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# Energy Crises and Discard in Pakistan: A Case Study on Korangi's Fisherfolk

**Abstract:** Subsistence fishing has increased in its energy requirement in the last few years. More fuel is required for longer fishing expeditions due to declines in fish stock at the coast as a result of overfishing and effluent dumping in water bodies. Fuel and energy use is crucial to the fisheries sector, but there is little note of this in food and natural resource management. This paper intends to study how discard and the rapidly worsening energy crisis in the South Asian coastal city of Karachi, Pakistan, affects subsistence fishers, their households, and their communities at large. I specifically want to understand how inadequate governance, dispossession, and the scarcity of fuel and energy has affected indigenous knowledge and local traditions of fishing, as well as the transformations in the nature of the historic relationship that small-scale fisherfolk have had with the sea as a result of the same. Drawing on discard studies and using an ocean grabbing lens, I analyze how militarization, bureaucracy, and imbalances of power stand in the way of ensuring just transitions for South Asian fisherfolk in a time of energy scarcity.

**Keywords:** energy justice, energy scarcity, material discard, ocean grabbing.

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## Introduction

Small-scale fisheries are responsible for nearly half of the world's seafood catch but utilize only 11% of the total amount of fuel used to extract seafood (Anderson, 2020). Although artisanal fisheries in the Global North are receiving more academic attention and policy protection given their sustainability as compared to industrial fisheries, South Asian small-scale fisheries remain under-studied. A lack of policy and implementation has also led to coastal deterioration and a decrease in fish catch and associated livelihoods for South Asian fisherfolk (Ilona et al., 2006).

Understanding how small-scale fisheries' traditions, ecologies, and communities in South Asia have changed over time through the lens of energy will help present solutions and policy recommendations to preserve communities that form part of the backbone of the world's food supply. The ties that indigenous small-scale fishers have with the sea are wide--rooted in caste, ethnicity, and/or tradition--and deep: fishing is often more than a means to make a living; it is a way of life within itself. Breaking down discard and energy poverty as consequences of inadequate governance and identifying their roles in the deterioration of South Asian indigenous fisherfolk's livelihoods and communities is central to rehabilitate them in a sustainable manner.

The peripheries of South Asian cities are often occupied by low-income districts that rely on either daily wage work or subsistence livelihoods involving fishing, livestock farming, or agriculture. Korangi in Pakistan's most industrialized city, Karachi, is an example of such a district; its inhabitants are mostly small--scale subsistence fisherfolk. While this is the city this paper will study, there are also other examples that are valuable for future research. Bangladesh's capital, Dhaka, also has similar areas to Korangi: the Port of Dhaka has several fishing districts close by, such as the Khilkhet neighborhood. The Indian city of Mumbai is home to the world's oldest fishing village, the 800-year old Worli Koliwada. These cities are homes to their respective indigenous fisherfolk: Sindhis in Karachi (Azeem, 2021), the Koli

tribe in Mumbai (Harad & Joglekar, 2017), and the Bagdi, Malo, and Rajbonshi communities in Dhaka (Rahman, 2020, pp. 188).

These are all also port cities that are undergoing rapid urbanization that have sprawled due to housing crises and rural--to-urban migration (Eren, 2014, pp. 943; Hasan, 2015, pp. 217; Rahman et al., 2020, pp. 7439) and have, in some cases, extended to informal housing settlements on the outskirts near the coast or resulted in the creation of satellite cities by the government as part of a solution to urban overpopulation. Residents of these informal settlements and satellite cities are increasingly the targets of marginalization carried out by their respective states (Hasan, 2016; Hasnat & Hoque, 2016, pp. 50; Shaw, 1995, pp. 254). These cities have been facing energy crises, hikes in fuel prices, and increasing energy poverty, made worse by the COVID-19 outbreak, the Russian war on Ukraine, and climate change disasters such as floods and cyclones (Kessides, 2013, pp. 272; Nandy, 2016, pp. 2; Rabby, 2022).

There has been a significant body of work carried out about how energy poverty has affected subsistence livelihoods in rural areas of these South Asian countries (Khandker et al., 2011) and comparative studies of how rural and urban access to energy differs (Rehman et al., 2018). However, there is little empirical evidence of how individuals relying on subsistence fishing and living in or at the outskirts of these cities are affected by energy crises in the long term, and how the scarcity of energy affects their food security. The link between energy and economic development is generally well-accepted; households that are energy poor cannot have a high level of well-being in terms of security and livelihood. Energy is among the necessities for development (Khandker et al., 2011, pp. 894).

Over the last decade, the Korangi Creek's coastline and the Arabian sea coast it is attached to have deteriorated due to the timber mafia, which cut down the mangroves at the Korangi Creek to sell for profit as a cheap source of fuel (Dawn News, 24 January 2022). However, the mangroves are essential to sustain marine life at the Korangi coastline, where they harbor the prawn and crab

species that are the most lucrative catches and therefore central to the livelihoods of local fisherfolk. Other community members who are not fishing themselves nevertheless are mostly involved in the fisheries sector; women and children in Ibrahim Hyderi and Rehri Goth work as fish cleaners or shrimp peelers, while the non-fishing men often work as processors or transporters. Due to the destruction of mangroves, the subsequent decline in fish catch, and the resultant hike in seafood prices, a vast proportion of Korangi's fisherfolk and fisheries workers cannot afford to make ends meet, or even eat the fish they catch (Idrees, 2021).

Solid waste dumping by industries and municipal authorities is also routine at the Korangi coast—governmental institutions such as the provincial Sindh Solid Waste Management Board (SSWMB) and the Karachi Municipal Corporation (KMC) passively allow or ignore the misuse of low-income districts as dumpsites for Karachi's municipal and industrial solid waste, which is between 18,000 and 20,000 tonnes daily (C40 Cities, January 2020). Karachi has no proper landfills; Deh Gondal and Jam Chakho, the city's only dedicated solid waste disposal sites, are in reality dump sites that have been choked for the last ten years (Imran, 2019).

The land mafia—a mix of politicians, police, and, most importantly, land developers—is an active player in the garbage dumping, land grabbing, and land reclamation in Karachi. These individuals' campaigns are forceful and hard-hitting, and since 2005 have centered on reclaiming land from Karachi's seas through the use of compacted, weighted garbage (Guriro, 2017). This reclamation leads to hazardous chemicals in the solid waste leaching into the sand and toxic effluent being dumped into fishing grounds. Marine life has been depleted from the coastline: a combination of the timber mafia's actions, the water from the Indus Delta running low, and erosion (Aeman et al., 2023; Ali, 2018; Baker, 2022). The aquatic zone's health has also deteriorated and there are not enough mangroves to remedy this.

These circumstances have forced the fishing communities at the Korangi coast to venture farther and farther offshore to obtain their catch, now more expensive as more fuel is used and more

dangerous due to choppy waves and the risk of crossing over into Indian waters and being interrogated or detained on suspicion of being spies by Indian authorities (Imtiaz, 2014).

Against this background, this paper concentrates on the following main research questions:

- How has the fishing communities' relationship with the sea changed on the Korangi coast due to energy poverty and material discard?
- How do military and governance institutions change definitions of legality and uphold a narrative of "greater good" against dissenting fishing communities, and how are these communities discarded by these institutions?

By applying a Foucaldian lens to discard studies, this paper will posit that the discard as relates to Korangi is two-fold: there is discard *at* Korangi (of materials) and there is discard *of* Korangi (its ecosystem, people, and traditions). A core part of this paper's findings is based on how changes in landscape due to garbage dumping and development at the coastline (i.e. shifts in geography) have rippled out and caused physical and socio-economic harm for the fishing communities, including energy poverty, damage to their health and the loss of centuries-old traditional fishing practices and monsoon-time culture. The history of fisherfolk presented within this paper will explain the content and extent of this harm, while the theoretical frameworks used will highlight the violence involved in this type of economic development at the coast marginalizing and dispossessing fishing communities of their livelihoods, fishing rights and their physical and mental health.

## Theoretical framework and literature review

This paper explores how the energy poverty that Korangi's subsistence fisherfolk face due to inflation and rising fuel prices is further worsened by discard, inadequate governance, and ocean grabbing. Similar to its counterpart on terrestrial systems, land grabbing, ocean grabbing literature explains what kinds of ma-

rine reallocations by governments or the private sector can be considered detrimental to ecosystems and the populations that rely on these ecosystems for survival. According to Barbesgaard (2016), ocean grabbing is a means of accumulation by dispossession. Harvey (2003, 2005) highlights state redistribution as one among the neoliberal mechanisms that enable and uphold accumulation by dispossession. These state redistributions happen routinely at the Korangi coast in the form of ocean grabbing, both implicitly and explicitly, through the auctioning of trawlers (Aamir, 2020; Baloch, 2002; Baloch, 2021; Business Recorder, 2005), repurposing of the fisherfolk's residential coastal land into garbage dumps (Ahmed, 2015; Guriro, 2017; Idrees, 2021; Kaimkhani, 2007), and the consolidation of fishing power into the hands of large companies (Mehmood, 2021). These factors, all combined, have enabled the unraveling of two of the Korangi coasts's neighborhoods'--namely Ibrahim Hyderi and Rehri Goth--communities over the last two decades especially.

These reallocations can be considered ocean grabbing if it fulfills one of the following three conditions: it is brought about by inadequate governance, it harms livelihood or human security, or it causes socio-ecological damage (Bennett et al., 2015; Govan, and Satterfield, 2015). This strand of literature is mainly relevant for small-scale subsistence fishers, especially those of the Global South. Ocean grabbing "deprive[s] small-scale fishers of resources… and/or undermine[s] historical access to areas of the sea" (ibid, pp. 61). In the case of the Korangi coast, the deprivation and undermining of historical access occurs mainly through garbage and effluent dumping, enabled by police violence and inefficient city planning. Ocean grabbing studies tend to typically focus on policy making and governance (Bennett et al., 2015) and blue growth (Barbesgaard, 2016) from a perspective more centered around the Global North. Global South perspectives are key to understanding how the policies and redistributions that enable ocean grabbing are upheld in systems that are more informal in nature, with a variety of stakeholders. The dispossession of indigeneity should be a core part of reporting ocean grabbing, as it is with land grabbing globally (Albarenga & i Dalmases, 2022; IDMC, 2013; OHCHR, 2020).

Discard studies has emerged as a way of understanding "aspects of waste [that] are entirely hidden from common view, including the wider social, economic, political, cultural, and material systems that shape waste and wasting" (Liboiron & Lepawsky, 2022, pp. 2). Therefore, discard studies looks beyond the traditional confines of waste studies, which focuses primarily on material waste and the techniques and systems used to manage it. More specifically, it questions "how some materials, practices, regions, and people are valued and devalued, become disposable or dominant" (ibid, pp. 3). The emphasis, in discard studies, is on how harm is determined, and by whom (Vogel, 2012), and which materials, peoples, communities, and places are discarded. For the dominant system to continue functioning, it rids itself of "people, places, and things that actually or potentially threaten the continuity of [the system]" (Liboiron and Lepawsky, 2022, pp. 3). Discard studies conceptualizes wasting as a "technique of power" (ibid), and analyzes the necropolitics involved in placing value on some places and people above others. What is discarded shows who possesses power within the system; as Michel Foucault put it, "power… produces reality [and] domains of objects and rituals of truth" (Foucault, 1991, pp. 27).

The concept of governmentality was introduced as a power analytic by Foucault, and has further inspired the term eco-governmentality in the political ecology literature. Eco-governmentality has now become a concept often used by political ecologists to show how environmental concerns can become a "rationality of rule" (McCarthy et al., 2015, pp. 389) in neoliberal, governmental systems. Biodiversity conservation efforts, extractive processes, and other environmental concerns have been largely governmentalized, with "new governing apparatuses [producing] new knowledge about natural and social bodies of proper conduct and rule" (Valdivia, 2015, pp. 471). The opinions and decisions of those actually affected by environmental policymaking are not invited, nor are they consulted (Demeritt, 2015). The dispossession of these marginalized communities--and treatment of individuals as subjects to be governed without

the right to self-govern or dissent--is a built-in feature of eco-governmentality. Accordingly, a governmental state uses tools to proliferate "techniques and knowledges to manage social life" (Valdivia, 2015, pp. 470). It regulates institutions, and uses the complementary technologies of disciplinary power and control mechanisms to remove deviations from behaviors, populations, economic outcomes, etc. that are considered undesirable by the biopower state (Foucault, 2000). Eco-governmentality therefore questions power relations: how power is used, and against whom, within the context of nature-society relations. The term is often utilized to analyze power relations in cases of dispossession and extractivism in the Global South (Ayub et. al, 2022; Andreucci & Kallis, 2017; Goldman, 2001; Himley, 2008).

Rashid (2020) analyzes the Pakistani army's role in governance, and defines it as the British Indian Army's direct successor in the country, having direct rule over the population for over thirty years. The position of Prime Minister (the most powerful political position in Pakistan) coincided with the Chief of Army Staff position through the enactment of martial law between 1958 and 1971, then between 1977 and 1988, and finally between 1999 and 2008. Therefore, this paper also aims to examine the Pakistani military's role in dispossession of marginalized communities today, and establish how it produces and enforces power over those it governs with respect to the fisherfolk.

## Methodology

This paper utilizes in-depth semi-structured interviews that were conducted with members of the fisherfolk living in Rehri Goth and Ibrahim Hyderi. These interviews are organized into different sections thematically using open-coding methods. Local newspaper articles pertaining to the Korangi coast's fisherfolk were used to construct a historical overview of how the coast has changed over time, including how the fisherfolk's own relationships with the sea have been affected by the shifts in their space and place.

These interviews--combined with my literature review and news articles from high-impact English-language local news sources such as Dawn News and The Express Tribune--form the basis of my arguments and allow for a holistic picture of how Ibrahim Hyderi and Rehri Goth have changed over time.

## Results

This section presents the key findings and analyses based on the in-depth interviews that I conducted with the fisherfolk of the Korangi coast in Karachi. The analysis is complemented by archives on Pakistan's and Karachi's history and news articles on fishing communities living at the Korangi coast.

### Creation of the land mafia

The land mafia came into being due to Karachi's housing crisis, which began in 1947 with the partition of the Indian subcontinent and worsened in 1971 due to the separation of Pakistan and Bangladesh (then "West Pakistan" and "East Pakistan," respectively), causing two mass migrations into Karachi. At the time of the partition, Karachi's population was approximately 400,000, so housing was not an issue for the city, which is the twelfth-largest in the world. However, refugees and rural-to-urban migrants created new housing challenges, which "land sub-dividers"--what is now referred to as the land mafia, grabbers, or developers--stepped up to control by dividing vacant land in Karachi into plots.

These land sub-dividers were typically government officials, *zamindar* (landowners), bureaucrats, politicians, or members of the Sindh police. They let or sold these plots to migrants for cheap without involving the government or producing proper paperwork. The majority of low-income migrants had left behind their generational homes before migrating and required this affordable housing, even if it was an impermanent solution. Essentially, the land mafia came into existence due to the lack of affordable housing plans put in place by the national government, and their unwillingness to cater to lower-income individuals and migrants (Ahmed, 2015).

Korangi was among the first districts to be re-settled with migrant groups. The administration of the then-Governor General, Ayub Khan, defined *jhuggis* (informal housing constructed with corrugated iron and mud) as an eyesore where "unhygienic", "unclean" populations lived. Migrants from India living in Karachi's jhuggis were resettled in Korangi "without any housing or infrastructural support" (Ashfaq et al., 2020, pp. 1) as the administration lauded the creation of satellite towns such as Korangi. Rajani & Rajani (2016) state that the displacement of these individuals is an example of "colonial patterns," wherein states exert control over subjects, instead of subjects having the power to exercise their rights in how they are governed. These satellite towns are populated without possession documents, through political backdoors and bribes. Informal settlements are institutionalized and make up for around half of Karachi's housing needs, and are characterized by the lack of sanitation infrastructure (Hasan, 1996). These units allow individuals without due documentation (National Identity Cards, birth certificates, etc.) to access housing affordably without resorting to "long-drawn, complicated government [housing] schemes" (Ashfaq et al., 2020, pp. 13).

Over time, as land became an even more precious commodity due to overpopulation, the land mafia turned to the sea to produce more valuable land at the coast. The aggressive land reclamation campaigns at the Korangi coastline are carried out using solid waste, as a violent form of ocean grabbing. These campaigns use compressed plastic waste (including toxic medicinal waste, since source separated waste is not the norm in Pakistan) to push the coast further into the sea, and the land is rented or sold to illegally operational, environmentally damaging factories. These factories pay a huge one-time cost to the ocean grabbers to carry out operations without the legal paperwork it requires and dump effluent into the sea without the requisite treatment, and unprocessed fumes into the air (Guriro, 2017; Ahmed, 2015). The fishers are intensely connected to the coast; the dispossession of their means of livelihood and dismissal of their well-being and core identity is a feature of ocean grabbing (Pedersen et al., 2014).

The Pakistan Fisherfolk Forum (PFF) has requested the municipal authorities to set up a sewage and effluent treatment plant multiple times so the water at the coast does not get dirtier with time. They proposed that this be financed by the commercial sea lords--private fishing company owners who have multiple jetties on the Korangi coast and employ fishers to work on commercial boats. However, these sea lords--*sarmaydaar*--are reluctant to finance what they believe is too expensive a project. The gutter water that Korangi's coast receives incorporates the wastewater of 5,000 farmhouses that are located in Bhens Colony--one of the foremost reasons, according to an interviewee, that the water at the coast is brown now. There is a lack of sewage and city planning, and the mangroves dry out as a result. This observation is in line with Van Bijsterveldt et al. (2021), who found that mangroves' growth and development is adversely affected by pollution. When the fisherfolk get out of their boats and pull their boats towards the jetties, their feet remain greasy and blackened with residue that does not wash off for days.

Karachi's sprawling buildings and informal settlements can therefore be viewed as a failure to plan, wherein "illegality becomes part of planning" (Ayub et al., 2022, pp. 4). Since the provincial government and municipal urban planning institutions failed to allocate adequate land for housing to migrants and refugees, these individuals had to resort to residing in temporary houses, resulting in various communities that have generationally lived in informal settlements.

## The manifestation of "Othering" in Korangi

### Stereotyping and "Othering" of fisherfolk

Many of the Bengali migrants who were given government-issued computerized national identity cards (CNICs) have had them revoked. CNICs are used by the state to police and exclude individuals from national rights and governmental services "along arbitrary lines of citizenship and non-citizenship" (Ashfaq et al., 2020, pp. 13). The Bengali and Rohingya members of Korangi are consi-

dered "foreign" and therefore ineligible to apply for a CNIC, but even residents who are eligible for citizenship are subject to violent policing if they lack a valid CNIC. Daily wage workers (including fisherfolk) are routinely stopped by the Sindh police and asked to hand over their CNICs for examination. A CNIC--or the lack of a CNIC--becomes a pretext for arrest and extortion for lower-income men or those from marginalized communities (Anwar et al., 2016). Many of the Korangi coast's fisherfolk have been made to pay bribes to the Sindh police on multiple occasions due to their lack of CNICs; those who cannot are sometimes detained and sometimes let off (Mughal & Baloch, 2017). The bribes they are made to pay are "financially crippling" (Anwar et al., 2016, pp. 151), with the police demanding a significant percentage of their daily wages. If they are unable to pay, they are harassed and beaten (Ashfaq et al., 2020). Interviewee #6 explained that customs and maritime officers check CNICs as the boat enters and leaves the harbor.

Against this background, I argue that the focus on differences regarding ethnicity and class with respect to the issuing of CNICs by the Pakistani government is a form of "discard" in line with the "stereotyping" concept discussed in discard studies literature (Leboiron & Lepawsky, 2022). It is essential to study difference when it comes to power relations or issues of justice. I posit that "Othering" in the Foucauldian sense is upheld via stereotyping in the case of the Korangi coast. Bhabha (1994) suggests that stereotypes are "complex, ambivalent, contradictory mode[s] of representation, as anxious as [they are] assertive," and demand of the dominant group that they "change the object of analysis itself" (Bhabha, 1994, pp. 138). Dominant groups stabilize knowledge about "aliens" using stereotypes, which are often contradictory (Liboiron & Lepawsky, 2022), as in the case of the Bangladeshi migrants: the Pakistani federal government uses the specific narrative implying they are lazy, immoral thieves, but also that they are taking jobs away from "legitimate" Pakistanis. These two ideas are at odds with each other, and yet both contribute to the idea that Bengali migrants are 'less than' the dominant normative group, in the same way that those living in

Korangi's informal housing are Othered through narratives of sanitation and cleanliness, while municipal authorities actively and passively allow garbage and effluent dumping to take place.

In line with this, Interviewee #5 stated that the garbage dumping takes place because the dominant middle class would not care whether a neighborhood was converted into a heap of rubbish as long as it was not within their areas. These attitudes of not-in-my-backyard, and the stereotypes that perpetuate them, are also a production of knowledge about the types of people that it is acceptable for institutions, states, and societies to discard. Essentially, "stereotyping is a foundation of annihilation" (Liboiron & Lepawsky, 2022, pp. 111). The impacts of this stereotyping are damaging across generations; Interviewee #10, for instance, found it immensely difficult to raise her three children in Ibrahim Hyderi, saying that she cannot make herself ask her children to stop playing in the trash, since the trash is everywhere.

Ibrahim Hyderi and Rehri Goth's residents are low-income, marginalized individuals who are stereotyped on the basis of ethnic or casteist value systems. This grouping together of the residents is based on the "idea that there are fundamental differences between different types of people" (Liboiron & Lepawsky, 2022, pp. 100). Governments exercising necropolitics utilize this stereotype by enforcing hierarchies and creating "truths" that protect the "greater good;" in the case of Korangi, the greater good is economic development, which is given value over the human lives of the fisherfolk. However, the valuation of life by the governing system puts the stereotyped Other at substantial risk (Dias & Deluchey, 2020) by exposing them to environments and situations that harm their lives and livelihoods. Therefore, stereotyping is a technique of "discarding through differentiation" (Liboiron & Lepawsky, 2022, pp. 100) so as to uphold dominant power structures and dynamics.

The COVID-19 pandemic brought the middle class's anxieties around disease and uncleanliness to a peak, and engendered a global narrative centered on the importance of living in green, healthy, sustainable cities (Ayub et al., 2022). The Karachi Mu-

nicipal Corporation (KMC) has used this anxiety as a tool to further neoliberal development agendas by revoking the legality of 99-year leases that the Corporation itself granted to many residents living in *katchi abaadiyaan* and demolishing informal settlements such as those along Gujjar Nullah (Ayub et al., 2022). The Korangi coast faces a similar fate; although its residents are not being evicted by the municipal authorities, they are being "forcibly displaced" (Ashfaq et al., 2020, pp. 9) further away from the coast due to environmental degradation and ecological shifts in its landscape. Land reclamation using compressed garbage, the formation of sludge at the coast due to wastewater dumping, and the decline of health as a result of residing in Ibrahim Hyderi and Rehri Goth are all external pressures displacing these communities. In addition, land value decides land use in Karachi; this is the reason that many factories and workshops are located in and easily available in Ibrahim Hyderi, Rehri Goth, and other districts that house *katchi abaadiyaan*, thereby causing mass displacement of working-class communities (Ayub et al., 2022).

The mainstream discourse around cleanliness and the pandemic enables the stereotyping of Korangi's fisherfolk as "dirty" among the middle and upper classes. The district is also subjected to the stigmatization that occurs alongside the waste dumping due to their proximity to the waste. These "inherently classist vocabularies and prejudices" (Ayub et al., 2022, pp. 6) enable the state to justify its violent rationale and ensure that the cycle of Othering marginalized communities remains intact.

Further, the heavy policing of residents including the fisherfolk at the Korangi coast is in line with the control mechanisms utilized in political systems reliant on governmentality as theorized by Foucault (1998). The constant surveillance, extortion, and harassment that they undergo can be seen as a control mechanism employed by a governmental state employing "a more diffuse form of power" (Bakker and Bridge, 2008, p. 225) as opposed to older sovereign states that depended on overt forms of punishment to ensure order. Governmental systems rely less on absolutist power, and more on disciplinary and judicial powers

(Foucault, 1998). At the Korangi coast, these powers manifest as surveillance, stereotyping, and bureaucratic control.

## Legality, dissent, and "making/letting die": Korangi fisherfolk's deteriorating well-being and mental health

The residents of the Korangi coast, including the fishing communities of Ibrahim Hyderi and Rehri Goth, are subject to discriminatory policies (such as refusal to issue identity cards to Bengali fisherfolk) and state-enabled garbage dumping. This deteriorates their well-being and leads to severe mental and physical health problems (Ahmed, 2015). The groundwater at the Korangi coast is immensely polluted as a result of chemicals leaching into the ground from the dumped solid waste, and can cause stomach infections which may be fatal for infants (Waseem et al., 2014). Allergies and skin diseases are a common complaint for many of the residents, and as summer draws closer, a significant portion of the population suffers from chikungunya, a viral fever borne by mosquitos (Mughal & Baloch, 2017). The "330 million gallons of industrial and domestic effluent" (Guriro, 2017) and resultant decline in fish catch and, by extension, fisherfolks' livelihood, has taken an enormous emotional toll on Ibrahim Hyderi's residents, with a sharp rise in mental health issues such as drug addiction, depression, and schizophrenia (Ahmed, 2015). All of these are examples of "making die"; these financial, mental, and physical issues cause the breakdown of the fishing community and render it unable to mobilize effectively due to the imminent threats to its residents' survival.

These "technologies of control", in Foucauldian terms, are comparatively diffused and covert. Garbage dumping is heavily protested by the fisherfolk at the coast, who utilize non-violent means of protest including sit-ins, surrounding the garbage trucks so they cannot dump the garbage until the trucks leave. However, it is enabled by the municipal government. Those who dissent actively against the state's control mechanisms face severe disciplinary and increasingly militarized consequences. One of the interviewees, as a young fisherman in his twenties, protested against the garbage

dumping in 2007, whereupon Sindh police authorities detained him and falsely accused him of murder. He was an influential part of the protests, and regularly interacted with the media to highlight the extent of disrepair in Rehri Goth as a result of garbage and effluent dumping. He was bailed out by his community and the charges against him were dropped when he was proven innocent, but the detention was an excuse for torture. His right ear was broken by the Sindh police. The means of torture and alienation from community are deliberate; he was not taken to the jail from his own district when he was detained, but rather one much farther away that his community members would have difficulty accessing. His whereabouts were not given to his family. He is only one of many protestors who have been jailed or tortured. In 2011, two members of the PFF were assassinated for fighting against mangrove deforestation and the land mafia (AHRC, 2011).

Muhammad Ali Shah, arguably the most respected among all the Chairmen of the PFF, spent decades resisting the Rangers, a paramilitary unit of the army (i.e. civil armed forces, tasked with maintaining internal security in Pakistan) that was deployed at the Korangi coast in 1977. The Rangers supported the *beopari* (middlemen who work for private fishing companies and sea lords) at the coast who utilized an exploitative contract system, so that Korangi's fisherfolk (as well as Badin's, a small city in Sindh near Karachi) could not sell their fish catches at market rates. Instead, they would have to sell it for a twentieth of the price to the *beopari.* Thus began a system wherein the fisherfolk could not afford to eat the fish they caught, or to even take any of the fish they caught home, since the *beopari* would complain to the Rangers, who would then torture the fisherfolk. The relentless nonviolent protests that the PFF held against this restrictive contract system and the public attention gathered through Shah's arrest helped them, in Shah's words, "win against an army" (Down to Earth, 2005) when the Rangers officially withdrew from Badin under the then-Prime Minister Pervez Musharraf's orders.

However, state control against the fisherfolk did not die down. The Karachi Fisheries Harbour Authority (KFHA) is a

part of the Sindh government, and announces auctions where private fishing companies outside Pakistan can buy fishing rights. These auctions are the primary means by which foreign corporate trawlers gain access to Pakistani waters (Business Recorder, 2005). The PFF has historically staged sit-ins outside these auction halls. In 2005, after the Rangers withdrew from the coast, Shah was arrested after a sit-in and kept in custody for 22 days. According to Shah, it was all the same whether it was the Rangers, the Sindh government, or politicians--all these factions attempt to profit off the increasingly degraded Korangi coast at the cost of its biodiversity and indigeneity (Down to Earth, 2005).

Pakistan's military and paramilitary forces exercise full control over the population. On the 16th of January 2016, Saeed Baloch, a prominent PFF activist, was "disappeared" by the Rangers after he was taken into custody for protesting against the Fisherman Cooperative Society's (FCS) corruption (AHRC, 2016). At the time, the Chairman and Vice Chairman of the FCS had extorted millions of dollars, and hired hundreds of unregistered employees (Dunya News, 2015). Pakistan's Anti-Terrorism Act made it entirely legal for the Rangers to detain a person who is deemed suspicious at their discretion even without official charges. Therefore, "legality" is often used by the army and national and municipal governments as a control mechanism against dissenting populations. Baloch was released on bail in August 2016, after international uproar over his arrest (Front Line Defenders, 2016).

These continuously changing definitions of legality target marginalized communities and keep them in a state of flux. Legality is, therefore, used as a means to discard by way of justifying violence against those who protest for their right to reclaim the sea in the case of Korangi. This can be seen in how the PFF's activists have been physically assaulted by the police for a myriad of reasons: campaigning to find members of the timber mafia who have caused mangrove depletion, protesting against the killing of their colleagues by the state, and holding peaceful sit-ins against illegal occupation of their seas and lands by ocean and land grabbers even as the Sindh government protects those who harm the fisherfolk (AHRC, 2011).

This paper argues that the shifting of legality to serve the purposes of the biopower state which exercises total control over populations--and, indeed, labeling entire communities of marginalized peoples as "illegal"—can be conceptualized as "Othering" and an example of "making die" (Foucault, 2003). While the state and its agents, namely, the police, military sea lords, municipal officers, etc. may not be physically killing the residents of Ibrahim Hyderi and Rehri Goth, the discriminatory policies and state-enabled garbage dumping steadily worsens their quality of life and causes them deep physical and emotional harm.

## Chinese industrial fishing and maritime development threatening Korangi's fisherfolk

In 2017, a 40-year lease brought about by the China-Pakistan Economic Corridor (CPEC) surrendered control of the Gwadar Port to the China Overseas Port Holding Company (COPHC). Gwadar is a coastal region in the province of Balochistan along the coast of the Arabian Sea. In 2020, fisherfolk from Karachi and Gwadar, Balochistan, protested against the arrival of twenty Chinese trawlers, stating that their local fishing equipment did not stand a chance against the trawlers. These grievances are part of local workers' growing resentment against China's growing economic hold over Pakistan as a result of the CPEC. The PFF wrote a letter in protest to the FCS, who had issued the permit to the Fujian Hengli Fishery, which owned the trawlers (Aamir, 2020). These efforts ultimately culminated in the Chinese trawlers being ousted from Pakistani waters. However, China's depletion of fish stocks, and its cultural dependence on seafood, results in Chinese fishing companies looking to sustain their fish catch elsewhere. In 2021, Pakistani authorities detained five Chinese trawlers on suspicion of illegal fishing. Although the boats were full of fish, the president of the COPHC maintained that they were docked to shelter from storms. Despite the then-Prime Minister's reassurance to the Pakistani fishers that there are not and would not be any licenses granted to Chinese trawlers, reports state

that around one hundred trawlers have been licensed to carry out fishing activities in Pakistani waters (Baloch, 2021). Given that bottom trawling is an especially detrimental way of industrial fishing for the marine ecosystems, damaging entire seafloor habitats (Coastal and Marine Hazards and Resources Program, 2016), these licenses are likely to have further negative impacts on the fish stocks and livelihoods of Korangi coast fishers.

Development of maritime infrastructure occurring at Karachi's Arabian Sea coast and Indus Delta also threatens the fisherfolk's survival in Korangi. The Muhammad bin Qasim Port (Port Qasim for short) was opened in 1980, and handles 35% of Pakistan's total cargo. Port Qasim was built on the Indus Delta's northwest edge. Its construction, the sheer volume of cargo it handles, and the dangers associated with the latter have caused the mangrove species surrounding the port to decrease from 8 in 1972 to 4 in 2009 (Dehlavi, 2017). The mangroves are an immense asset to carbon sequestration and a source of protection for Karachi's coast, directing cyclones away from the city. They are also rich ecosystems that are integral to harboring the most lucrative catches for Korangi's fisherfolk, such as prawn and crab species. Although mangrove cover all through Pakistan has increased since 2009, it is unlikely to go back to its 1980 levels (Baker, 2022). There is an active timber mafia in Pakistan, which cuts down mangrove trees from within the thick of the forest to sell wood for profit. Fuel is an expensive commodity in Pakistan, and with year-to-year inflation at 31.5% as of February 2023--the highest in 50 years (Al Jazeera, 2023)--timber from mangroves is an inexpensive, long-burning source of fuel. It takes between 50 and 100 years for a mangrove tree to mature fully, but the timber mafia takes it for free and sells it for cheap.

Port Qasim's unchecked industrial activity and rapidly increasing shipping volumes threaten the well-being of local bird and fish species. When the port was being built, the authorities assured the fisherfolk that there would be minimal pollution and that the indigenous Sindhi population at Korangi would be given lucrative jobs within the newly built port. However, none of Ko-

rangi's fisherfolk work there to this day. Many families living in Rehri Goth and Ibrahim Hyderi have documents proving their family's legal residence at the Korangi Coast from 400 years ago. The Port Qasim authorities are only open to hiring *uttar* (upper-caste) Sindhi people, who mostly come from the neighboring city of Hyderabad and are better educated than the fisherfolk, whose caste is classified as *laad* (lower-caste), despite the latter having historic right to the sea. The Port Qasim authorities prevent them from going into the sea area that "belongs" to the port. The port authorities and governance institutions have ways of making the *laad* fisherfolk feel out of place or inferior. Those who work in state offices are usually *uttar*, and despite the common language they share, the *uttar* officials never speak Sindhi to the *laad* fisherfolk. They use Urdu instead--due to the "hegemonic role of Urdu" (Rahman, 1995, pp. 1007) in Pakistan.

Large boats unloaded at Port Qasim cut through the water so fast that sometimes it upends the fisherfolk's smaller boats. When the fisherfolk spread their nets out on the water within sight of the authorities, they are told to pack up their nets and leave so the boats headed for Port Qasim can make their way through and unload. Korangi's fisherfolk are aware that they are not welcome there, or near the coast at Defense, which is an economically privileged neighborhood with a coast just 17 kilometers away from Korangi. The policing means they cannot fish there anymore, at least not comfortably--"our people are not thieves. It's our sea. We are of and from the water. When we catch a fish, its scales are moist with saltwater. That salt, that water, that fish, is ours. Our lives and our livelihoods are from the sea."

## Forms of discard at the Korangi coast

### Material discard: Garbage dumping on the Korangi coast

Karachi's land mafia has capitalized off the city's housing issues, which began with the large-scale displacement that the 1947 partition and the 1971 war brought, and were exacerbated by the influx of Afghan refugees in the 1990s and 2000s. Refugees and

migrants from different countries or from rural areas created unique housing difficulties for the city. The land mafia divided Karachi's vacant land into plots and set up temporary housing for low-income migrants. The existence of the land mafia is due to municipal carelessness and unwillingness to service lower-income factions of the city (Ahmed, 2015). As land in the central locations became scarcer due to overpopulation, the land mafia began carrying out aggressive land reclamation campaigns at the coast using compressed plastic (Guriro, 2017).

It is not only plastic waste that is dumped at the coast, 330 million gallons of effluent--both domestic and industrial--is dumped directly or indirectly at the coast (Guriro, 2017), further decreasing fish catch and causing declines in small-scale fisherfolk's livelihoods. Waterborne diseases such as chikungunya are immensely common (ibid). Organizations such as the Aga Khan University Hospital, HANDS, and Aman Foundation have all operated in Ibrahim Hyderi to provide healthcare to the residents (Ahmed, 2014), but no amount of medicine can cure that the water is filthy, the air unbreathable, and the land covered with litter. The fisherfolk community's breakdown is deliberate; the physical, mental, and financial issues they face have caused them immense harm and taken away their resources of mobilization through imminent security- and health-related threats.

In addition, local and international private fishing companies began building jetties for their trawlers at the port that the fisherfolk would have to pay to use in the early 2000s. These deep-sea trawlers run for 24 hours in a go without stopping, and remain the most responsible for overfishing and biodiversity loss (Baloch, 2002).The fisherfolk have to pay the price of rental space to keep their boats at the harbor, which was bought by land developers and sea lords. These rental prices keep on increasing and are paid by the fisherfolk daily for each day they use the jetty space. These jetties have another negative effect. They drive down the natural speed of the water and do not allow the seafloor to be cleaned, since the coast has been replaced by jetty concrete. The water where the jetty starts, therefore, is immensely dirty; there is effluent and sewage

water coming from one way, and not enough current to drive it away. The water being dirty causes immense harm to the underside of the boats. Boats now have a much shorter life than the past as a result of the gray sludge that gathers at the coast.

## Discarding the marginalized Other: Marginalization through loss of fishing livelihoods and informal settlements

Small-scale fishing communities on the Korangi coast are especially at risk of losing their livelihoods due to overfishing by foreign trawlers, the increase in the number of individual fishers, and the resultant depletion of marine stocks. This is a vicious cycle: the indigenous fisherfolk have also started utilizing equipment that is harmful to aquatic life; one such example is under-gauge fishing nets that catch fish species before their full maturation period, which ultimately leads to a greater decline in these species (Naqi, 2016). While Pakistan's fisheries sector is not sustainably managed or technologically adept in general, Karachi's fisheries are in worse condition than others. Ibrahim Hyderi suffers from arguably the worst conditions, facing not only the biodiversity loss and overfishing challenges that other fisheries face but also being labeled and utilized as a "Garbage Transfer Station" for its peripheral districts--Ibrahim Hyderi being part of Bin Qasim Town--in 2007 by the City District Government Office in the Karachi Strategic Development Plan 2020 (Kaimkhani, 2007).

Moreover, Ibrahim Hyderi and Rehri Goth's *mohallay* primarily comprise *katchi abadiyaan*--the colloquial Urdu-language term for informal (literally "impermanent") settlements. These *katchi abaadiyaan* were a way for individuals who migrated from India to Karachi in 1947 during and after the partition to have homes in a city with little to no urban planning. While many of these informal settlements are generational houses with leases, the term *katchi abadi* in itself is indicative of marginalization and impermanence (Gazdar & Mallah, 2011, pp. 4). The term, like its English equivalent "slum," is associated with dirt, poverty, and other stigma-heavy connotations. The use of this language and

these narratives results in *katchi abadiyaan* being widely perceived by judiciary and middle classes alike as encroachments, even though they "are not necessarily illegitimate or unrecognized by the state, having instead resulted from a planning failure and lack of affordable housing in Karachi" (Ayub et al., 2022, pp. 6). These two factors, namely, the loss of fishing livelihoods and living in *katchi abaadiyaan*, have further contributed to the marginalization of fishing communities at the Korangi coast. This is a more implicit discard: the discard of the Other, which further adds to material discard through garbage dumping described in the previous section.

## Discarding through ocean grabbing

Andreucci and Kallis (2017) focused on extractive practices situated in the Peruvian state enabling unchecked development and the enactment of violence against those who resist natural resource extraction, which is very similar to the case of Korangi. This paper argues that the nature of governmentality and governance organizations (and their associated structures, permissions, and practices of development) are quite similar across the Global South, wherein the well-being of indigenous and/or low-income communities is secondary and discarded as and when it hinders or counters economic growth and "the greater good."

One of these "greater goods" for the Pakistani government comes in the form of the imminent "Blue Revolution" that aims to maximize profits from the marine sector (Patil et al., 2018, pp. 17). This "Blue Revolution" agenda refers to the renewed foreign investment interest in Pakistan's maritime sector, for which the China-Pakistan Economic Corridor (CPEC) is largely responsible (Mehmood, 2021). It also aims to consolidate the fisheries sector into the hands of a few large, hegemonic corporations with well-oiled value and supply chains (Patil et al., 2018), thereby rendering small-scale fisheries obsolete. Pakistan's lack of dedicated protections for indigenous fisherfolk, as well as this consolidation of power as a result of the CPEC, are forms of ocean

grabbing, following Bennett et al.'s (2015) definition of the same: small-scale fishers are deprived of resources, coastal populations are dispossessed of their lands, and their historical access to the sea is restricted and undermined. The fisherfolk's consent is not taken before their coastline is irreversibly altered by foreign policy, auctioning, overfishing, and garbage dumping. The violence levied by the military against dissenters at the Korangi coast also contributes to ocean grabbing by undermining the fisherfolk's "historical tenure" (Bennett et al., 2015, pp. 63).

The discard at the Korangi is therefore three-fold: Korangi's coast is *a site of discard* for waste, Korangi fishing communities are *discarded as "Others"* and *the coast is likely to be further discarded* by the neoliberal growth agenda via Blue Revolution to profit from its destruction rather than its rehabilitation. All societies and systems will generate waste to produce value (Gidwani & Reddy, 2011; Liboiron & Lepawsky, 2022, pp. 52), but what a society chooses to discard (and who it collectively decides to accept or ignore harm for) is deeply indicative of the societal values around low-income communities: although the Korangi coastline is located only 17 kilometers away from the upper-class ocean-facing neighborhood Defense Housing Authority (DHA) coastline, fisherfolk are banned from fishing in these waters since DHA residents complain about the smell of the fish (Ahmed, 2015). This speaks to the values of a neoliberal capitalist economy focused on economic growth and profit and the societal structuring of these values, wherein an elite neighborhood's criticism of the way fisherfolk smell has a large enough place to discard the fisherfolk struggling to make a living from these spaces (through exclusionary policies such as banning, fining, and the like).

Discarding, therefore, is a "technique of power" (Liboiron & Lepawsky, 2022, pp. 83) at the Korangi coast. All systems utilize resources and discard objects, places, and people that do not fit within their orders, giving rise to various types of unevenness; Liboiron & Lepawsky (2022, pp. 83-84) define power as "the maintenance of such unevenness." Keeping the city's center and elite spaces relatively cleaner can only be viewed as "good", if there is a

dismissal or erasure of the fact that garbage dumping in low-income areas is the mechanism by means of which this cleanliness is produced. This erasure is also an act of discarding; it is how Korangi's fisherfolk are shuttled away to the city's peripheries while also being dispossessed of these peripheries that they built and sustained for generations, which in turn sustained them.

## Discard of fishing traditions, culture and enjoyment

The eighties were the time when fishing traditions and tools began to change at the Sindh coast. Prior to the Indus Delta drying up, agriculture and livestock were viable means to make a living. Once the waters dried up, many of the individuals involved in the agricultural and livestock sector near the delta started to become fishers, with a large number of them moving to informal and/or temporary housing along the Korangi Creek. This was a key contributor to the initial decline in fish catch, before authorities began dumping garbage and effluent at the coast. The indigenous Sindhi fisherfolk historically used a *doro jaal,* or hand woven rope nets, to fish in the sea. These nets were woven specifically to ensure that only mature species were caught, and that younger fish that were smaller could escape through its eye. In the eighties and nineties, newer fisherfolk working on commercial fishing boats popularized the *katla jaal,* or wire net, that held on to younger fish too. These nets quickly became popular among the Korangi coast's indigenous fisherfolk as well due to their lower costs, durability, and the efficiency of catch.

The fisherfolk who were born into the practice were well-versed in the knowledge and tools of fishing at the Korangi coast. Fisherfolk who had just moved into the profession did not have the generational knowledge that was indigenous fisherfolk's birthright. They would overfish near the mangroves. The *katla jaal* was threatening biodiversity at the coast; the openings on the machine-made nets got smaller and smaller with time. In the early 2000s, packaging companies began making fishing nets with high-density polyethylene or nylon, which are especi-

ally damaging to sea life and make up a significant proportion of plastic in Karachi's sea (WWF Pakistan, 2020). The opening of wire nets is so small that even the head of a matchstick cannot pass through it. The use of these plastic nets, combined with the population increase of the fisherfolk, caused a rapid decline in many of the species integral to the fisherfolk's livelihood over the years (Naqi, 2016). Since the 1970s, the interviewees personally witnessed the decline of multiple shark species, including the winghead shark, the whale shark, the blacktip reef shark, and three species of hammerhead sharks: smooth hammerhead, scalloped hammerhead, and great hammerhead. The river shad, barramundi, or pompano fish cannot be found in Karachi's waters anymore, although these used to be common three decades ago. Prawn and crab species flourish at the mangroves, and come back to the same mangrove where they were born to give birth. There are 32 species of aquatic life at the Korangi coast that are dependent on the mangroves to thrive. But young prawns are not allowed to mature due to the usage of machine-made nets. Since the population of mature fish has declined so greatly, using a hand-woven net would yield a lower fish catch for fisherfolk using them. Mass-produced nets are also vastly cheaper than handmade nets, so even indigenous fisherfolk now use them. Most of Korangi's fisherfolk, whether indigenous or not, have now resorted to working on commercial boats. 77.5% of Ibrahim Hyderi and 49.7% of Rehri Goth's populations cannot afford the expense required to carry out boat upkeep, and instead work on commercial fishing boats (Dehlavi, 2017).

Machine-made nets are indicators of an era in disposability and discard. Plastic nets are made to be discarded, but the *doro jaal* was made to be used, repaired, and used again, until it wore out. There were residents--primarily women, but also members of minority ethnicities--at the Korangi coast who used to be hired specifically to weave nets. As machine-made nets were popularized, they had to resort to working elsewhere. Discard and disposability, therefore, were not normative to Korangi's fisherfolk. They became norms over time due to disruptions in the

environment and to the indigenous fisherfolk's way of living. It is quicker, cheaper, and more efficient to buy a machine-made net than to construct a *doro jaal*, and quicker to construct a boat now than ever before. It would take a year in the seventies and eighties to construct a single boat. Now, it takes maybe a month. Even so, there are too many commercial boats, and fisherfolk cannot afford to keep up with the competition independently.

Previously, the boats used to have a *baadbaan* (sail) that only experienced, skilled fisherfolk would know how to guide. When fishing motor boats were popularized, there was a rapid increase in the number of fishers without prior expertise or knowledge about the Korangi coast and its biodiversity. There is not enough work for the women to move to the islands due to the sharp decline in shrimp catch. The increasing inflation in Pakistan has also made it difficult for fisherfolk to afford fuel, but the pollution at the coastline means they have to venture farther and farther offshore each time to make up their fish catch, thereby running the risk of greater expenses, losing their lives, or being captured by the Indian authorities (Imtiaz, 2014) on suspicion of being spies. The fisherfolk's tradition of moving to the islands for the monsoon seasons is now over; there are simply too many fisherfolk and too few fish, thereby increasing competition and internal politics among the fisherfolk themselves. I therefore posit that the fisherfolk at the Korangi coast being forced to let go of their communal forms of enjoyment is another form of discard. Leisure is a core part of both individual and communal well-being (Oncescu & Neufeld, 2019). While detainment, fines, and torture mechanisms are overt forms of breaking up the fisherfolk's communities, the taking away of spaces and times of leisure is a covert mechanism for the same.

There are islands along the creeks where the fisherfolk used to move to during the fishing season, where they would stay throughout the monsoon with their families. These are all empty now, and they look like they have always been empty, but the fisherfolk still sometimes visit the Sufi saints' shrines for protection. Karachi's mangrove forests have proven to save the city on a number of occasions, including from the Cyclone Phet in 2010, Cyclone

Nilofar in 2014, and Cyclone Shaheen in 2021 (Ayub & Ilyas, 2021; John et al., 2014; Popalzai, 2010). Many Muslims in Karachi believe that it is solely the shrines that act as protection, but the interviewees believe that the mangroves are a gift of protection from the Sufi saints. They are well-versed in the science behind the mangroves, but with an added layer of spirituality; to them, the mangroves are holy and their last line of defense against the degradation their geography has gone through.

## Conclusion

This paper focuses on small-scale indigenous fishing communities on the Korangi coast of Karachi, Pakistan, by analyzing the socio-ecological context of a coastline that has gone through immense social, ecological and political turmoil. Although it is true that the area has changed and become unrecognizable over the last three decades, Korangi's fisherfolk continue to fight for their access to the sea and their right to sanitation, safety and well-being. Small-scale fishing communities are crucial to the culture of the coast, and form the backbone of Pakistan's fisheries sector. Therefore, there is a dire need for the development of policies that protect, center, and rehabilitate the fisherfolk, their rights, and their livelihoods, and legalize those fisherfolk who are considered "alien" by central and municipal governments.

The discarding of waste is also a discarding of local indigenous fisherfolk's mobility, well-being, fishing culture and fishing grounds at the same time. Discarding waste has become synonymous with discarding those who live in proximity to the waste in Pakistan. It is therefore imperative to further study widely-accepted rationales and agendas of central and local governments in Pakistan, as well as in other Global South countries, to uncover the increasingly dire impacts of this socio-ecologically unsustainable, anti-poor neoliberal model of discarding of marginalized communities in urban contexts, as well as on coastal zones where small-scale fisheries constitute and sustain coastal communities' food sources, livelihoods and culture.

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