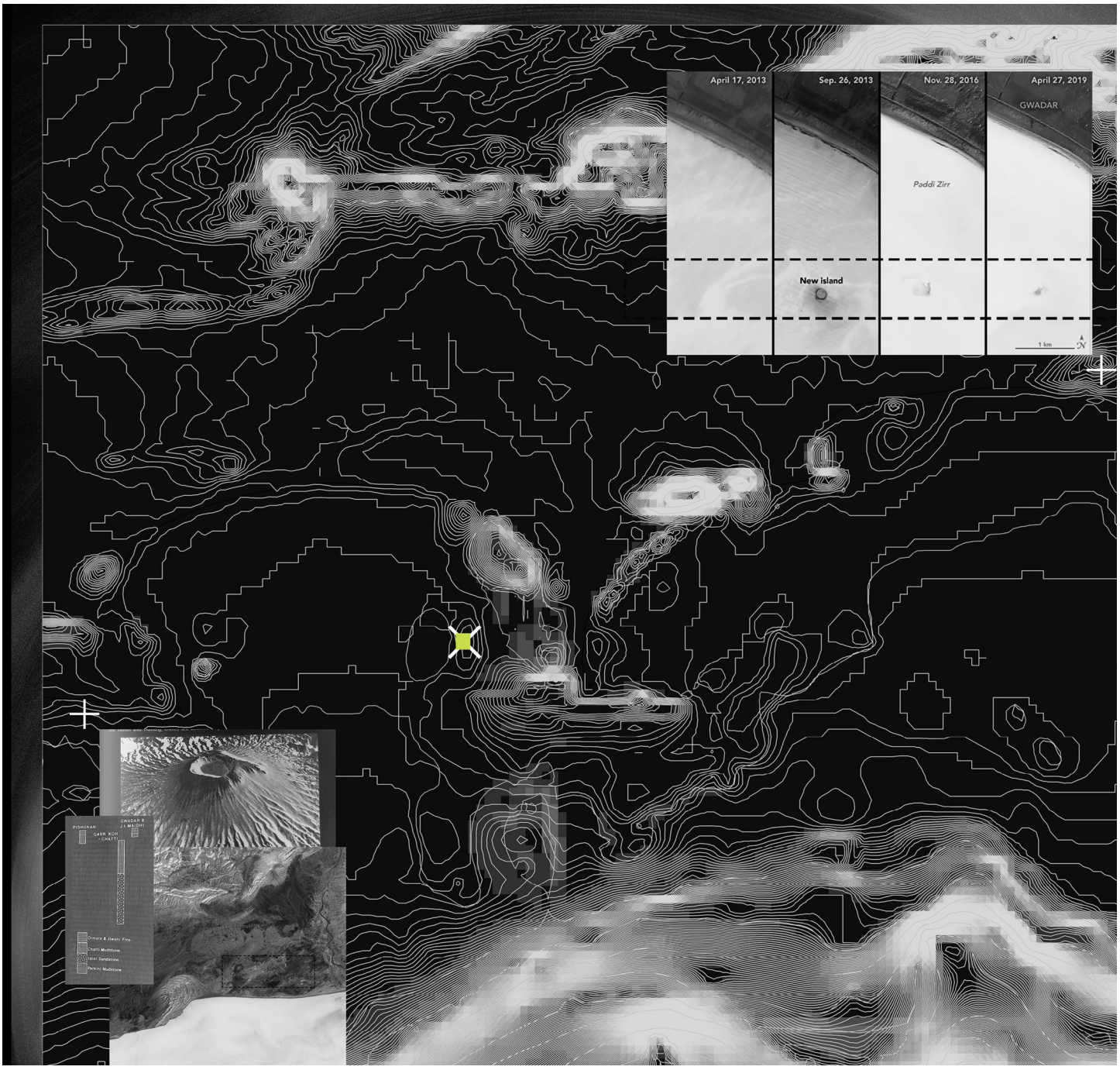



i-spatializing
geo- thresholds

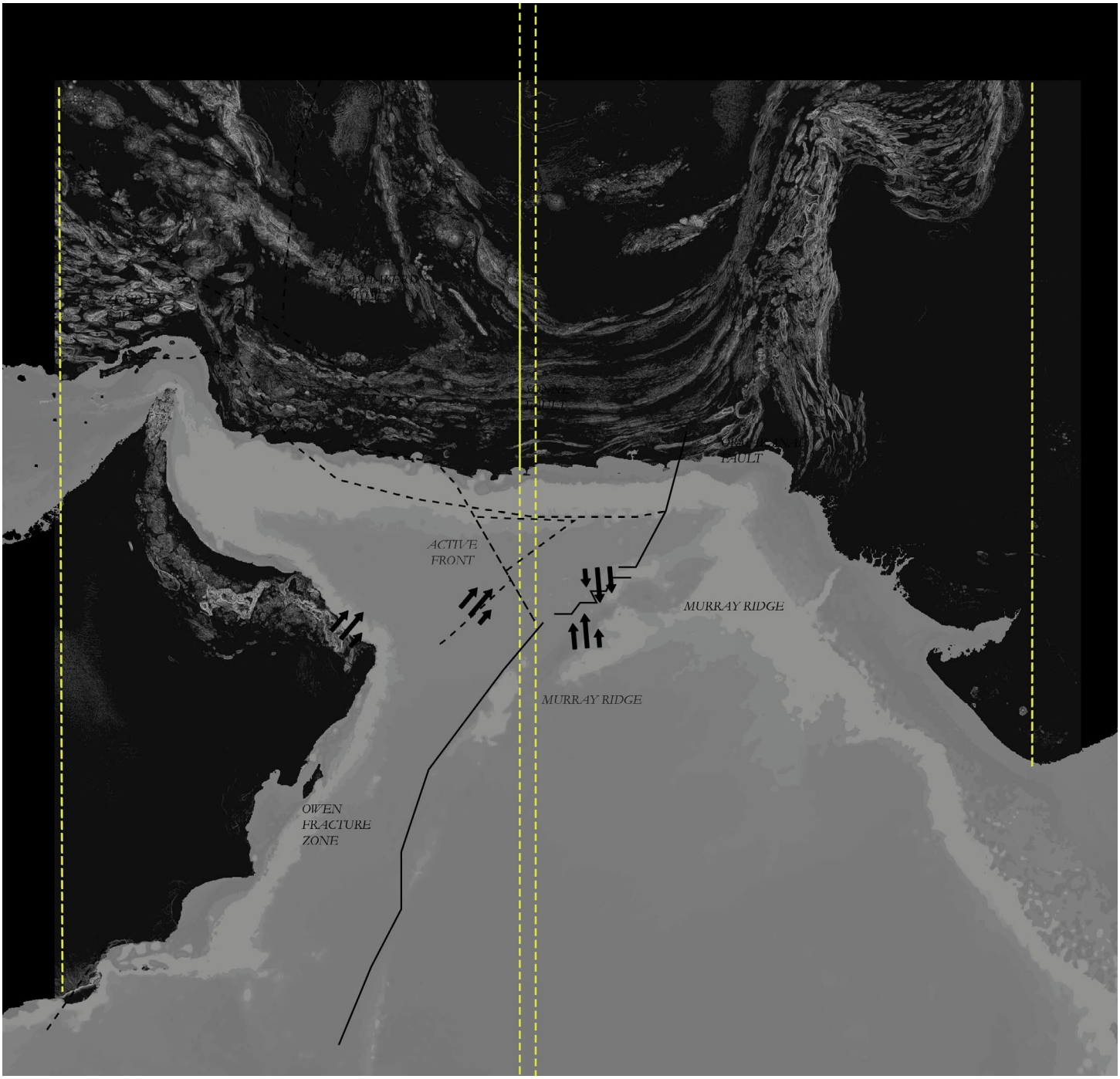


Moving Thresholds - Image by Author

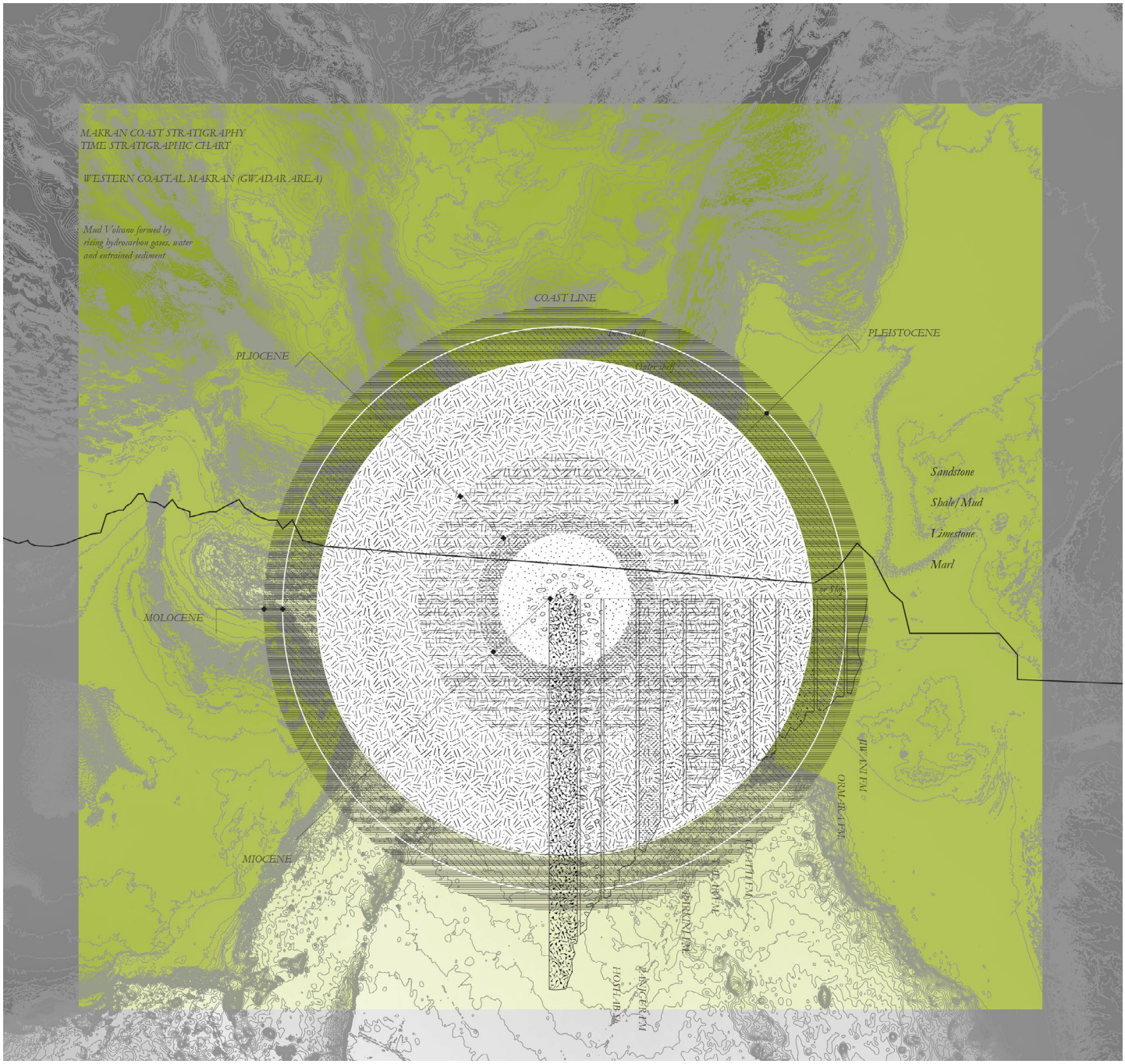

JIWANI
PISHUKAN
GWADAR
Back Shore
Shore Face
Front Shore
Road
Sand
Beach Face
High Tide
Low Tide
Terrace



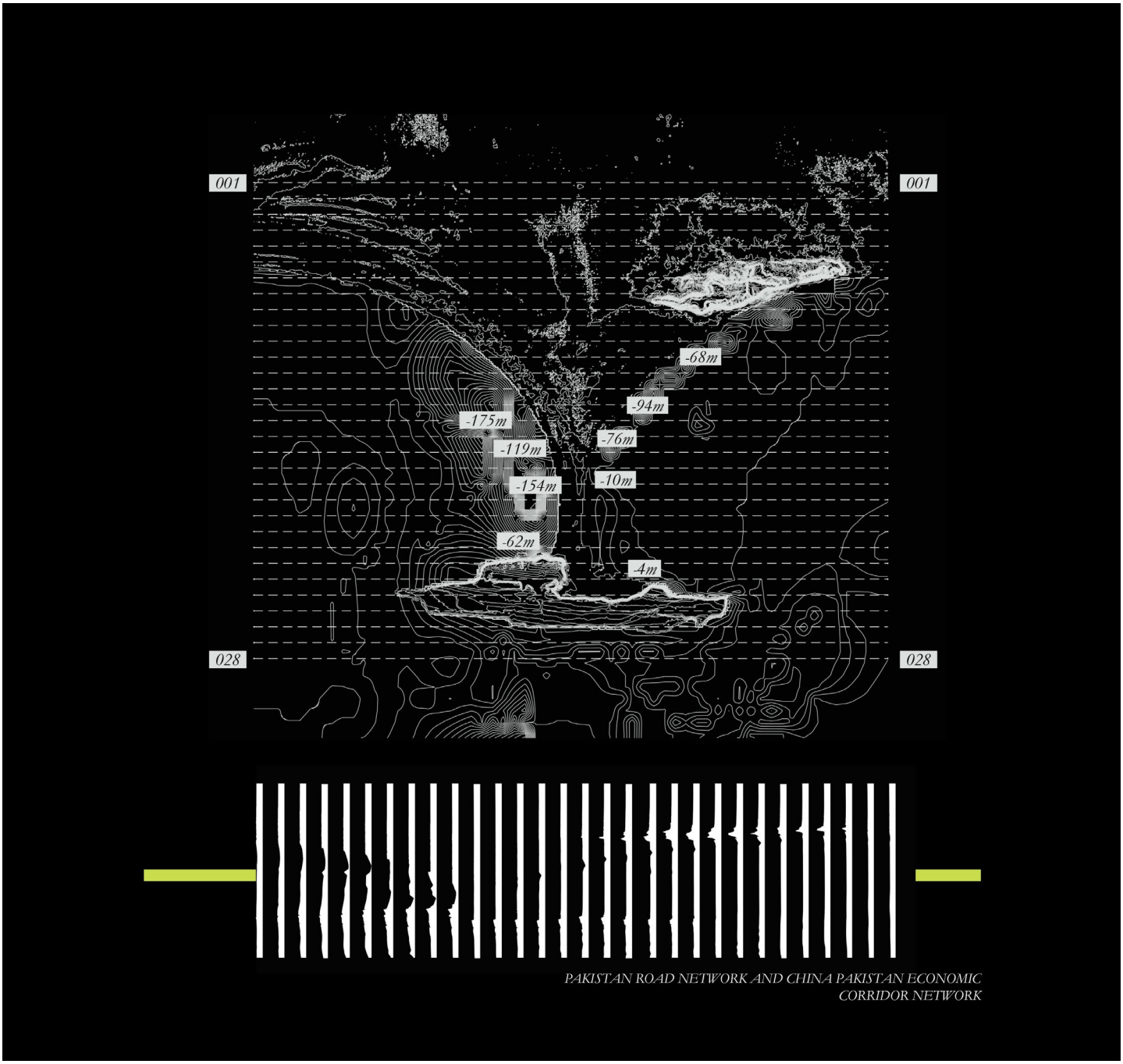
Shifting thresholds - Mud volcanoes and Zalzala Jazira, Image by Author



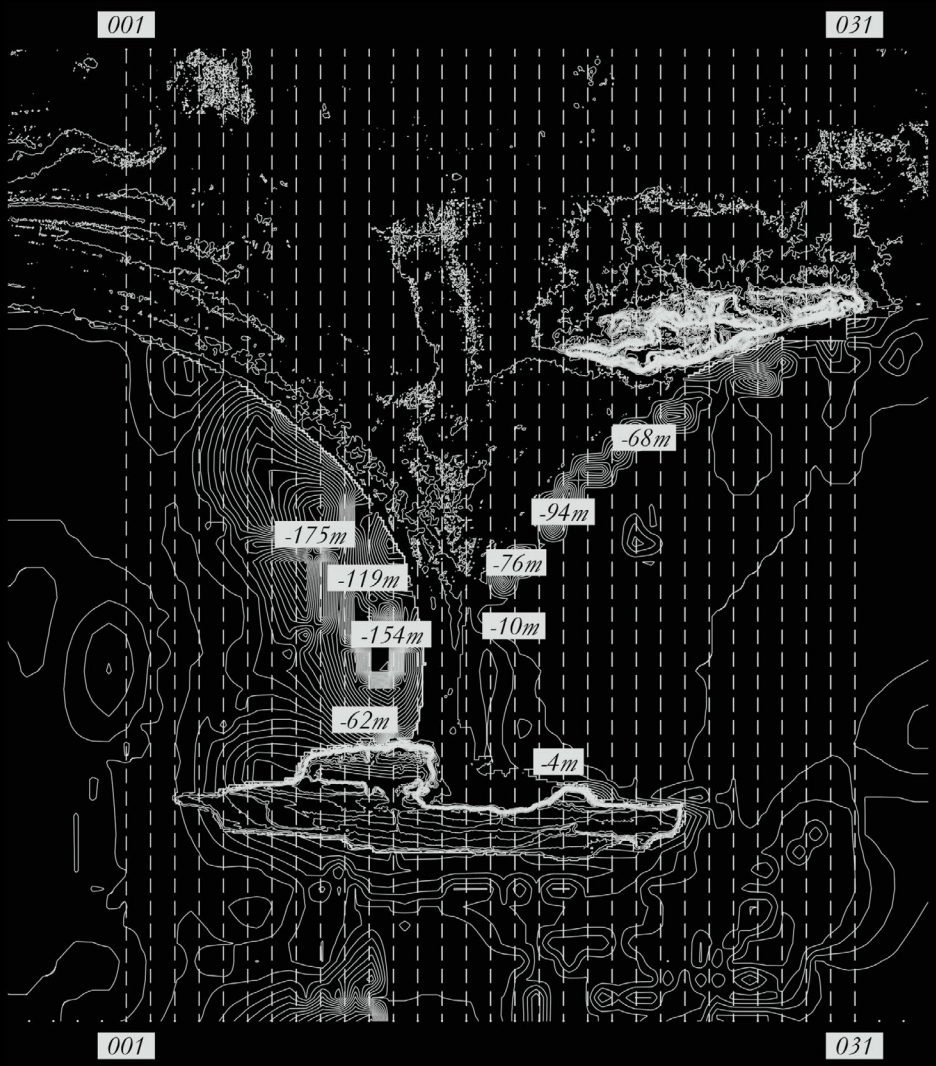
Faulty thresholds- Geologic fault lines around Gwadar, Image by Author

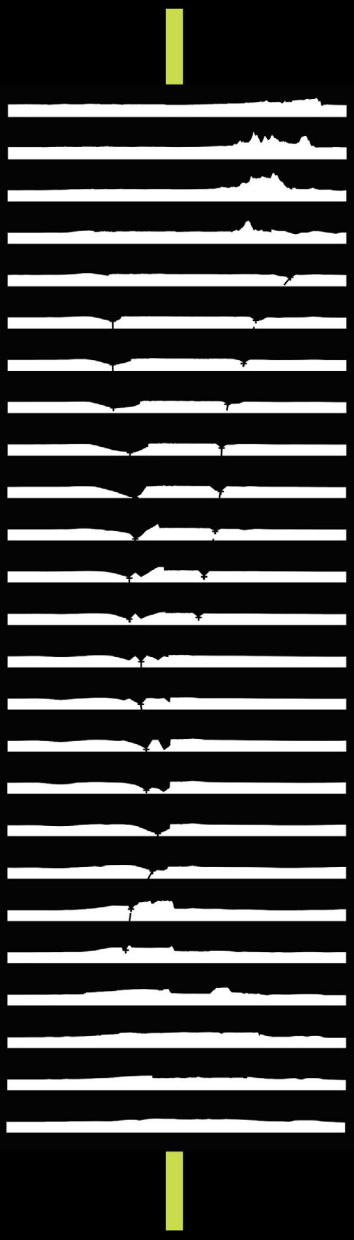


Materilaity and Time- Makran Coast Spatialized Striagraphy, Image by Author



Sea depth levels around the thresholds in Gwadar with longitudnal sections, Image by Author





SECTIONAL DEPTHS OF THE THRESHOLDS

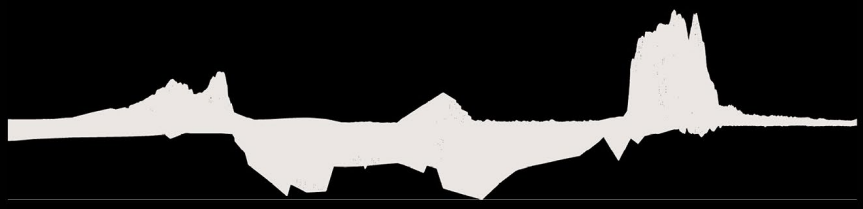
Sea depth levels around the thresholds in Gwadar and short sections, Image by Author

threshold condition 1- Area under Navy

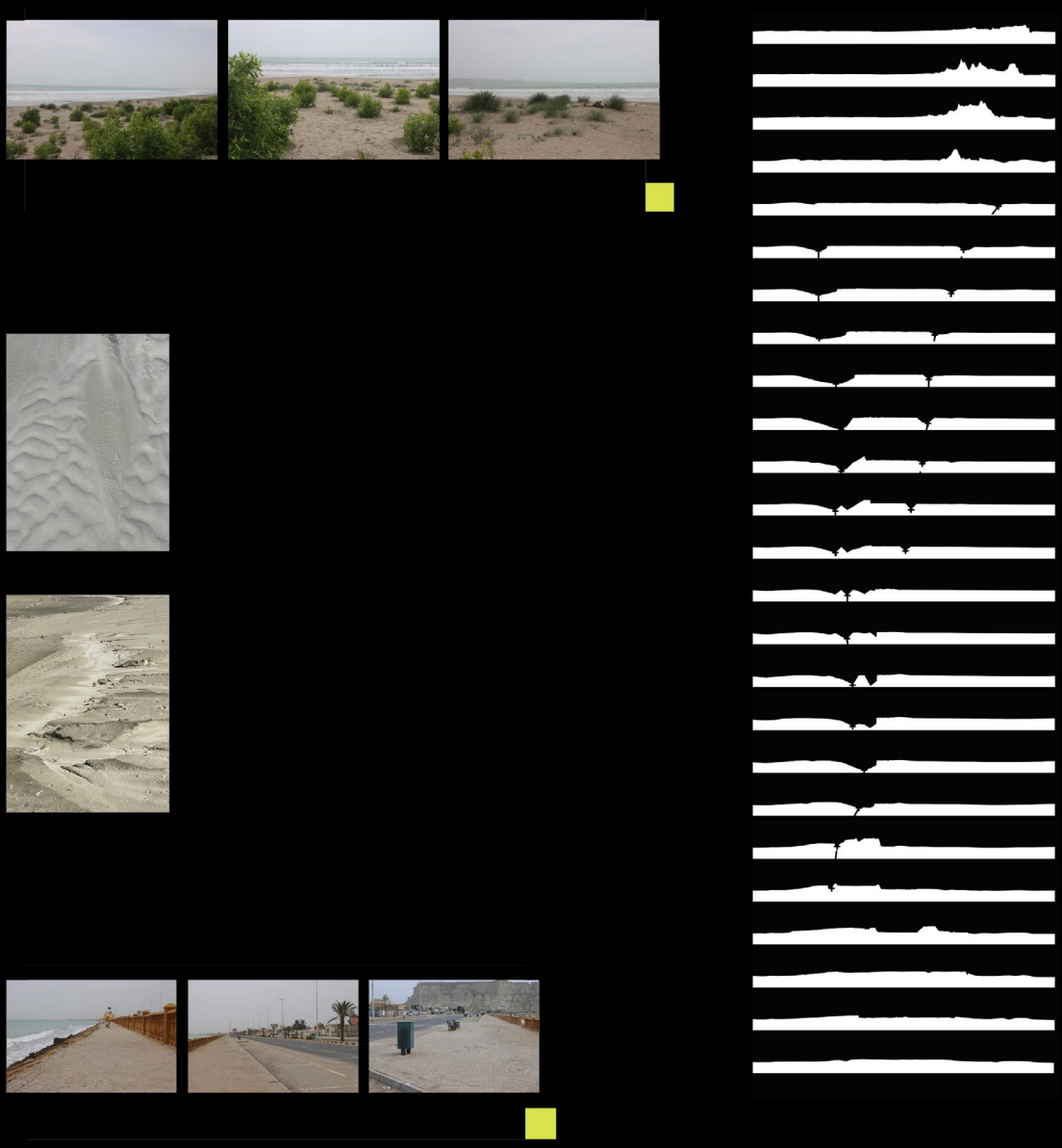
threshold condition 1- area under navy

threshold condition 5- Kohe batil edge

threshold condition 5- Kohe batil edge



threshold condition 4- new fishing ground



Materiality and Texture - Threshold condition of Gwadar, Image by Author

threshold condition 2- with boat builders

threshold condition 3- break water edge

THRESHOILD BOUNDARY CONDITIONS

ii- spatializing nature-culture thresholds

Conceptual diagram of world shiping routes from the view of the satellite , Image by Author.

Wooden ship building still exists in this region, Image by Author.

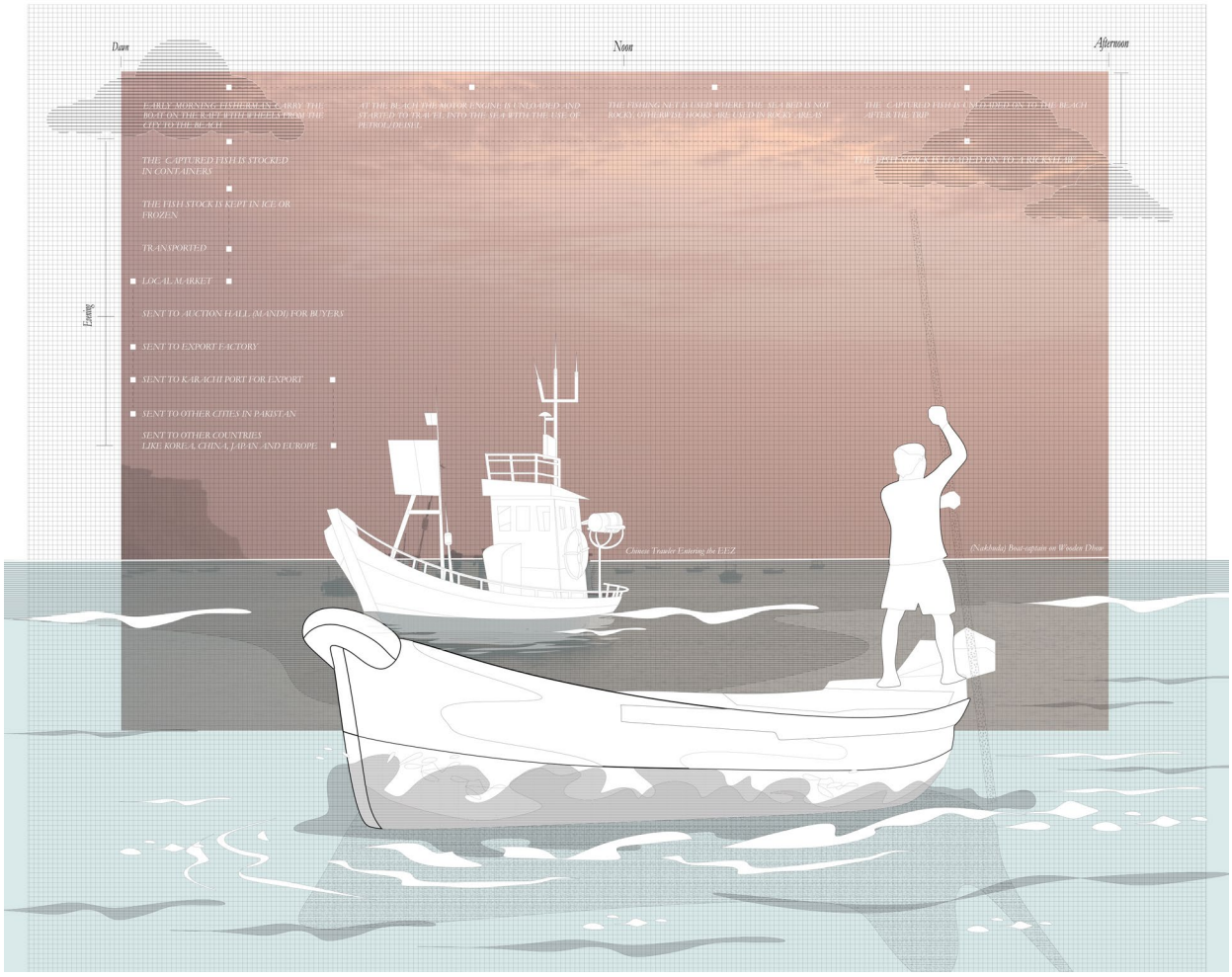


Image by Author, Data collected from Interviews

FISHING PROCESS IN GWADAR- A DAY IN THE LIFE OF A FISHERMAN

EARLY MORNING FISHERMAN CARRY THE BOAT ON THE RAFT WITH WHEELS FROM THE CITY TO THE BEACH

AT THE BEACH THE MOTOR ENGINE IS UNLOADED AND STARTED TO TRAVEL INTO THE SEA

THE FISHING NET IS USED WHERE THE SEA BED IS NOT ROCKY, OTHERWISE HOOKS ARE USED IN ROCKY AREAS

THE CAPTURED FISH IS UNLOADED ON TO THE BEACH AFTER THE TRIP

THE FISH STOCK IS LOADED ON TO A RICKSHAW

TRANSPORTED

1.EXPORTED

2. LOCAL MARKET

SENT TO EXPORT FACTORY

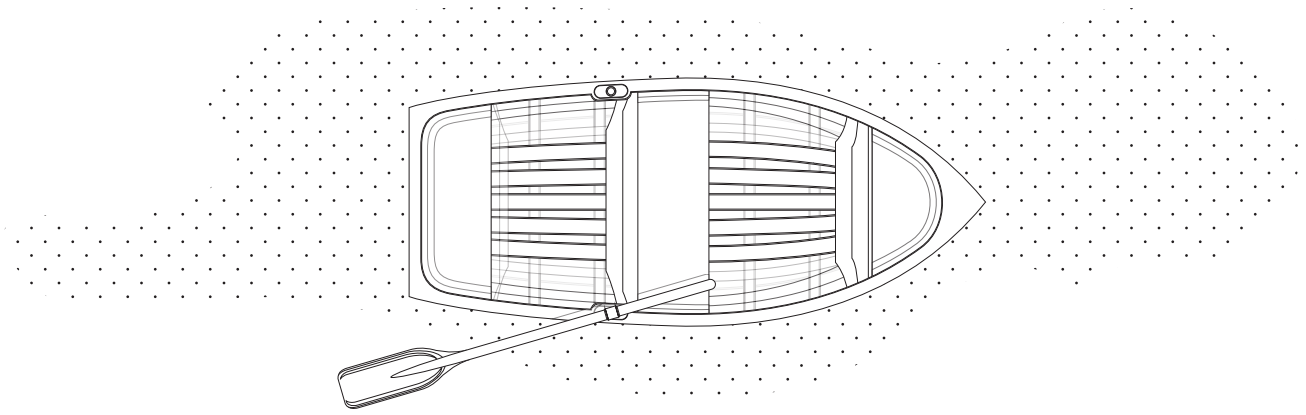
SENT TO AUCTION HALL (MANDI) FOR BUYERS

SENT TO OTHER CITIES IN PAKISTAN

SENT TO KARACHI PORT FOR EXPORT

SENT TO OTHER COUNTRIES LIKE KOREA, CHINA, JAPAN AND EUROPE

Image by Author, Data collected from Interviews



CURRENT LOCAL BOAT TYPOLOGIES

KATI	SPEED BOAT	YAD DAR	GALETT	LAANCH
Also known as Choti Kashti, it is made from fibre material. It is without an engine and is used with a chapu (paddle). It cant go far out into the sea.	*Made with fibre material but it has a motor engine to power it and has storage compartment for fish catch. It can travel further into the sea.*	*It is a bit bigger in size , around 30 ft, and it is made out of teak wood with a fibre layer coasted on top, it is also powered by a motor engine and it take around 2 months to be built.*	*This is a big boat around 30-40 ft, but it has a deeper base of 8 ft with a storage cabin to store the fish, it is made of shish-am wood and it takes around 4 months to build it.*	*It is considered to be a big boat made out of wood. It has a flat end towards the back. It also has a cabin on top for shelter. It is used for venturing furthest out in the sea.*

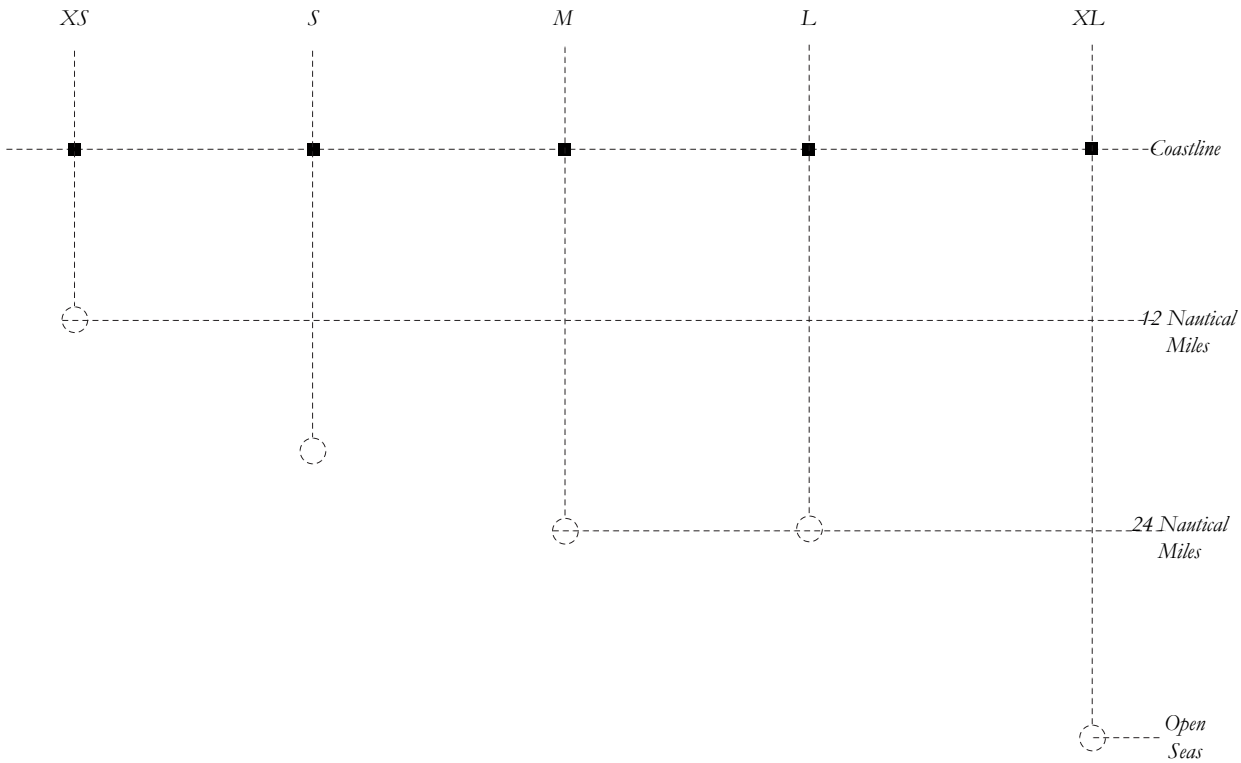


Image by Author, Data collected from Interviews

BOAT MAKING TOOLS

COBALT

GLULAM

FIBRE (MOWAD)

REISEIN

MAT (CHAADAR)

DRILL MACHINE

ROPE

NAILS

PAINT

WOOD- LOCAL TYPOLOGY

- PERTAL
- KIKAR
- SHISHAM
- TEAK

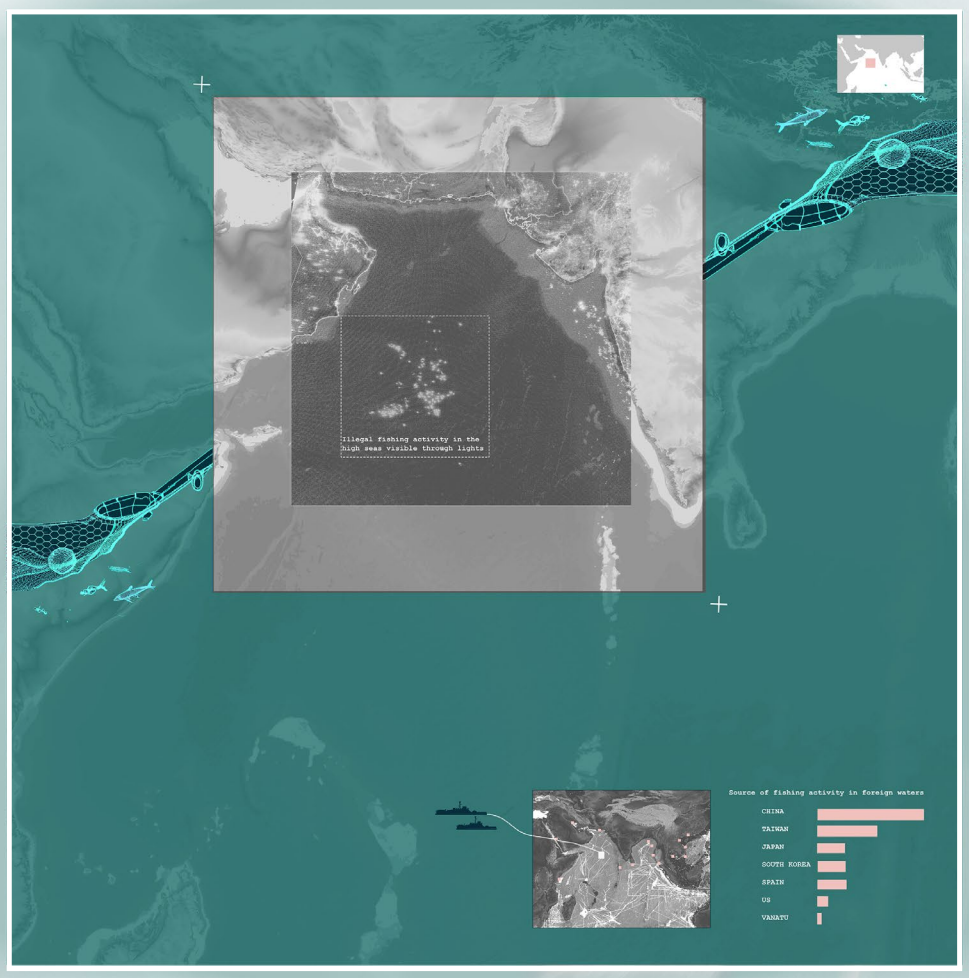
Image by Author, Data collected from Interviews

Some of the local community is still engaged in the act of wooden boat building; this indigenous art has seized to exist in many parts of the world but continues to exist in Gwadar. The local shipbuilding community is linked to the fishing community as the fisherman often come to them to get the boats repaired. During my fieldwork, I got a chance to spend time with the local shipbuilders and they shared the unique boat building process. For them the act of boat building is an art form that they learnt from their forefathers, hence it is a multi-generational art form. There is little documentation within scholarship of this art form which is prevalent in the Makran Coast Region. The locals say that it is different from the other Indian ocean port regions. The act of dhow building (wooden boat making) is influenced by the Arab dhows in their form and typology. But what is unique about these wooden boats is that they paint these intricate designs, floral patterns, and scenery on these boats, influenced by the truck art form prevalent in the South Asian Region. The locals fear that this unique tradition, is disappearing from the region as the younger generation of might not take up it as a profession after the urban development of the region. The wooden boats with intricate designs are hand painted and require a lot of time and effort, they often have unique quotations and messages painted on them, each trying to beat the other with more density and 'local flavor'. This local art has a particular stylistic flavor which has bold colors and dense designs painted in repetitive form, and coastal landscape scenery, this appropriation of the boat reflects that these boats mean a lot more than just material forms. The fact that these fishermen spend so much time on these boats often months in the sea, they become nomadic homes in which they dwell. However, since many are not motor powered, they cannot extend or go too far out in the ocean and compete with the trawlers that fish within the region. The boats have the capacity to be powered by the motor engine, but many poor local fishermen can't afford them. The government promised to build a floating jetty and

a lot more than just material forms. The fact that these fishermen spend so much time on these boats often months in the sea, they become nomadic homes in which they dwell. However, since many are not motor powered, they cannot extend or go too far out in the ocean and compete with the trawlers that fish within the region. The boats have the capacity to be powered by the motor engine, but many poor local fishermen can't afford them. The government promised to build a floating jetty and provide motorboats, but they are still awaiting those promises.

The sea a region of contesting sovereignty places a genuine concern, as each boat while fishing has an associated flag which marks its association while fishing in the international waters. Hence these boats are extensions of state sovereignty that float as parcels within the seas. The fact that these local dhows are not able to compete with the giant trawlers operating in the seas is concerning for the locals. The speed with which they operate is not competitive and they are limited in terms of storage capacity, fuel, and power to cross further out into the ocean.

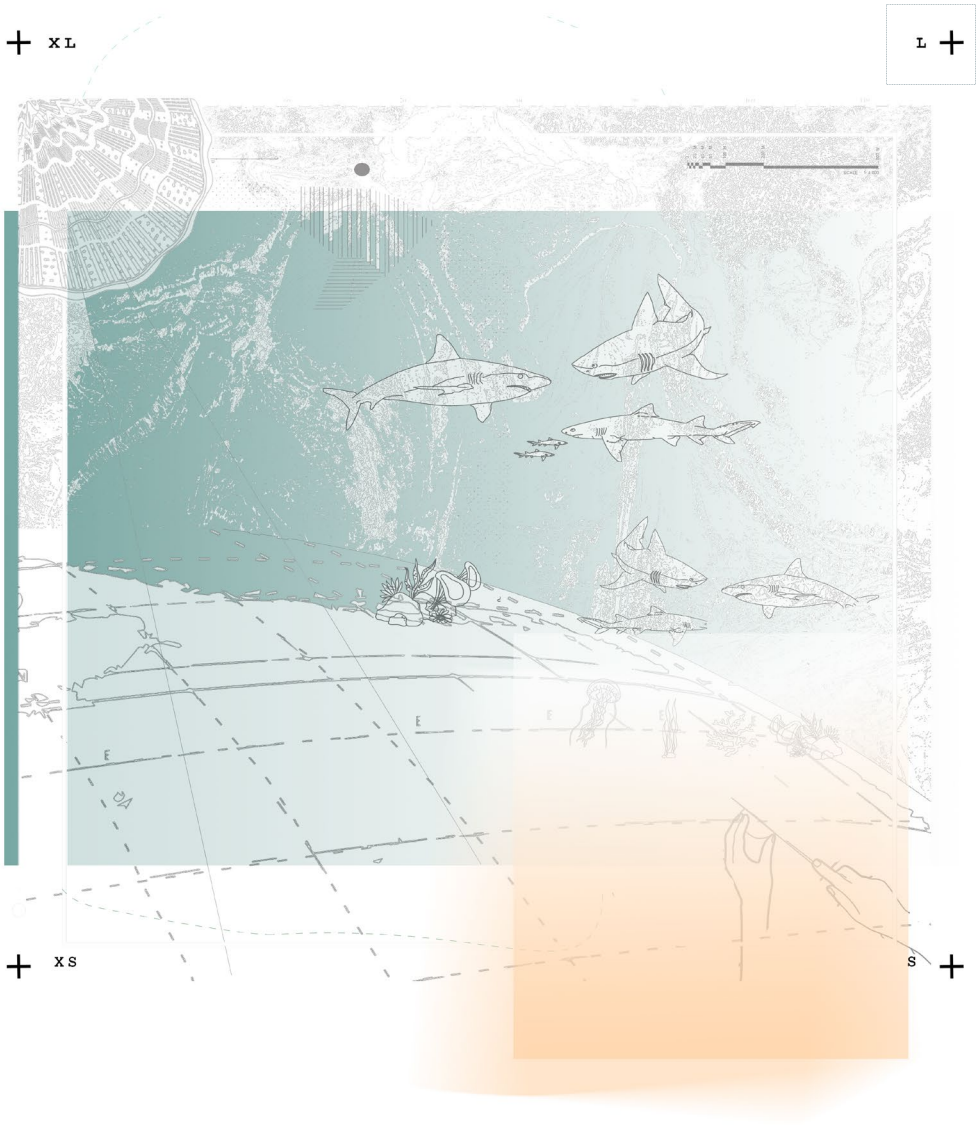
The illegal trawling remains the main concern of these fisherman as these giant trawlers, scrape the surface of the ocean with all that comes its way not just the fish, but coral reefs and seabed too destroying all the ecological life that exists within the oceans. The value of this ecosystem is not just for the locals or the fisherman as the natural oceanic systems effect the coastal climate and maintain the ecological balance.



map

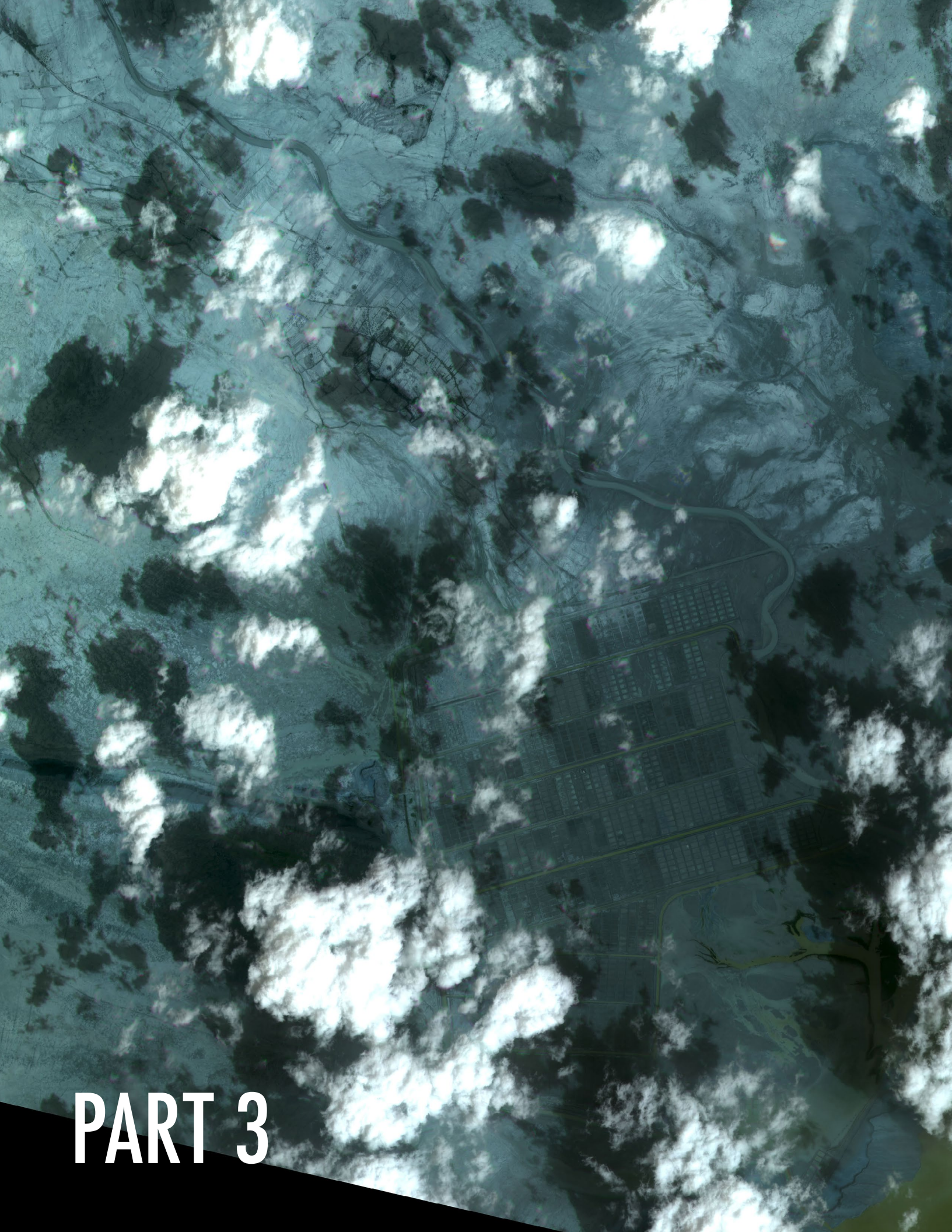
Map showing Illegal Deep Sea Trawling

Wooden Boat in Gwadar turned into Cafe, Gwadar 2022, Image by Author



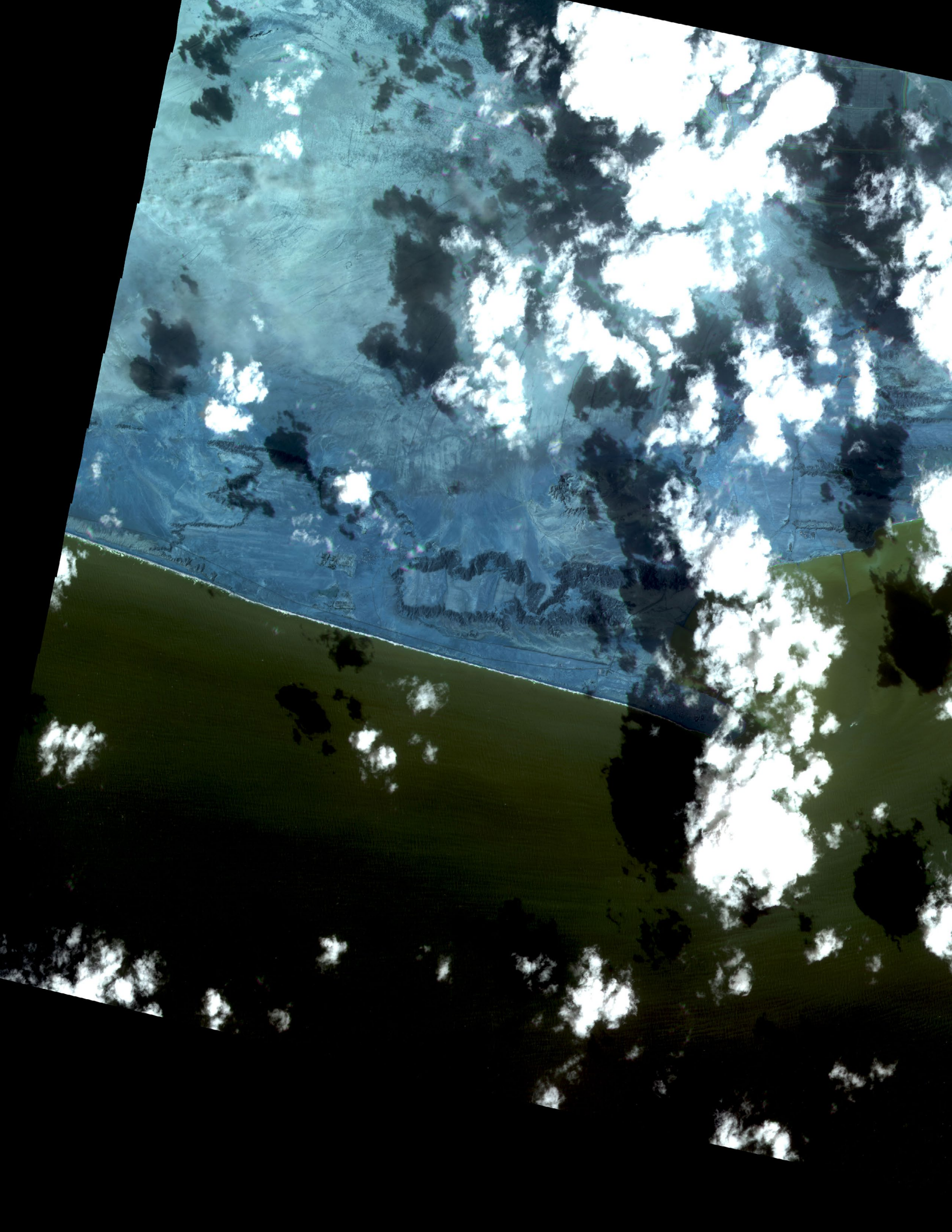
Conceptual Image showing the extinction of sharks in Arbian Sea

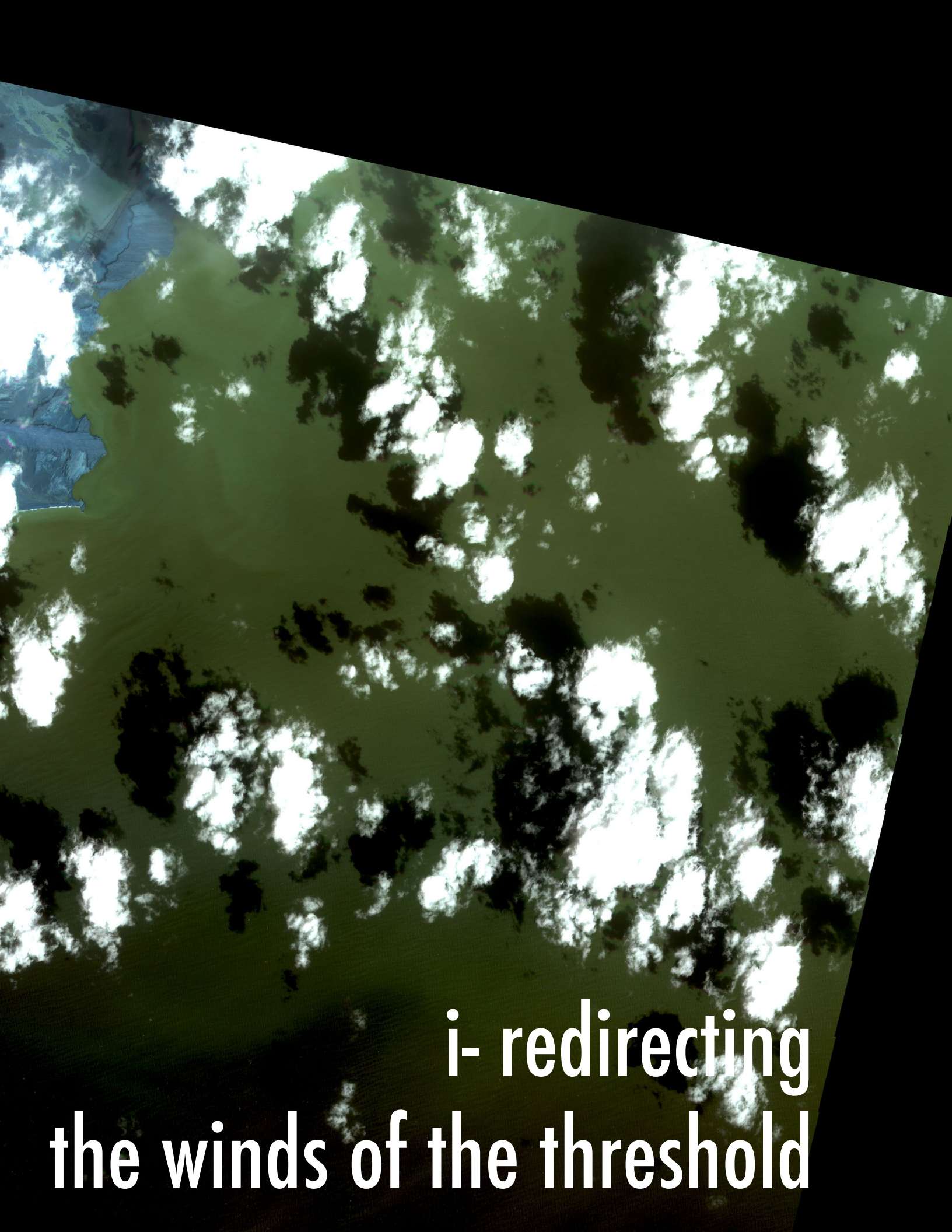
Shelter near Boat building area, Gwadar 2022, Image by Author



PART 3

Literal
Manifesto




i- redirecting
the winds of the threshold

The conceptual analogy of the littoral manifesto shapes into a literal manifesto that aims to step beyond the parameters of academia and extend out into the field as an initiation to a larger engagement with the community. The literal manifesto is an amalgamation of a zine, selected photography, curated videos, and critical maps that will highlight the issues of littoral and littoral dwellers within the urban centers of Pakistan.

One of the components of the literal manifesto, compiled as a zine, is a curated mind map which serves as a constellation of propositions that aim to address issues within the littoral landscape. The propositions are built upon the local needs highlighted by the community and a sensitive understanding of the region. However, they serve as an invitation rather than an imposition, to generate dialogue on the issues of the littoral.

One of the propositions of the zine is to redirect the winds of the existing political network into a communal form of brotherhood that aims to cultivate the shared close ties that the fishing community has fostered over the years. The sustained protests within the region by the local fishing community highlight that there is existing infrastructure of political activism that can be transformed into newer forms. The manifesto frames the fishing community as the principal stakeholders and aims to center the discussion around them as they are the most oppressed segment of the society within the social hierarchy within the region.

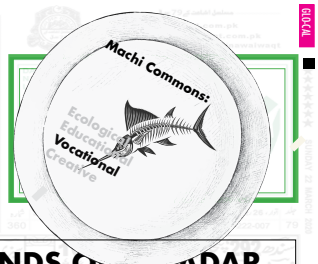
Within the field of contemporary urbanism there has been a surge in the application of the idea of utilizing commons as a conceptual framework. However, the idea of commons as shared infrastructure is not new and has been practiced within the context of Baluchistan region in the form of Karez irrigation system for ages, an indigenous water infrastructure that operated as shared social contracts. The regulation of commons can be adapted and tailored to the needs of the fishing community in this context.

The ambit of Machi Commons is a shared voluntary run organization. Within the larger umbrella of Machi Commons it houses ecological, vocational, educational, and creative as subcategories. Within which there are certain hyper-localized solutions that can be shared with the community and integrated with the master plan of the city. Within the master planning of the cities the city designs need to be reframed from a bottom-up approach as opposed to top-down. The bottom-up design approach needs localized partnerships with the community which are essential in sustaining an integrated approach. The commons can operate as public-private model or as voluntary organizations led by non-governmental organizations.

The visual language of the zine lends its vocabulary from the local newspapers distributed within the region. The visual monotony is dissected by the images of plates with the dead remains of fish metaphorically serves alluding to the decreasing biodiversity in the Arabian Sea.

30,000 fishermen along with their families are protesting in Gwadar District

Fishing remains the predominant means of livelihood in Gwadar. In fact, some 70 percent of the district's total labour force is employed in the fisheries sector. In terms of statistics, there were 30,660 fishermen in the district in 2002. More than 8,000 fishermen were based in Pasni. Fulltime professionals made up 66 percent of the total, 25 percent were part-timers and the remaining 11 percent were occasional workers in the sector. In 2002, the total catch on the Gwadar coast was 105,609 tonnes, valued at 3,408 million rupees. An unspecified amount of the catch is usually sold by larger fishing crafts to fish trawlers in the open sea. The volume of the catch varies widely in different months of the year. In 2002, the catch was above 10,000 tonnes per month from October to February, with the highest numbers in December and January when it was above 20,000 tonnes. In other months, the fish catch stood over 5,000 tonnes, except in May when it was 4,906 tonnes. The fishing fleet registered on the Gwadar coast comprises 4,494 boats of various sizes. The largest number or 54 percent of the boats are between 1 to 5 tonnes, followed by 21 percent in the 6 to15 tonnes category. Only 6 percent of the fishing vessels exceed 25 tonnes. All fishing crafts are fitted with engine. About 25 percent are classified as mechanized and fitted with inboard engines while 75 percent are classified as motorized and have outboard engines. No mechanized fishing craft is less than one tonne and no motorized fishing craft in the above 25 tonnes category. one tonne made up 9 percent of the total and a majority of these were based Smaller fishing boats known locally as yakdar or horri comprise about 64 percent of the total fishing craft. These boats operate in shallow waters closer to the coast; their fishing expeditions lasting from one to several days. Children, often family members of the older crew, learn their craft from an early age. The large fishing vessels known as launches or trawlers are at sea for longer periods. They operate in the deep sea, usually out of sight of land. The crew of the vessel comprises a captain or nakhuda, fishermen or classy and one cook. The number



GOOGLE

PUBLIC DEMAND

Boat Rack: *The displaced fisherman have to carry boats all the way to their homes*

Bio Degredable Nets: *To protect marine life*

Watch Tower: *The fisherman commune can keep an eye on the trawling activity and report*

Food banks: *Storage Freegers for the fisherman to stock the fish and excess fish can be*

Aqua Pods: *Fish and Oyster Farming*

Fishing App: *Machi Machi*

Floating jetty: *Vendor market*

MANIFESTO FOR REDIRECTING THE WINDS OF GWADAR

Besides the owner of the fishing craft, the crew and the fisherman, there are other players in the fisheries sector. Large vessel and high sea fishing expeditions are managed by mole agents who are responsible for periodic cleaning, repair and maintenance of crafts to ensure seaworthiness. In fact, mole agents manage the craft and expedition in terms of loading, unloading, maintenance, provision of crew and clearance with security agencies. But their most important work is to auction and dispose the catch, including some transactions between local fisher- Earlier, communication equipment was not permitted on fishing crafts. Those going on expeditions tended seem effectively cut off for the entire duration. Today, communication is of utmost importance for vessels on fishing expeditions in the open sea. Presently, the response and rescue component of the communication mechanism is missing. Added to the problem is the limitation of the communication equipment. Practically, communication equipment is of little or no use to fishing vessels operating in the EEZ or the Continental Shelf. local processing and marketing facilities are outdated and cannot compete in the upper-scale world markets. Almost 5,000 fishing crafts are being used for fishing in Gwadar. The sheer number generates an opportunity for developing a vibrant market to sustain the sector. Likewise, the needs of more than 30,600 fishermen cannot be left unattended. The availability of so many hard-working fishermen and their boats provides a window for creating effective mechanisms for investment, employment and facilitation. Though the fishing grounds around Gwadar are extremely rich, stocks are ultimately finite. In other parts of the world, over-fishing of many popular and abundant species, including cod, tuna and salmon, have led to a crash in stocks, with devastating consequences for the livelihood of fishermen. The fishermen of Gwadar need protection from the economic and ecological consequences of pollution, over-fishing, wasteful practices and use of illegal nets by foreign-owned trawlers. The sea is divided into three zones for economic and administrative purposes. Falling under the provincial government's control, the Territorial Zone extends up to 12 nautical miles. Fishing boats not registered in the province are not allowed to fish in territorial waters. The Continental Shelf is between 12 and 35 nautical miles. Fishing boats registered in other provinces are allowed to fish here. The sea zone after 12 nautical miles is also known as the Maritime Zone. The EEZ extends from 35 nautical miles to 200 nautical miles where licensed foreign trawlers are allowed deep-sea fishing. The Provincial fisheries department monitors the Territorial Zone while monitoring responsibility beyond that is entrusted to the MSA. Foreign trawlers routinely violate the Maritime Zone to the detriment of Gwadar's fishermen. To prevent illegal operations by foreign trawlers, it is necessary to strengthen the interdiction capacity of MSA and Balochistan's fisheries department. The sector also needs to update practices by adopting modern refrigeration techniques and sanitary handling.

LOG ON FOR LIVE TRACKING OF AIS SHIPS ON **SHIP TRAFFIC** TO MONITOR AND TRACK ILLEGAL TRAWLERS AND REPORT THEM TO PROVINCIAL FISHERIES DEPARTMENT

Water Issue

Rain Water Harvesting

Reviving Karez Water Irrigation

Call for Ecological Desalination

Public infrastructre

Building more Wind Catchers

Wind Turbines

Sustainability infrastructure

Earth Quake Shelter

Building with local Materials Mud and Reed Structures

Local Tree typology Plantation

Environment Corps

Chai Baithak

Floating Library

Memory Wailing Gardens

Archive the History

App of Local History

Internet Connections

Wifi Hub

Freedom Trail for Tourist

JAGEER TO JIGAR (OWNERSHIP TO BROTHERHOOD)

The four steps of collective commons that operate as social contracts

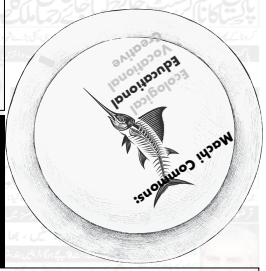
Collective Allocation

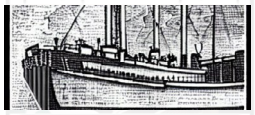
Collective Delimitation

Collective Demarcation

Collective Administration

LOG ON OPEN_SOURCE **GLOBAL FISHING WATCH** TO MONITOR AND TRACK ILLEGAL TRAWLERS AND REPORT THEM TO PROVINCIAL FISHERIES DEPARTMENT www.globalfishingwatch.org





Stopping deep-sea trawling in the Arabian Sea requires a coordinated effort from vari-ous stakeholders, including government agencies, international organizations, and civil society groups in Gwadar.

Flood resilience in the Makran coastal region requires a comprehensive policy framework that includes both short-term and long-term strategies

Demands and strategies to combat deep-sea trawling in the Arabian Sea

1. Enforce Existing Regulations: The Pakistani government needs to enforce existing regulations that prohibit destructive fishing practices such as deep-sea trawling. This will require increased surveillance and monitoring of fishing activities in the Arabian Sea. The use of Global Fishing Watch and RemoteSatellitetrackshouldbeprioritized.

2. Strengthen Regional Cooperation: Pakistan needs to work closely with neighboring countries such as India, Iran, and Oman to develop a coordinated regional approach to combatting illegal fishing activities, including deep-sea trawling. The increase in deep sea trawling is detrimental to the marine ecosystem of the whole Indian Ocean .

3. Implement Trade Sanctions: Countries that import seafood caught through deep-sea trawling can be targeted with trade sanctions, which can help deter companies from participating in these activities. Trade sanctions should be imposed on the countries that are giving subsidies to the illegal fishing trawlers that operate in high seas and poach within the EEZ zones too.

4.Promote Sustainable Fishing Practices: Pakistan government needs to subsidize and promote sustainable fishing practices through the development of certification schemes that reward fishermen who use sustainable practices. This can create economic incentives for fishermenor all the stakeholders to adopt sustainable practices.

5. Increase Public Awareness: Civil society groups and the media needs to play an important role in raising public awareness about the negative impacts of deep-sea trawling on marine ecosystems and the livelihoods of coastal communities. This will help build public pressure on the government to take action, beyond just words. The most effective way to stop Chinese deep-sea trawling in the Arabian Sea is through a combination of these strategies. By working together, government agencies, civil society groups, and the private sector can help protect the marine ecosystems of the Arabian Sea and promote sustainable fishing practices that benefit coastal communities.

1. Early Warning Systems: Developing effective early warning systems can help communities prepare for floods and minimize the damage caused by floods. This can include systems that provide advance notice of impending floods, as well as systems that provide information on evacuation routes and emergency shelters..

2. Infrastructure Development: Developing infrastructure that can withstand flooding is critical for flood resilience. This can include measures such as building sea walls and levees, constructing stormwater drainage systems, and elevating buildings and roads in flood-prone areas.

3. Land Use Planning: Developing effective land use planning policies can help prevent development in flood-prone areas and protect critical habitats such as wetlands and mangroves, which can help reduce the impact of flooding.

4.Capacity Building: Building the capacity of local communities and government agencies to respond to floods is critical for flood resilience. This can include training programs for emergency responders, community education programs on flood preparedness, and capacity-building programs for government agencies responsible for managing flood risk.

5.Disaster Recovery: Developing effective disaster recovery programs can help communities recover from floods more quickly and effectively. This can include programs that provide financial assistance to affected individuals and businesses, as well as programs that support the reconstruction of damaged infrastructure and buildings.

6. Climate Change Adaptation: Developing policies that address the root causes of flooding, such as climate change, is critical for long-term flood resilience. This can include policies that promote sustainable development, reduce greenhouse gas emissions, and support the transition to renewable energy sources.

Ship Making Industry

Rauli Art Work

Story Telling

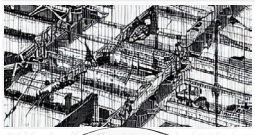
Boat Painting

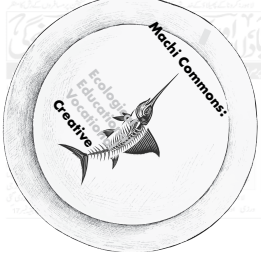
Graffiti Art

Theatre/ Natak

Playing Spaces

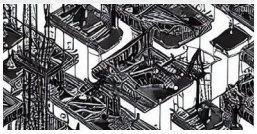
Workshop for Youtubers/ Tik Tokers to document city





DIY- WORKSHOP

How to build your own Fish Farm?
FISHERMAN X BOATMAKERS



Coastal communities in Gwadar can build a more resilient and sustainable future for themselves and future generations.

Future coastal resilence strategies in Gwadar should be framed by the govt.

1.Enhancing Disaster Preparedness: Developing a comprehensive disaster management plan that includes early warning systems, evacuation plans, and emergency response mechanisms can help reduce the impact of natural disasters on coastal communities. This plan should also prioritize the safety and well-being of vulnerable groups

2. Building Resilient Infrastructure: Coastal communities in Gwadar require resilient infrastructure that can withstand natural disasters and rising sea levels. Building codes and standards should be enforced to ensure that new infrastructure is designed to be resilient, while existing infrastructure should be retrofitted to enhance its resilience.

3.Promoting Sustainable Livelihoods: Coastal communities in Gwadar rely heavily on fishing and other marine-based livelihoods. However, overfishing and other unsustainable practices are threatening the sustainability of these livelihoods. The policy framework should prioritize the promotion of sustainable livelihoods .

4.Enhancing Social Resilience: Coastal communities in Gwadar are vulnerable to social and economic disruptions caused by natural disasters and other external shocks. The policy framework should prioritize the strengthening of social resilience through the promotion of community cohesion, social safety nets, and access to basic services.

5.Protecting the Natural Environment: The natural environment in Gwadar is under threat from climate change, overfishing, and other unsustainable practices. The policy framework should prioritize the protection of the natural environment through the promotion of sustainable resource use, the protection of biodiversity,

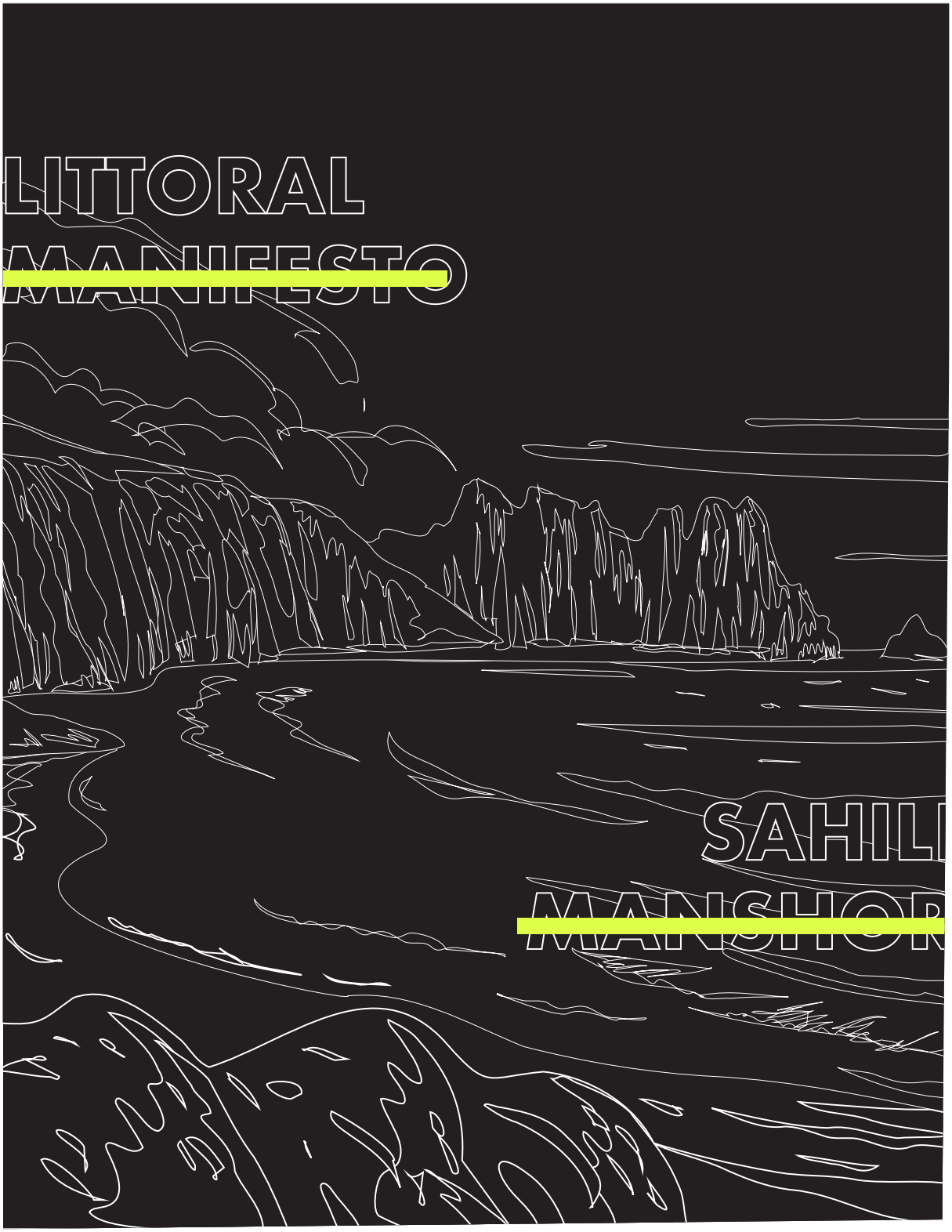
These policy recommendations can help make coastal communities in Gwadar more resilient to the impacts of natural disasters and other external shocks. However, the implementation of these policies requires the cooperation and collaboration of multiple stakeholders, including government agencies, civil society organizations, and the private

LEARNING FROM THE PAST-

REVIVE KAREZ IRRIGATION BROTHERHOOD

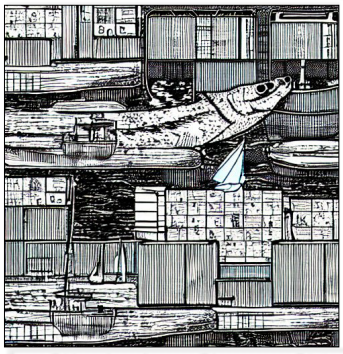
come join us...

Main page of the Manifesto, Image by Author



Back cover of the Manifesto, Image by Author

30,000 fishermen along with their fam protesting in Gwadar



Fishing remains the predominant means of livelihood in Gwadar. In fact, some 70 percent of the district`s total labour force is employed in the fisheries sector. In terms of statistics, there were 30,660 fishermen in the district in 2002. More than 8,000 fishermen were based in Pasni. Fulltime professionals made up 66 percent of the total, 23 percent were part-timers and the remaining 11 percent were occasional workers in the sector. In 2002, the total catch on the Gwadar coast was 105,609 tonnes, valued at 3,408 million rupees. An unspecified amount of the catch is usually sold by larger fishing crafts to fish trawlers in the open sea. The volume of the catch varies widely in different months of the year. In 2002, the catch was above 10,000 tonnes per month from October to February, with the highest numbers in December and January when it was above 20,000 tonnes. In other months, the fish catch stood over 5,000 tonnes, except in May when it was 4,906 tonnes. The fishing fleet registered on the Gwadar coast comprises 4,494 boats of various sizes. The largest number or 54 percent of the boats are between 1 to 5 tonnes, followed by 21 percent in the 6 to15 tonnes category. Only 6 percent of the fishing vessels exceed 25 tonnes. All fishing crafts are fitted with engine. About 25 percent are classified as mechanized and fitted with inboard engines while 75 percent are classified as motorized and have outboard engines. No mechanized fishing craft is less than one tonne and no motorized fishing craft in the above 25 tonnes category. one tonne made up 9 percent of the total and a majority of these were based

Sma
yak
cent
oper
coas
from
ten
learn
large
or tr
They
of si
com
men

PUBLIC DEMAND

Boat Rack: *The displaced fisherman have to carry boats all the way to their homes*

Bio Degredable Nets: *To protect marine life*

Watch Tower: *The fisherman commune can keep an eye on the trawling activity and report*

Food banks: *Storage Freezers for the fisherman to stock the fish and excess fish can be*

Aqua Pods: *Fish and Oyster Farming*

Fishing App: *Machi Machi*

Floating jetty: *Vendor market*

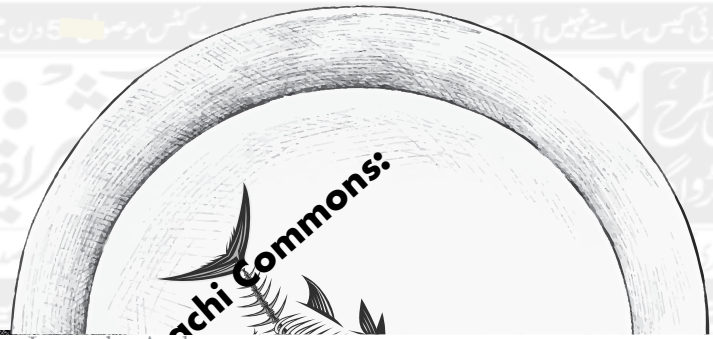
MANIFESTO FOR REDIREC

Besides the owner of the fishing craft, the crew and the fisherman, there are other players in the fisheries sector. Large vessel and high sea fishing expeditions are managed by mole agents who are responsible for periodic cleaning, repair and maintenance of crafts to ensure seaworthiness. In fact, mole agents manage the craft and expedition in terms of loading, unloading, maintenance, provision of crew and clearance with security agencies. But their most important work is to auction and dispose the catch, including some transactions between local fisher-

Earlier, communication equipment was not permitted on fishing crafts. Those going on expeditions tended were effectively cut off for the entire duration. Today, communication is of utmost importance for vessels on fishing expeditions in the open sea. Presently, the response and rescue component of the communication mechanism is missing. Added to the problem is the limitation of the communication equipment. Practically, communication equipment is of little or no use to fishing vessels operating in the EEZ or the Continental Shelf.

local processing and marketing facilities are outdated and cannot compete in the upper-scale world markets. Almost 5,000 fishing crafts are being used for fishing in Gwadar. The sheer number generates an opportunity for developing a vibrant market to sustain the sector. Likewise, the needs of more than 30,600 fishermen cannot be left unattended. The availability of so many hard-working fishermen and their boats provide a window for creating effective mechanisms for investment, employment and facilitation.

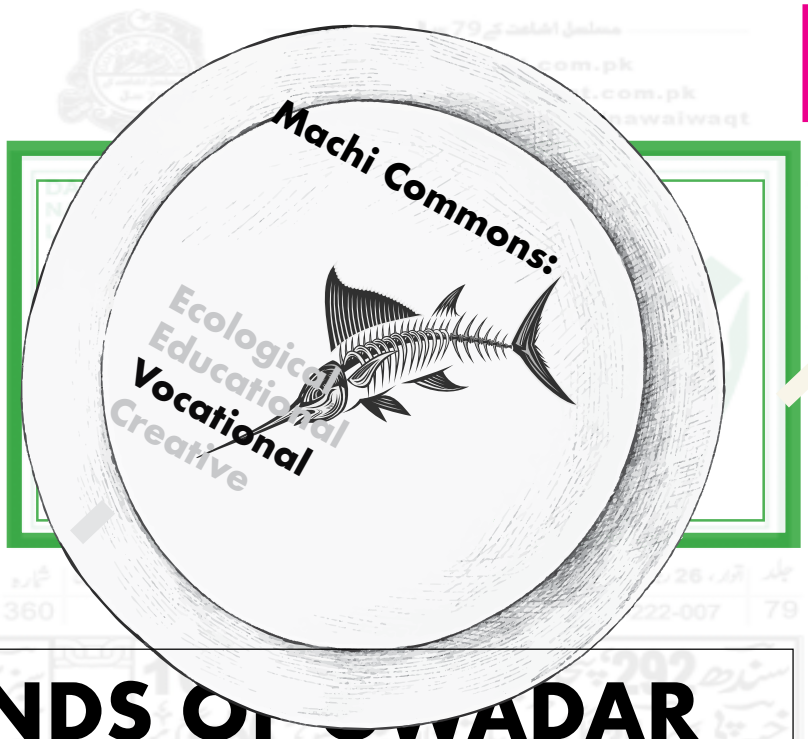
Thou
Gwa
ultim
worl
and
tuna
stock
es fo
fishe
from
cons
ing,
legal



Zoomed in and highlighted part of the Manifesto, Image by Author

ilies are District

ller fishing boats known locally as dar or horri comprise about 64 per- of the total fishing craft. These boats rate in shallow waters closer to the t; their fishing expeditions lasting n one to several days. Children, of- family members of the older crew, n their craft from an early age. The e fishing vessels known as launches rawlers are at sea for longer periods. y operate in the deep sea, usually out ight of land. The crew of the vessel prises a captain or nakhuda, fisher- or classy and one cook. The number



TING THE WINDS OF GWADAR

ugh the fishing grounds around adar are extremely rich, stocks are mately finite. In other parts of the d, over-fishing of many popular abundant species, including cod, and salmon, have led to a crash in ks, with devastating consequenc- or the livelihood of fishermen. The ermen of Gwadar need protection the economic and ecological sequences of pollution, over-fish- wasteful practices and use of il- nets by foreign-owned trawlers. The sea is divided into three zones for economic and administrative purposes. Falling under the provincial government's control, the Territorial Zone extends up to 12 nautical miles. Fishing boats not registered in the province are not allowed to fish in territorial waters. The Continental Shelf is between 12 and 35 nautical miles. Fishing boats registered in other provinces are allowed to fish here. The sea zone after 12 nautical miles is also known as the Maritime Zone. The EEZ extends from 35 nautical miles to 200 nautical miles where licensed foreign trawlers are allowed deep-sea fishing. The Provincial fisheries department monitors the Territorial Zone while monitoring responsibility beyond that is entrusted to the MSA. Foreign trawlers routinely violate the Maritime Zone to the detriment of Gwadar's fishermen. To prevent illegal operations by foreign trawlers, it is necessary to strengthen the interdiction capacity of MSA and Balochistan's fisheries department. The sector also needs to update practices by adopting modern refrigeration techniques and sanitary handling.

LOG ON
FOR LIVE TRACKING
OF
AIS SHIPS ON
SHIP TRAFFIC
TO MONITOR AND
TRACK ILLEGAL
TRAWLERS AND RE-
PORT THEM TO PRO-
VINCIAL FISHERIES
DEPARTMENT

ter Issue
in Water Harvesting
iving Karez Water Irrigation
l for Ecological Desalina-
blic infrastructre

Chai Baithak
Floating Library

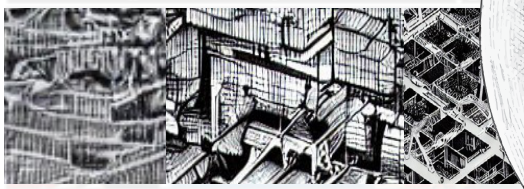
Zoomed in and highlighted part of the Manifesto, Image by Author

Freezers for the fisherman to stock the fish and excess fish can be

Aqua Pods: *Fish and Oyster Farming*

Fishing App: *Machi Machi*

Floating jetty: *Vendor market*



Machi Commons:

Ecological
Educational
Vocational
Creative

JAGEER TO JIGAR (OWNERSHIP TO BROTHERHOOD)

The four steps of collective commons that operate as social contracts

Collective Allocation

Collective Delimitation

Collective Demarcation

Collective Administration

LOG ON
OPEN -SOURCE
GLOBAL FISHING WATCH
TO MONITOR AND TRACK ILLEGAL TRAWLERS AND REPORT THEM TO PROVINCIAL FISHERIES DEPARTMENT
www.globalfishingwatch.org

Stopping deep-sea trawling in the Arabian Sea requires a coordinated effort from vari-ous stakeholders, including government agencies, international organizations, and civil society groups in Gwadar.

Demands and strategies to combat deep-sea trawling in the Arabian Sea

1. Enforce Existing Regulations: The Pakistani government needs to enforce existing regulations that prohibit destructive fishing practices such as deep-sea trawling. This will require increased surveillance and monitoring of fishing activities in the Arabian Sea. The use of Global Fishing Watch and Remote Satellite to track should be prioritized.

2. Strengthen Regional Cooperation: Pakistan needs to work closely with neighboring countries such as India, Iran, and Oman to develop a coordinated regional approach to combatting illegal fishing activities, including deep-sea trawling. The increase in deep sea trawling is deterimental to the marine ecosystem of the whole Indian Ocean .

3. Implement Trade Sanctions: Countries that import seafood caught through deep-sea trawling can be targeted with trade sanctions, which can help deter companies from participating in these activities. Trade sanctions should be imposed on the countries that are giving subsidies to the illegal fishing trawlers that operate in high seas and poach within the EEZ zones too.

4.Promote Sustainable Fishing Practices: Pakistan government needs to subsidize and promote sustainable fishing practices through the development of certification schemes that reward fishermen who use sustainable practices. This can create economic incentives for fishermenor all the stakeholders to adopt sustainable practices.

5. Increase Public Awareness: Civil society groups and the media needs to play an important role in raising public awareness about the negative impacts of deep-sea trawling on marine ecosystems and the livelihoods of coastal communities. This will help build public pressure on the government to take action, beyond just words.

The most effective way to stop Chinese deep-sea trawling in the Arabian Sea is through a combination of these strategies. By working together, government agencies, civil society groups, and the private sector can help protect the marine ecosystems of the Arabian Sea and promote sustainable fishing practices that benefit coastal communities.

Water Issue

Rain Water Harvesting

Revivng Karez Water Irrigation

Call for Ecological Desalination

Public infrastructre

Building more Wind Catchers

Wind Turbines

Sustainability infrastructure

Earth Quake Shelter

Building with local Materials Mud and Reed Structures

Local Tree typology Plantation

Environment Corps

Chai Baithak

Floating Library

Memory Wailing Gardens

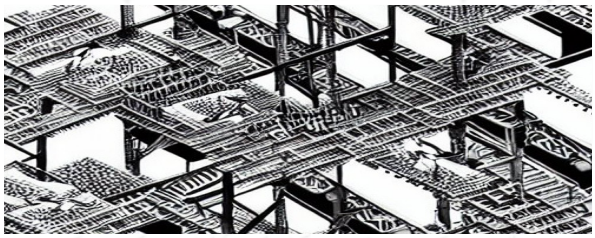
Archive the History

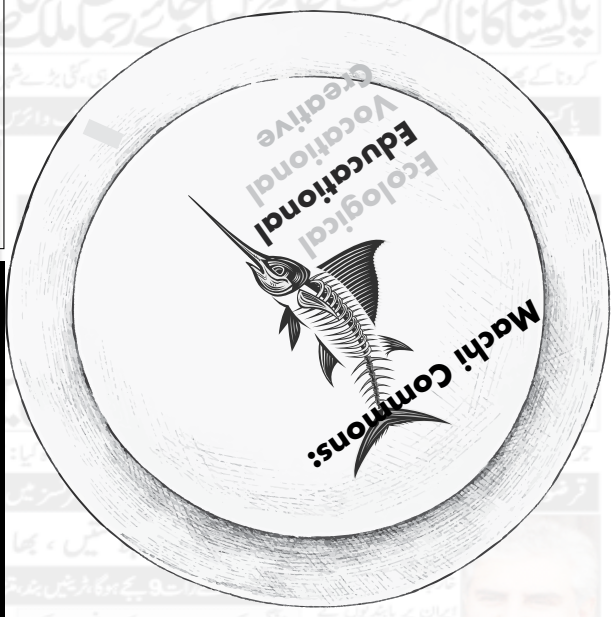
App of Local History

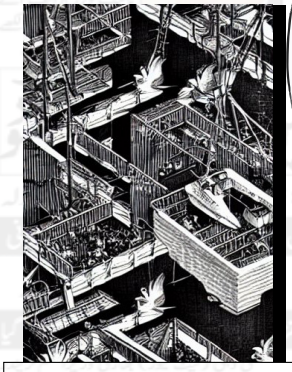
Internet Connections

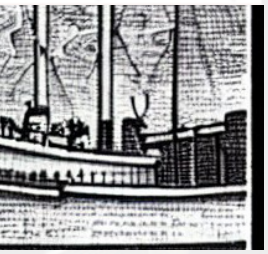
Wifi Hub

Freedom Trail for Tourist









Flood resilience in the Makran coastal region requires a comprehensive policy framework that includes both short-term and long-term strategies

1. Early Warning Systems: Developing effective early warning systems can help communities prepare for floods and minimize the damage caused by floods. This can include systems that provide advance notice of impending floods, as well as systems that provide information on evacuation routes and emergency shelters..

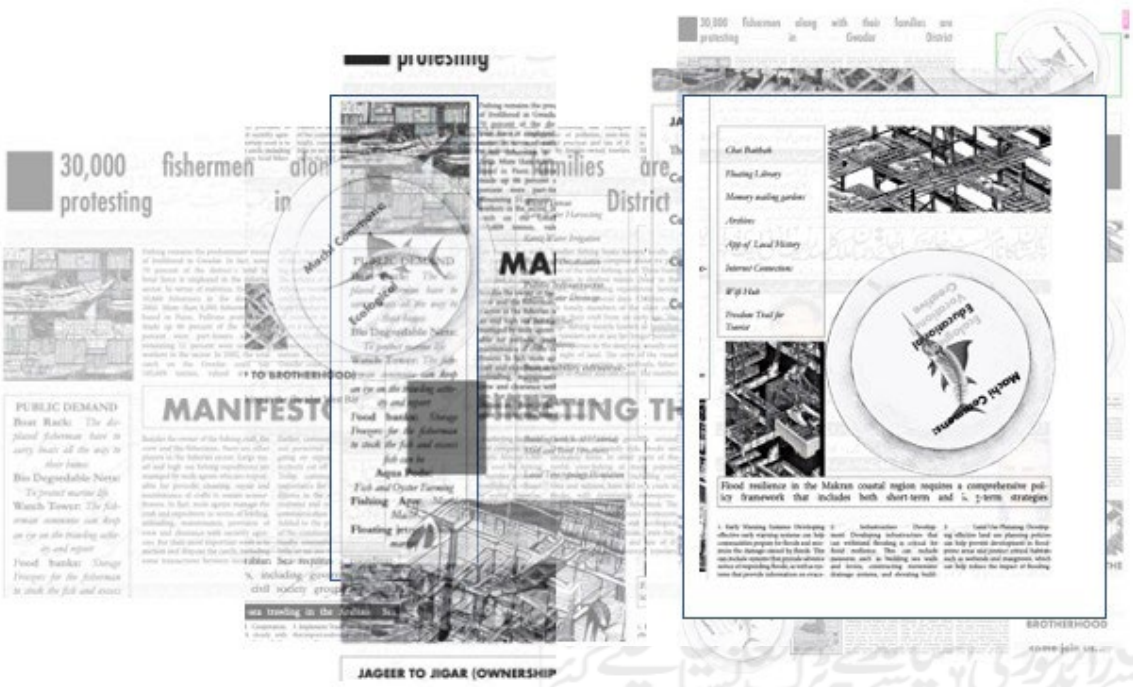
2. Infrastructure Development: Developing infrastructure that can withstand flooding is critical for flood resilience. This can include measures such as building sea walls and levees, constructing stormwater drainage systems, and elevating buildings and roads in flood-prone areas.

3. Land Use Planning: Developing effective land use planning policies can help prevent development in flood-prone areas and protect critical habitats such as wetlands and mangroves, which can help reduce the impact of flooding.

4.Capacity Building: Building the capacity of local communities and government agencies to respond to floods is critical for flood resilience. This can include training programs for emergency responders, community education programs on flood preparedness, and capacity-building programs for government agencies responsible for managing flood risk.

5.Disaster Recovery: Developing effective disaster recovery programs can help communities recover from floods more quickly and effectively. This can include programs that provide financial assistance to affected individuals and businesses, as well as programs that support the reconstruction of damaged infrastructure and buildings.

6. Climate Change Adaptation: Developing policies that address the root causes of flooding, such as climate change, is critical for long-term flood resilience. This can include policies that promote sustainable development, reduce greenhouse gas emissions, and support the transition to renewable energy sources.



Ship Making Industry

Raali Art Work

Story Telling

Boat Painting

Grafitti Art

Theatre/ Natak

Playing Spaces

Workshop for Youtubers/Tik Tokers to document city

DIY- WORKSHOP

How to build your own Fish Farm?
FISHERMAN X BOATMAKERS

Coastal communities in Gwadar can build a more resilient and sustainable future for themselves and future generations.

Future coastal resilence strategies in Gwadar should be framed by the govt.

1.Enhancing Disaster Preparedness: Developing a comprehensive disaster management plan that includes early warning systems, evacuation plans, and emergency response mechanisms can help reduce the impact of natural disasters on coastal communities. This plan should also prioritize the safety and well-being of vulnerable groups

2. Building Resilient Infrastructure: Coastal communities in Gwadar require resilient infrastructure that can withstand natural disasters and rising sea levels. Building codes and standards should be enforced to ensure that new infrastructure is designed to be resilient, while existing infrastructure should be retrofitted to enhance its resilience.

3.Promoting Sustainable Livelihoods: Coastal communities in Gwadar rely heavily on fishing and other marine-based livelihoods. However, overfishing and other unsustainable practices are threatening the sustainability of these livelihoods. The policy framework should prioritize the promotion of sustainable livelihoods .

4.Enhancing Social Resilience: Coastal communities in Gwadar are vulnerable to social and economic disruptions caused by natural disasters and other external shocks. The policy framework should prioritize the strengthening of social resilience through the promotion of community cohesion, social safety nets, and access to basic ser-

5.Protecting the Natural Environment: The natural environment in Gwadar is under threat from climate change, overfishing, and other unsustainable practices. The policy framework should prioritize the protection of the natural environment through the promotion of sustainable resource use, the protection of biodiversity,

These policy recommendations can help make coastal communities in Gwadar more resilient to the impacts of natural disasters and other external shocks. However, the implementation of these policies requires the cooperation and collaboration of multiple stakeholders, including government agencies, civil society organizations, and the private

LEARNING FROM THE PAST-

REVIVE KAREZ IRRIGATION BROTHERHOOD

come join us...

BIBLIOGRAPHY

Bibliography:

Anderson, Clare. "Introduction to Marginal Centers: Writing Life Histories in the Indian Ocean World." Journal of Social History 45, no. 2 (2011): 335–44. http://www.jstor.org/stable/41678858.

Akhtar, Nasreen. 2017. 'Balochistan Conflict: Internal and International Dynamics.' Pakistan Journal of Social Sciences (PJSS) 37, no. 1: 190–202.

Beeck, Sonja, and Meredith Baber. "Scaling Infrastructure." edited by Meredith Baber. First edition. New York: Princeton Architectural Press, 2016.

Bremner, Lindsay, Beth Cullen, Christina Leigh Geros, John Cook, Harshavardhan Bhat, Anthony Powis, and Tom Benson. Monsoon as Method : Assembling Monsoonal Multiplicities. New York: Actar Publishing, 2022.

Colls, Caroline. Forensis: The Architecture of Public Truth. Sternberg Press, 2014. Print

Cowen, Deborah. 'The Deadly Life of Logistics: Mapping Violence in Global Trade.' The Deadly Life of Logistics. Minneapolis: University of Minnesota Press, 2014. Print

Clift, P. D. The Tectonic and Climatic Evolution of the Arabian Sea Region. Vol. 195. Bath: Geological Society, 2002.

Chowdhary, Harris. "Making Cities, Making Citizens; Governmentality and the Politics of Space Along the China Pakistan Economic Corridor, a Comparative Urban Study of Shenzhen, Kashgar, and Gwadar.", Bachelor's Thesis, University of Texas at Dallas, 2018.

Easterling, Keller. Extrastatecraft : the Power of Infrastructure Space. London ; Verso, 2014. Print.

Eyal Weizman, Forensic Architecture: Violence at the Threshold of Detectability, Zone Books. 2017

Ejaz, Ahmad. Jamshed, Unsa. "Review of China's Role in Development of Gwadar Port.", Journal of Pakistan Vision, Volume 19, Issue No 2. 2019. https://prdb.pk/article/review-of-china-s-role-in-development-of-gwadar-port-5399

Graf A, Huat C, "Port Cities in Asia and Europe", Routledge Studies in the Modern History of Asia. 2009

Hussain, Zahra. Awan, Nishat. "Conflicting Material Imaginaries", New Silk Roads, e-flux Architecture. 2019. https://www.e-flux.com/architecture/new-silk-roads/312609/conflicting-material-imaginaries/

Haq, Bilal U., and John D. Milliman. "Marine Geology and Oceanography of Arabian Sea and Coastal Pakistan". New York: Van Nostrand Reinhold/Scientific and Academic Editions, 1984.

Jamali, Hafeez. "A Tempest in My Harbor: Gwadar, Balochistan." In Dispatches from Pakistan, edited by Madiha R. Tahir, Qalandar Bux Memon, and Vijay Prashad, 168–84. University of Minnesota Press, 2012. http://www.jstor.org/stable/10.5749/j.ctt6wr7cd.16.

Karadon.I, Kennedy. C, Dutton.P. "Gwadar China's Potential Strategic Strongpoint in Pakistan." China Maritime Studies Institute, China Maritime Report no. 7. August 2013
Keshavarzian, A. "From Port Cities to Cities with Ports", Oxford Publication Online. January 2017.

Khan, Zahid." China's Gwadar and India's Chahbahar.", Institute of strategic Studies Islamabad Strategic studies, Vol.32/33, no.4/Vol.33 no.1. 2013.

Kokot, Waltraud. "Port Cities as Areas of Transition- Comparative Ethnographic Research," January 2009. https://www.researchgate.net/publication/238600813_Port_Cities_as_Areas_of_Transition_-_Comparative_Ethnographic_Research.

Larkin, Brian. "The Politics and Poetics of Infrastructure." Annual Review of Anthropology 42 (2013): 327–43. http://www.jstor.org/stable/43049305.

Lyster, Clare. Learning from Logistics: How Networks Change Our Cities. Basel/Berlin/Boston: Walter de Gruyter GmbH, 2016.Print

Mir, Nadir. Gwadar on The Global Chessboard, Pakistan's Identity, History, and Culture. Lahore, Punjab: Ferozsons (pvt.) Ltd, 2010. Print

Ramos, Stephen J. Dubai Amplified : the Engineering of a Port Geography. Farnham, Surrey, England ;Ashgate Pub. Ltd., 2010. Print

Roman, Michael R. "The Arabian Sea: Living Marine Resources and the Environment. Mary-Frances Thompson , Nasima M. Tirmizi." The Quarterly review of biology 72, no. 2 (1997): 218–218.

Rodrigue, Jean-Paul. The Geography of Transport Systems, New York: Routledge, 2020. doi.org/10.4324/9780429346323

Sheller, Mimi. Mobility Justice: The Politics of Movement in an Age of Extremes. London: Verso, 2018. Print.
Steiner, Frederick R., and Ian L. McHarg. Design with Nature Now. Edited by Frederick R. Steiner. Cambridge, Massachusetts: Lincoln Institute of Land Policy, published in association with the University of Pennsylvania Stuart Weitzman School of Design and The McHarg Center, 2011

Weizman, Eyal. Forensic Architecture : Notes from Fields and Forums = Forensische Architektur : Notizenvon Feldern Und Foren. Ostfildern: Hatje Cantz, 2012.

Zuo, Long, and Alejandro Lara. "Shekou: new modes of development." Landscape Architecture Frontiers 2, no. 5 (2014): 143+. Gale Academic OneFile (accessed May 14, 2022). https://link.gale.com/apps/doc/A454485953/AONE?u=googlescholar&sid=bookmark-AONE&xid=65ab5195

Nicolini, Beatrice., and Penelope-Jane. Watson. Makran, Oman, and Zanzibar : Three-Terminal Cultural Corridor in the Western Indian Ocean, 1799-1856. Leiden ;: Brill, 2004.

Lyster, Clare. Learning from Logistics: How Networks Change Our Cities. Basel/Berlin/Boston: Walter de Gruyter GmbH, 2016.

Fiorani Piacentini, Valeria., and Riccardo. Redaelli. Baluchistan : Terra Incognita : a New Methodological Approach Combining Archaeological, Historical, Anthropological and Architectural Studies. Oxford, England: Archaeopress, 2003.

Schmitt, Susanne. "A Different Kind of Ethnography. Imaginative Practices and Creative Methodologies." Anthropos. FIBOURG: Nomos Verlagsgesellschaft mbH, 2018.

Atkinson, Paul, Sara Delamont, and William Housley. Contours of Culture : Complex Ethnography and the Ethnography of Complexity. Walnut Creek, [CA: AltaMira Press, 2008.
Strang, Veronica. Water. London: Reaktion Books, 2015.

"The Sea and Monsoon Within: A Mumbai Manifesto," Ecological Urbanism, edited by Mohsen Mostafavi with Gary Doherty, Lars Müller Publishers, 2010

Lehrman, B. (2011). [Review of SOAK: Mumbai in an Estuary, by A. Mathur, D. da Cunha, A. Appadurai, & C. Breckenridge]. Landscape Journal, 30(2), 315–317. http://www.jstor.org/stable/43324382

Tan, Pelin."The Scale of Commons and Solidarity Infrastructures: on City Plaza Hotel, Athens", p.135-40, Columbia University Press, New York, October, 2019
Waldheim, Charles, and Alan Berger. "Logistics Landscape." Landscape Journal 27, no. 2 (2008): 219–46. http://www.jstor.org/stable/43332450.

Bayat, Asif. "From 'Dangerous Classes' to 'Quiet Rebels': Politics of the Urban Subaltern in the Global South." International Sociology, 15(3): 533-557, 2000.
Holston, J. "Spaces of Insurgent Citizenship." in Cities and Citizenship, Duke University Press, 155-176, 1999.

Pickles, John. 2004. A History of Spaces: Cartographic Reason, Mapping, and the Geocoded World. London: Routledge.

Rajani, Shahana. Malkani, Zahra. (2015). "Exhausted Geographies", Retrieved from: http://www.exhaustedgeographies.com/volume-one.html

Rao, V. (2006). "Slum as theory: the South/Asian city and globalization." International Journal of Urban and Regional Research, 30.1: 225-232.

Site Visit Data:
Author, Interviews, 5 Fisherman, 2 residents, 4 Officials, Semi-structured Interview. Gwadar, August, 2022.
Author, Photographic Footage Digital Images, Gwadar, Augusr, 2022.

Archival Data:
'File 22/16 III Gwadur', British Library: India Office Records and Private Papers, IOR/R/15/1/380, in Qatar Digital Library <https://www.qdl.qa/node/9334> [accessed 15 November 2022]

'Précis of Mekran Affairs', British Library: India Office Records and Private Papers, IOR/L/PS/20/C244, in Qatar Digital Library <https://www.qdl.qa/archive/81055/vdc_100000000884.0x0001ca> [accessed 15 November 2022]

Custer, S., Dreher, A., Elston, T.B., Fuchs, A., Ghose, S., Lin, J., Malik, A., Parks, B.C., Russell, B., Solomon, K., Strange, A., Tierney, M.J., Walsh, K., Zaleski, L., and Zhang, S. 2021. Tracking Chinese Development Finance: An Application of AidData's TUFF 2.0 Methodology. Williamsburg, VA: AidData at William & Mary.

Johannes M. Waldmüller, Hameed Jamali & Nelson Nogales (2019)
Operationalizing Sustainable Development Goals in Vulnerable Coastal Areas of Ecuador and Pakistan: Marginalizing Human Development?, Journal of Human Development and Capabilities, 20:4, 468-485, DOI: 10.1080/19452829.2019.1666810

Cartography references:

Rankin, William After the Map: Cartography, Navigation, and the Transformation of Territory in the Twentieth Century, University Chicago Press, 2018. Print.

Mesquita, André.Counter–Cartographies–The Insurrection of Maps, From the book This Is Not an Atlas, Verlag 2018. https://doi.org/10.1515/9783839445198-002

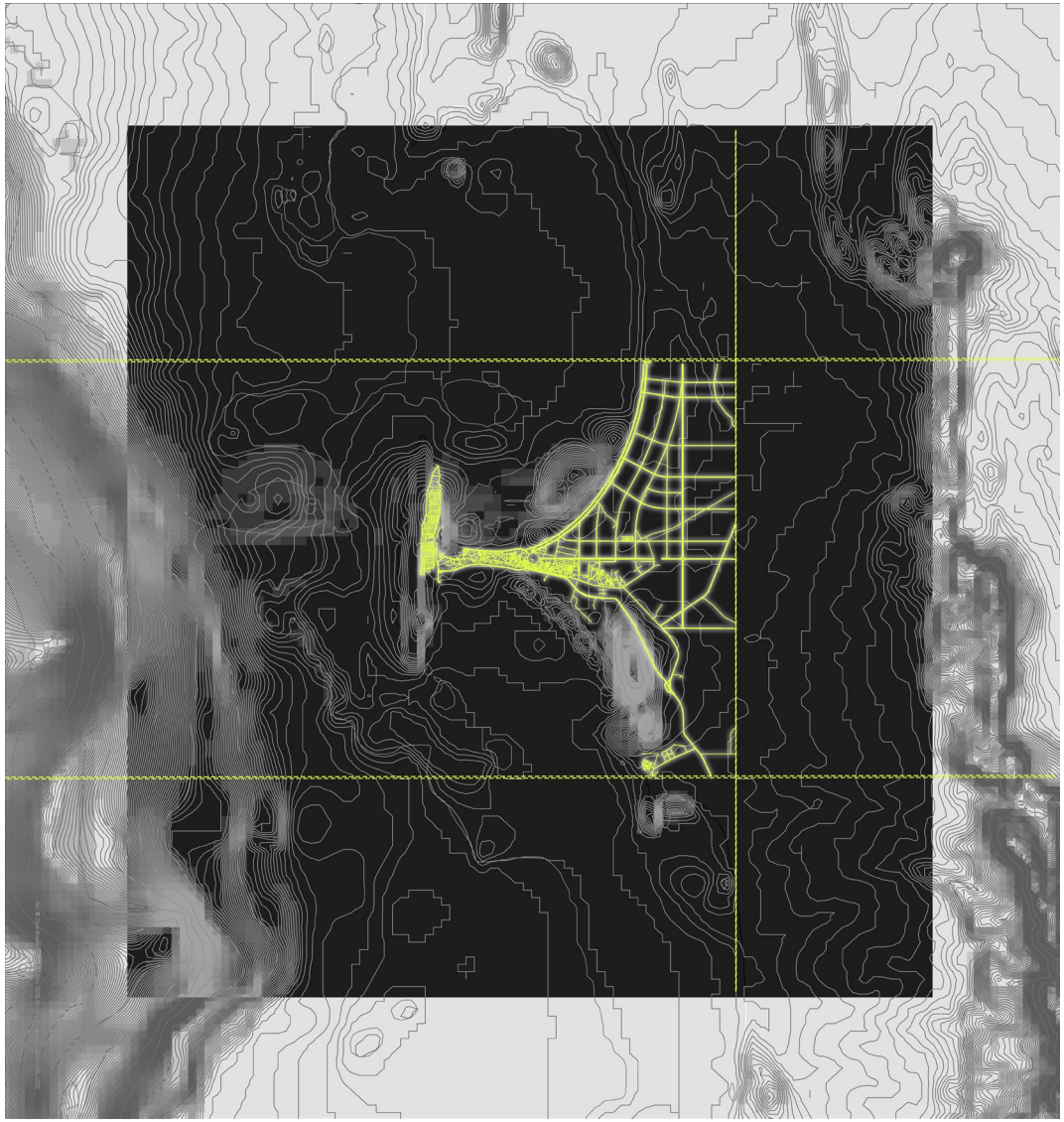
Ghosn, Rania. Jazairy, El Hadi.Geostories: Another Architecture for the Environment , 2020. Print

Olóriz, Clara. Landscape as Territory: A Cartographic Design. Actar, 2020. Print

Paezy, Roger. Operative Mapping: The Use of Maps as a Design Tool. Actor, 2020.

Gendall, J.P. (2008), Deccan Traverses: The Making of Bangalore's Terrain - Edited by Anuradha Mathur and Dilip Da Cunha. Journal of Architectural Education, 61: 68-69. https://doi.org/10.1111/j.1531-314X.2007.00175.x

Bremner, Lindsay, Beth Cullen, Christina Leigh Geros, Harshavardhan Bhat, and Anthony Powis. (2022) 2022. Monsoon as Method. Actar D. https://www.perlego.com/book/3532848/monsoon-as-method-assembling-monsoonal-multiplicities-pdf.



LIST OF FIGURES

List of Figures:

Figure.1 Still from Video pg. 6
Credits: Photograph by Author

Figure.2 Still from Video pg. 7
Credits: Photograph by Author

Figure.3 Where do the birds end their flight pg. 8
Credits: Photograph by Author

Figure.4 World Map Projection flight pg. 9
Credits: Ocean map data from https://earth.nullschool.net/about.html

Figure.5 Amorphous Boundaries, Gwadar Coast 2022 pg. 10
Credits: Photograph by Author

Figure.6 Amorphous Boundaries, Gwadar Coast 2022 pg. 12
Credits: Photograph by Author

Figure.8 Bathymetric Topography pg. 13
Credits: Data from The GEBCO Grid https://www.gebco.net/data_and_products/gridded_bathymetry_data/

Figure.9 Conceptual Map Drawing pg. 16
Credits: Ocean Current Map Data from https://earth.nullschool.net/about.html

Figure.10 Conceptual Map Drawing pg. 19
Credits: Ocean Current Map Data from https://earth.nullschool.net/about.html

Figure.11 Gwadar city and Port view from PC Hotel 2022 pg. 20
Credits: Photograph by Author

Figure.12 Gwadar city and Port view from PC Hotel 2022 pg. 21
Credits: Photograph by Author

Figure.12 Gwadar Historical Maps Timeline pg. 23
Credits: https://www.davidrumsey.com/luna/servlet/s/1xolk1

Figure.13 Map Shows telegraph stations in Kurarachee (Karachi), Sonmeauce (Sonmani), Ormarali (Ormara), Pusinee (Pasni) and Guadur (Gwadar) , 1864, Timeline pg. 25
Credits: 'Mekran coast - Kurrachee to Guadur with Lieut. Ross route from Guadur to Kurrachee' [□ 1r] (1/2), British Library: Map Collections, IOR/X/3082/1, in Qatar Digital

Figure.14 Gwadar Port Development pg. 27 and 28
Credits: Satellite Maps Data: Google, Image Copy right 2022, Maxar Technologies
Accessed 2022.

Figure 15. Map of Gwadar Smart Plan 2050. Retraced by Author from official Documents. pg. 35
Credits: https://www.gda.gov.pk/masterplan/

Figure.17 Gwadar Street Banner, 2022 pg. 20
Credits: Photograph by Author

Figure.18 Gwadar East Bay Expressway, 2022 pg. 38
Credits: Photograph by Author

Figure.19 Gwadar East Bay Expressway, 2022 pg. 39
Credits: Photograph by Author

Figure.20 Gwadar City Rendering by Local Artist, 2022 pg. 39
Credits: Photograph by Author

Figure.21 Gwadar Old Settlement, Retraced by Author 2022 pg. 42
Credits:

Figure.22 Gwadar Road Network 2022 pg. 43
Credits:

Figure.23 Gwadar 2022 pg. 44
Credits: Images by Author

Figure 24.
Credits: Maps Data: Google, Image Copy right 2022, Maxar Technologies
Accessed 2022.

Figure 25.: Special Economic Zone Model Inside Chinese Business Hotel in Gwadar pg.48
Credits: Image by Author

Figure 26.: Special Economic Zone Model Inside Chinese Business Hotel in Gwadar pg.49
Credits: Image by Author

Figure 27.: Overlooking the Sea in Gwadar pg.50
Credits: Image by Author

Figure 28.: Overlooking the Sea in Gwadar pg.51
Credits: Image by Author

Figure 29.: Global Network of Ports and its Flows pg.52
Credits: Image by Author

Figure 30.: Global Network of Ports and its Flows pg.53
Credits: Image by Author

Figure 31.: Surface of Earth pg.54
Credits: Image by Author

Figure 32: Global Network of Ports and its Flows pg.55
Credits: Image by Author

Figure 33: Belt and Road Initiative Master Plan, pg.56
Credits: Image by Author

Figure 34: Chinese Ports in Indian Ocean- String of Pearls-, pg.57
Credits: Image by Author

Figure 34: Pakistan changed outer limit from 200 nautical miles to 350 Nautical Miles-pg.58
Credits: Image by Author

Figure 35: Pakistan changed outer limit from 200 nautical miles to 350 Nautical Miles-pg.59
Credits: Image by Author

Figure 36: Belt and Road Initiative Master Plan, pg.60
Credits: Image by Author

Figure 37: Changing territoriality with Belt and Road Inititaive Masterplan, pg.61
Credits: Image by Author

Figure 39: Gwadar's Port Connectivity-, pg.62
Credits: Image by Author

Figure 40: Internal Waters-, pg.62
Credits: Image by Author

Figure 41: 12 and 24 Miles Contiguous Zone, pg.63
Credits: Image by Author

Figure 42: 200 Nautical Miles Continental Shelf, pg.63
Credits: Image by Author

Figure 43: EEZ Boundaries, pg.64
Credits: Image by Author

Figure 44: Contested EEZ Boundaries, pg.64
Credits: Image by Author

Figure 45: Open Seas of Indian Ocean, pg.65
Credits: Image by Author

Figure 46: Territorial sovereignty along with coastal shelf in Indian Ocean, pg.66
Credits: Image by Author

Figure 47: Territorial sovereignty along with coastal shelf in the world, pg.67
Credits: Image by Author

Figure 48: Conceptual Map Drawing, pg.69
Credits: Image by Author

Figure 49:Rock Formation showing geologic age of Gwadar, pg.70
Credits: Image by Author

Figure 50: Rock Formation showing geologic age of Gwadar, pg.71
Credits: Image by Author

Figure 51: Rock Formation showing geologic age of Gwadar, pg.71
Credits: Image by Author

Figure 52: Moving Thresholds, pg.72
Credits: Image by Author

Figure 53: Faulty thresholds- Geologic fault lines around Gwadar, pg.73
Credits: Image by Author

Figure 54: Shifting thresholds - Mud volcanoes and Zalzala Jazira,, pg.74
Credits: Image by Author

Figure 55: Materiality and Time- Makran Coast mineral deposition,, pg.75
Credits: Image by Author

Figure 56: Materiality and Time- Makran Coast Spatialized Stratigraphy,, pg.76
Credits: Image by Author

Figure 57: Threshold boundary Conditions, pg.77
Credits: Image by Author

Figure 58: Threshold boundary Conditions pg.78
Credits: Image by Author

Figure 59: Threshold boundary Conditions, pg.79
Credits: Image by Author

Figure 60: Threshold boundary Conditions, pg.80
Credits: Image by Author

Figure 61: Threshold boundary Conditions, pg.81
Credits: Image by Author

Figure 62: Materiality and Texture, pg.82
Credits: Image by Author

Figure 63: Continuity- Threshold condition of Gwadar- Wide angle photo and serial topographic section pg.83
Credits: Image by Author

Figure 64: Arabian Sea pg.84
Credits: Image by Author

Figure 65: Arabian Sea pg.85
Credits: Image by Author

Figure 66: Conceptual diagram of world shipping routes from the view of the satellite pg.86
Credits: Image by Author

Figure 67: Wooden ship building still exists in this region, pg.87
Credits: Image by Author

Figure 68: Wooden ship building still exists in this region, pg.88
Credits: Image by Author

Figure 69: A Day in the life of the fisherman, pg.89
Credits: Image by Author

Figure 70: Current Local Boat Typologies pg.90
Credits: Image by Author

Figure 71: Wooden ship building still exists in this region, pg.91
Credits: Image by Author

Figure 72: Map showing illegal Deep Sea Trawling, pg.94
Credits: Image by Author

Figure 73: Wooden boat in Gwadar turned into Cafe, pg.95
Credits: Image by Author

Figure 74: Shelter near Boat building area, pg.97
Credits: Image by Author

Figure 75: Conceptual Map Drawing, pg.99
Credits: Image by Author

Figure 76: Chai Tea stall in Gwadar, pg.100
Credits: Image by Author

Figure 77: Chai Tea Stall in Gwadar, pg.101
Credits: Image by Author

Figure 78: Main page of the Manifesto, pg.102
Credits: Image by Author

Figure 79: Back cover of the Manifesto, pg.103
Credits: Image by Author

Figure 80: Zoomed in and highlighted part of the Manifesto, pg.104
Credits: Image by Author

Figure 81: Zoomed in and highlighted part of the Manifesto, pg.105
Credits: Image by Author

Figure 82: Zoomed in and highlighted part of the Manifesto, pg.106
Credits: Image by Author

Figure 83: Zoomed in and highlighted part of the Manifesto, pg.107
Credits: Image by Author

Figure 84: Zoomed in and highlighted part of the Manifesto, pg.108
Credits: Image by Author

Figure 85: Zoomed in and highlighted part of the Manifesto, pg.109
Credits: Image by Author