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Between forests and coasts: Fishworkers on the move in India

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Abstract

The Covid-19 lockdown in India in March 2020 revealed the presence of Adivasi communities in the marine fishing industry of Goa, a coastal state in India. While the migration for work of Adivasi communities from the central regions of the country is well recorded, their movement across geographies of the forest and the coast is relatively unknown. Working with initial data collected during the lockdown, interviews conducted after the pandemic and using secondary materials, the paper sought to understand the social and material conditions in the forest and the coastal regions that shape this movement. Centring the waged relation of Adivasi workers opened the door to thinking about the marine fishing sector in India as a capitalist industry, while paying attention to social reproduction highlighted how the coastal and forest regions are spatially linked through their movement and labour. This highlights that the coasts and forests are going through distinct processes of capitalist intensification and expansion. Making connections between ecological appropriation, historical processes of resource extraction and marginalization, the paper finds that the extraction of fish resources in Goa is made productive through the hierarchization and differentiation of Adivasi workers. It reveals how the social relations of identity and caste mediate access to and define conditions of work at sea.

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Adivasi, caste, fisheries, forests, labour, oceans, social reproduction

1 | INTRODUCTION

This paper stems from the challenges facing workers in India's fishing industry when the government imposed a lock-down after cases of Covid 19 were detected in the country in March 2020. As fishing vessels continued to return from fishing trips, they found that the supply chains had been disrupted. Unable to return to sea for fishing, fishworkers¹ were restricted to vessels in crowded harbours and faced many hardships (NPSSF, 2020); deaths of at least six fishworkers were recorded (Thejesh et al., 2020). One of the authors of this paper was working for the repatriation of workers in Goa during this period. It became evident that Adivasi² people comprised a significant section of the fishing industry's workforce in Goa, particularly on mechanized fishing vessels.³ Adivasi peoples migrate for the fishing season for 10 months a year from forest regions in the Central and East Indian states of Jharkhand, Chhattisgarh, Odisha and West Bengal.

While migration as a characteristic of the fishing industry in India has been studied, Adivasi fishworkers are not reflected in public records, academic research, state-based census and fisheries-related data. The first Marine Fisheries Census of India (CMFRI, 2006) included a category of 'labourers' accounting for the movement of workers from the east to the west coast of India for employment in mechanized and allied fishing activities (Sathiadhas & Prathap, 2009). This pattern represents the largest share of migration in the fisheries sector in India, as Mondal's (2020) review of the colonial and contemporary patterns of migration show. Some researchers speak to the drivers of migration (Sarma & Salagrama, 2007), while others examine the working conditions (Roshan, 2016; Karnad, 2017; Nair, 2021; Shyam et al., 2021). Iyengar and Sridhar (2022) present policy recommendations in the aftermath of the pandemic to improve migrant fishworkers' experiences. Swathi Lekshmi and Johnson (2013) help contextualize migration from a non-coastal geography to the west coast of India, while Peter and Narendran (2017) account for Adivasi people working in processing and in harbours. While these works provide an overview of migration, they do not help account for how people from a forest geography and non-traditional fishing communities come to work at sea. A similar absence is present in the literature on migration of Adivasi communities. Only one paper (Kujur & Minz, 2021) records fishing and fish-farming as occupations in destination states for Adivasi people.

Within the above context, this paper sets out to explore two primary questions: under what conditions have Adivasi people come to be fishworkers in Goa? What does the journey of the Adivasi person reveal about the social and material conditions of the coast and the forest? While Adivasi migration has been extensively studied in migration literature, this paper highlights their movement into the marine fishing industry—a new occupation for Adivasi communities—and brings specificity to the duration and period of migration. Tracing the Adivasi worker's journey highlights how the coastal and forest regions are spatially linked through the movement and labour of Adivasi peoples. We make connections between ecological appropriation, resource extraction and marginalization. In doing so,

¹The term 'fishworker' arose from the struggles of traditional fishing communities in the 1970s. We restrict the term fishworkers to migrant workers and use the term fisher for members of traditional fishing communities.

²Adivasi, indicating first inhabitants, is an identification used by indigenous communities in India. The term has been in use since approximately the early 1930s and represents a political identity (Prasad, 2022). Legally, diverse groups notified as tribes by the colonial government and then the Constitution of India (Munda & Bosu, 2003) are grouped together and referred to as Scheduled Tribes under a schedule in the Indian Constitution Order of 1950. The Indian State does not recognize the term 'indigenous people'.

³Mechanized fishing vessel refers to a range of vessel-gear types fitted with machinery for propulsion and fishing.

we find that one of the ways through which the extraction of fish resources in Goa is made productive is through the fragmentation of forest economies and the hierarchization and differentiation of Adivasi fishworkers. This alludes to how the social relations of identity and caste mediate access to and define conditions of work in the subcontinent.

The paper is organized as follows: first, we introduce the methodology. We then establish our analytical framework by locating the circulation of labour between land and sea. We do so by extending agrarian political economy to sea and centring the social reproduction of Adivasi workers. Based on our findings, we situate Adivasi workers in their home regions and explore working conditions in Goa's fishery. Drawing from our observations, we qualify graded inequality as structuring work at sea. We conclude by summarizing our findings and offering an invitation to engage with the changing social and ecological relations of fishing and forest economies in South Asia.

2 | METHODOLOGY

This paper emerged from the experiences and conditions of the Covid-19 related lockdown in India in March 2020. Writing during the pandemic, we decided to not follow up with workers, whose priorities differed from ours. The paper's first draft was written from an action-research perspective.

The initial source of information for this paper was obtained by Author 1, who was involved in a coalition of civil society actors called 'Goa Peoples Voices: COVID-19 Response'. A WhatsApp group was set up as a dedicated response mechanism, and information was collected from the fishing harbours across Goa—Chapora and Malim jetties in the northern district and Vasco and Cutbona jetties in the southern district. This included the operational status of each harbour, status of migrant fishworkers and the collection of crew lists to facilitate repatriation of stranded workers. The civil society network in Goa was also tied to regional and national coalitions to address the conditions of migrant fishworkers. Part of these were through national-level fisher forums, such as the National Fishworkers' Forum and the National Platform for Small-Scale Fishworkers. Collaboration was also maintained with other migrant worker networks such as the Stranded Workers Action Network. Coordinating with these networks allowed for the conditions of fishworkers to be placed in the national context of what workers in other sectors were experiencing.

Given the absence of information related to Adivasi fishworkers, the initial research was based on the crew lists maintained by the fishing vessel owner-operators. These records assisted us in mapping their home regions. We drew on a wide range of sources such as population and fisheries census, periodic labour force surveys and statistical surveys, which we complemented with the rich literature related to the migration, movement and socio-economic conditions of Adivasi peoples. We also worked across different disciplines, forms of data and information to be able to make the link between the distant geographies that the workers traversed, grounding this work in the material conditions of both places.

In September 2023, with the aim to strengthen empirical information related to the conditions of home and work, both the authors undertook fieldwork for 2 weeks in Goa. We based our fieldwork in two of the largest harbours in Goa: Malim fishing harbour in the North and a visit to Cutbona fishing harbour in the South. Using a semi-structured interview guide, conversations took place with Adivasi people in and around the harbours both individually and in groups. Some interviews took place at eating stalls near the harbour, while other conversations took place at the entrance and inside the harbour and near the fishing vessels. Workers were on a hurried routine and many times, while in conversation, were ordered to get back to work by crew managers. Interviews were difficult to schedule because of the unpredictability of fishing trips and often workers would come back late at night or early mornings and depart to sea soon after. In contrast, senior vessel crew had time and, in some cases, spoke to us at length. All the interviews were conducted in Hindi, which most interviewees were conversant in. We also had conversations with truck and ice loaders, truckers, fish traders and seafood company representatives.

We formally requested the vessel-owners' cooperative society for interviews and met with their representatives. We also spoke to people with regional expertise to gain an overview of both contexts.

The tight interlinkages between work and home shape the reproduction of communities (Green & Estes, 2022), and given the conditions under which we began to explore these connections, the paper is premised on the experiences of Adivasi men. We focus on their social location and community identity as profoundly shaping the reproduction of these communities (Yea, 2019). We recognize that the experience of different dimensions of work and migration is gendered (Jain & Jayaram, 2022; Mazumdar, 2014; Prasad, 2016) and that without bringing these into the realm of analysis, the understanding of work-at-sea remains partial. We hope that future work can engage more with these different elements of social and material reproduction.

Authors have professional, personal and activist relations with fishworker groups, as outlined above for Author 1. Author 2 has spent most of the last decade working and researching on mining and dispossession in Adivasi areas of Jharkhand and Odisha. This paper is written from the position that the question of the workers at sea must urgently be addressed in multiple forums.

3 | ANALYTICAL FRAMING: LOCATING ADIVASI WORKERS AT SEA

In this section, we draw on literature to describe the Indian fishing industry and the presence of agrarian communities at sea. We establish the regulation of Indian fishing, within which the waged work by Adivasi people highlights 'the distribution and concentration of control over fisheries resources and how this is shaped by and shapes labour relations' (Belton & et.al, 2019, p. 207). This allows us to extend agrarian change approaches to study the extraction of fish resources for commodity markets (Havice & Campling, 2021). By centring the Adivasi workers and their journey, we respond to the call of feminist scholars to pay deeper attention to the aspects of social reproduction as they structure and determine working conditions at sea (Neis, 2023).

3.1 | Overlapping jurisdictions at sea

The oceans are produced and shaped by colonial histories and capitalist expansion (Todd, 2015). They are not Schmidtian empty spaces between nodes of production and consumption but rather a 'socially shaped space' (Steinberg, 1999, p.3). Within statist and legal imaginations, the oceans exist either as territory or as a resource, but they disregard the fundamentally aqueous nature of oceanic spaces (Steinberg & Peters, 2015). Todd (2015) writes, 'it is important to remember that human-animal engagements are intimately shaped by processes of colonialism and the Nation State, and that activities such as fishing in this case reflect broader impacts that hegemonic state and industrial activities have on both human and animal actors' (p. 232). Taking into consideration the interaction of capitalism with the natural forces of the sea, Campling and Colás (2018) introduce the concept of 'terraqueous territoriality', that is, 'uniquely capitalist alignments of sovereignty, exploitation, and appropriation in the capture and coding of maritime spaces and resources' (p. 2). The codification of the Exclusive Economic Zone (EEZ) thus became a sovereign mechanism for extracting ground rent for the nation-state, in essence becoming an enclosure of the oceans (Campling & Colás, 2021). These and other procedures of law conceal the ideological assumptions and labour that produce it as a juridical territory and the laws that govern it (Braverman & Johnson, 2020).

Coastal states try to maximize rent appropriation (Campling & Havice, 2014), attempts which are shaped by ecological characteristics of fishery and their interactions with oceanic jurisdiction. This relationship has been deployed in understanding access arrangements in transnational fisheries. At the national level, the Indian State holds rights over resources within the EEZ, as is evident in the successive iterations of policy/law facilitating access to the 'deep-sea' fisheries resources (FAO, 2022). We extend this theorization to the sub-national regional state level of India.

Varied and overlapping forms of jurisdiction and extractive arrangements exist within the Indian EEZ. The colonial Indian Fisheries Act, 1897 delineated the management of fisheries in the 12 nautical mile territorial waters⁴ to regional states (Matthews, 2010). India promulgated the 'Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976' and by claiming sovereignty over a 200 nautical mile EEZ, brought the fisheries resources of the EEZ under the jurisdiction of the central Indian State.

Soon after, through the adoption of 'Marine Fishing Regulation Acts', regional states formalized their regulation of fisheries in territorial waters (Vijayan et al., 2000). These acts codified boundaries within the EEZ, with fisheries management and regulation legally devolved to the regional state. This includes licencing fishing vessels and regulating fishing activities as well as restricting the entry of vessels from other states.⁵ It is within this nationally and regionally bordered space that we interpret how the fishing vessel operates.⁶ Mechanized fishing vessels licenced to a regional state traverse waters between the territorial waters of the state they are flagged to and the Indian EEZ, at times even traversing into the territorial waters of neighbouring states, often within and inside zones that are closed to mechanized fishing (Nakhawa et al., 2018). It sets the stage for the operations of mechanized fishing in Goa.

3.2 | Circulation of labour between land and sea

The most popular strand of literature related to migration in industrial fisheries focusses on lawlessness (for a review and critique, see Vandergeest, 2019). These approaches often work within the framework of a depleted fishery (Tickler et al., 2018) where accumulation is premised on the conditions of modern slavery. The framing of modern slavery and trafficking ignores historical antecedents of labour abuse, which is problematic (Marschke & Vandergeest, 2016). Furthermore, by not paying attention to the dynamic ways in which labour relations on board are structured and regulated, they neglect the agency of workers (Vandergeest, 2019).

Instead, literatures related to maritime workers helps us trace the historical circulation of workers and labour regimes at sea. Subramanian (1999) in her study of medieval seafarers of the 16th to 18th century finds that a strictly defined hierarchical structure existed on board the boat, with specific communities carrying out particular tasks. This determined relations between crew members as well as their earnings. Literature on maritime workers in the British merchant fleets point to racial differences on board (Balachandran, 2016). South Asian seamen entered a segmented labour market 'structured into a rigidly (*sic*) hierarchy with South Asians at the bottom' (Ahuja, 2006, p.112). Ahuja (2008) details how racial differences manifested in contracts, wages and workloads, while the terminology of *lascar* that was used to refer to maritime workers from South Asia 'carried connotations of a low, subordinated status and of inferiority to "white" workers' (p. 12).

These workers also straddled agrarian and maritime geographies. Shipowners at the turn of the 20th century secured a reliable source of low-cost workers through a circular movement of small and medium peasants between rural homes and the sea (Balachandran in Campling & Colás, 2021, p. 126). Similarly, Ahuja (2008) finds that the first Indian seamen to gain a foothold as steamship labour were Catholic Goans, who, on account of the fragmentation in land holdings by the Portuguese colonial administration, were pushed to seek supplementary sources of income. Other South Asian seamen also came from rural regions and had small land holdings coupled with low agricultural productivity. They were in majority small landholders, rather than agricultural labourers (Ahuja, 2008).

While maritime labour regimes 'contain a degree of path dependency' (Campling & Colás, 2021, p.110), they are also remade in different places and times. Some elements of the above-described forms of labour supply chains continue, where migrant fishworkers belong to agricultural backgrounds. The hierarchy of workers, including the

⁴As per UNCLOS, territorial water is the body of water extending up to a limit of 12 nautical miles measured from the baseline.

⁵See, for example, the Goa, Daman and Diu Marine Fishing Regulation Act, 1980, and the Gujarat Fisheries (Amendment) Bill, 2020

⁶On purse seine fishing in the Indian EEZ and the conflicts over operating in a bordered sea space, see Special Leave Petition (Civil) No. 8442 of 2021 (https://main.sci.gov.in/supremecourt/2021/11669/11669_2021_12_1501_41263_Judgement_24-Jan-2023.pdf) dated 24 January 2023 in the Supreme Court of India.

terminology used to reference to their roles on board, exists till today. This opens the door to thinking about the reproduction of workers within the changing nature of capitalist fisheries in India and the accompanying forms of labour relations. Within national boundaries demarcated in the sea, Indian fishing vessels thus carry land-based investments into the oceans but constrain 'physically the labour process to floating platforms of production that can transcend jurisdictions in multiple ways' (Campling & Colás, 2018, p. 785).

In returning to the 'terraqueous' predicament of industrial fisheries, we think of the specificities of labour relations at sea as connected to and a continuation of land-based processes. However, distinct to merchant ships, fishworkers directly encounter and transform nature through their productive work on board the fishing vessel. In expanding upon the aqueous in relation to fisheries, agrarian political economy underscores the difference that nature makes to capitalist production (Boyd et al., 2001; Bunker, 1989; Mann & Dickinson, 1978). Studies (Goodman et al., 1987; Moore, 2010) highlight that the commodification of nature, as fish is converted to seafood, is never complete, with nature compelling 'the production process to conform to their geo-physical/biological characteristics' (Baglioni & Campling, 2017, p. 2445). To contend with these indeterminacies, Baglioni et al. (2022) highlight how 'some of the inherent obstacles posed in the commodification of nature ... are typically passed over to workers' (p. 95).

3.3 | Beyond labour

The presence of Adivasi workers in Goa's fishing industry was not known outside the industry. While the lockdown revealed that the workers on the fishing boats were Adivasi, the desire to move home, as well as abuses at the workplace, highlighted that security and care were inextricably tied into the home.

This movement of Adivasi workers between distinct geographies of the forest and the coast encapsulates both work and life. Situating Adivasi people as not just labour or commodity producers at a destination state requires a recognition of the multiple identities, roles and responsibilities they occupy. In trying to think expansively of the lives of Adivasi people, we borrow the definition of social reproduction as 'the fleshy, messy, and indeterminate stuff of everyday life. It is also a set of structured practises that unfold in dialectical relation with production, with which it is mutually constitutive and in tension'. (Katz, 2001, p. 711). This tension is two-faced as described by Ferguson and McNally (2015)—labour provides surplus value and profit for capital, while for labour, capital is a source of wages that are essential for the reproduction of working-class households. While the wage from fishing becomes a precondition to the sustenance of Adivasi workers and their families back home, the extraction of surplus value is dependent on a deracinated worker, working in an unfamiliar and alien environment. As Fraser (2014) argues, social-reproductive activity is critical to waged work and surplus accumulation within 21st century capitalism, observing that 'social reproduction is an indispensable background condition for the possibility of production' (p. 61) and that the division between the two is central to capitalism.

This tension and co-constitution play out in the migration of the Adivasi people highlighting that social reproduction is a spatial phenomenon (Winders & Smith, 2019). Combined with insights from feminist geographers (Gibson-Graham, 1996; Massey, 1994; Smith & Katz, 1993), this reveals social relations as 'stretched out' (Massey, 1994, p.2) between geographies. This formulation of stretched social relations has been utilized to show that migrant life-worlds take place between different geographies, especially for long-term migrant workers (Green & Estes, 2022; Ramamurthy, 2020; Rogaly, 2003). Similarly, existing literature on migration and movement has emphasized that migrant workers are embedded within their local context (Brickell & Datta, 2011; Chaudhry, 2022), that work away from home is contingent on combinations of individual and structural reasons and that many move to be able to stay put (Rogaly, 2003). But as Massey (1994) implies, stretched out can indicate not just lives being lived between different geographies, but the dynamic movement between the two spheres as also linking them materially. Work in fishing is thus constituted by the social relations of Adivasi communities as they move between different geographies

and sectors of work. Furthermore, as we find in this paper, studying processes at both ends indicate that both fisheries and forests are going through distinct processes of capitalist intensification and expansion.

In another iteration of this spatial relation, dispossession in one geography allows for accumulation in another; Ferguson and McNally (2015) in context of global working classes point out how social reproduction needs to be analysed in relation to accumulation and the movement of people it induces (p. 8). Fernandez (2018) in studying prawn fisher households in India shows how social reproduction is reconstituted by capitalist modes of production. While her work attends to both these processes within the same geography, we do so in geographies 'stretched out' between the forest and coastal regions and across differing sectors of capitalist production. This movement, as migration literature has also argued, leads to the 'super-exploitation of labourers' (Meillassoux, 1981 in Shah & Lerche, 2020) made possible because the reproduction costs of labour are externalized. This corresponds with social reproduction literature highlighting how the realm of social reproduction acts as a *de facto* subsidy to capital, with capital dumping the costs of reproducing the worker onto the social and material relations of the home regions (Fraser, 2014; Mezzadri, 2019).

In context of gendered work in India, Gopal (2013) similarly notes that a resurgent primitive accumulation, resultant dispossession and the devaluation of labour results in the movement of people as wage labourers. Focusing on their relationship to land and forest economies reveals hidden processes of social reproduction. As she writes, and we attempt in this paper, 'In these times, there is an imperative to draw from both history and the contemporary to understand social reproduction' (p. 91). That these historical, political and economic processes are not only at the level of the individual or household but rather impact entire communities, where the reproduction of the Adivasi worker 'are shown to be the productive and reproductive work of kinship over generation' (Shah & Lerche, 2020, p. 722). Thus, tracing the histories of dispossession and capitalist appropriation in Adivasi areas and its impact on Adivasi communities is integral to understanding how they come to be migrant workers in the fishing sector. It also questions the economism of migration research to see that the whole family enables the migration of one person (Shah & Lerche, 2020). A social reproduction lens helps uncover geographies that are deliberately hidden but are crucial to capitalist accumulation in the fishing industry (Mezzadri, 2019).

The importance of wage labour to the reproduction of workers forms a critical component of agrarian political economy through Bernstein's (2006) formulation of 'classes of labour'. As he writes, classes of labour highlight those who must pursue their reproduction through 'wage employment and/or a range of likewise precarious small-scale and insecure, "informal sector" (survival) activity, including farming' (p.18). It is also fragmented along the lines of generation, gender, caste and identity (Pattenden, 2018). A rich body of work in context of labour and migration in India find that social stratification and oppression is interwoven with class and fragmented on the lines of gender, caste, generation and identity (see Lerche, 2010; Mezzadri & Fan, 2018; Pattenden, 2018) and reproduced as inequalities and discrimination in the labour market (Srivastava, 2019, 2020). These highlight different registers of power and vulnerability as experienced by Adivasi fishworkers, echoing that the 'social structure of accumulation is also a social structure of discrimination' (Harriss-White, 2020, p. 40).

The appropriation of labour power is not bounded by the nation-state but rather rests on 'global regimes of racialisation and colonial and postcolonial subordination' (Ferguson & McNally, 2015, p. 9). Baglioni et al. (2022) set out a research methodology on understanding which aspects of social reproduction shape and perpetuate surplus labour extraction; for this paper, we are interested in the processes that lead to Adivasis being reproduced as workers. They write that the production of difference shapes how social reproduction relates to exploitation. These are mediated by both state and other social and legal institutions that turn upon racialized and gendered division of labour (Baglioni et al., 2022). Just as gender results in differential exposures to structural violence, so do caste and community identity (Fernandez, 2018). As we show in the next section, the absorption of Adivasi people as idealized wage workers historically, and the contemporary attitudes towards them from other actors in the fishing industry, points to how capital transforms differences in worker's bodies into instruments of labour fragmentation (Muszynski, 1996 in Baglioni et al., 2022).

In the Indian subcontinent, this stratification of workers is perhaps most aptly framed by Dr. Ambedkar's formulation of 'graded inequality', which even in contemporary times continues to reflect in market and non-market realms (Thorat & Madheswaran, 2018). Writing about the labour movement in India, he had remarked, 'the caste system is not merely a division of labour. It is also a division of labourers' (Ambedkar, 1987, p. 67), indicating the relative position and (in)security of workers in relation to one another. This division plays out not only through the denial of economic opportunities, but also via 'a kind of ascending scale of hatred and a descending scale of contempt' (BAWS Vol. 1, p. 167), that was starkly visible during the pandemic and how state and sections of society reacted migrant workers, as well as in our interviews in Goa with vessel owners and others who part of the value chain. We refrain from articulating caste merely as an additive category to class. As Jodhka (2022) writes, 'Caste does not work merely as identity. It is also a resource, an embodiment of social and cultural capital (p. 16)'. It is this materiality of the caste system that 'embodies different kinds of inequality, going beyond the economic and extending to different forms of cultural and social inequality' (Kumar, 2020, p. 29). These force us to reflect on the role of caste as a system that makes possible particular occupations (such as manual scavenging; see Wilson & Singh, 2016) as well as influences the nature of work available in existing labour regimes. This differentiation in how Adivasi communities find themselves most vulnerable reflects the interaction between socially disadvantaged groups with their historically low positions, both socially and in the labour market (Jain & Sharma, 2019). It also reflects how the effects of caste and market regimes combine in forms of discrimination (Mosse, 2020) that are still understudied. Considering the above, we shift our focus beyond the realm of production to questions of how such work is shaped by history, identity, geography and movement.

4 | CROSS BORDER IDENTITIES

A mapping (Figure 2) of the home regions of the workers in Goa during the pandemic showed that the workers were in majority from eight districts, falling into different state jurisdictions that are contiguous across the state borders of Chhattisgarh, Jharkhand, Odisha and West Bengal. Together, these form part of the Chhota Nagpur plateau and the Santhal Parganas—home to heterogenous Adivasi communities. This was confirmed during our interviews in Goa in 2023, where majority of the workers were from three border districts of Jharkhand, Odisha and Chhattisgarh. The numbers from each state fluctuate, with workers from Sundargarh district in Jharkhand and Simdega district in Odisha being most represented during fieldwork. The mapping highlighted the relationship of the workers with their homes that helps unfold alternative geographical and social relations. It resituates histories, community identity and politics that have been obscured through the demarcation of states.

Historical patterns of migrations from these regions reveal the slow destruction of Adivasi economies and politics and the exploitation of their labour within different technological and labour regimes. These regions were historically incorporated into the British Empire as the South-West Frontier of the Bengal Presidency. Operating with a certain autonomy from caste-based agrarian systems (Kela, 2006) as well as princely kingdoms of the plains, Adivasi polities were crushed by British colonial rule in the 1800s, for the extraction of coal and timber (Ahuja, 2009; Skaria, 1997). British incursions led to the introduction of land tenure systems and forest management, resulting in Adivasi rebellions, as well as successive waves of expulsion of people.⁷ This operated under different degrees of force—including indentured labour and the transportation of Adivasis across the oceans to former plantation colonies of Mauritius, Trinidad and Tobago, Mauritius, Fiji, Suriname and South Africa, as well as to tea plantations in Assam. The 'Coolie' or 'Dhangar', as Ghosh (1999) describes, became a catchword for the 'ideal' migrant labourer.⁸

With the end of British rule, the region was split on a linguistic basis between the administrative borders of the state of Bihar, Odisha and West Bengal by the States Reorganisation Committee in 1953. The State of Jharkhand

⁷Work on indentured labour points to different compulsions, motivations and patterns of movement that have led people to move and migrate in search of livelihoods (see Bates, 2017)

⁸The coolie was the land-based equivalent of the lascar at sea.

was created by the bifurcation of Bihar in 2001 after the movement for greater autonomy of Adivasi communities⁹ (see Munda & Bosu, 2003, on the Jharkhand movement). A mapping of forest regions, mineral rich areas and major watersheds in the subcontinent show that these primarily overlap with the homes of Adivasi communities. While parts of these regions are protected under the Constitution, these protections have been steadily eroded and undermined. The forest belts of Chhattisgarh, Jharkhand and Odisha have been the site of large-scale commercial mining and industrialization that have exacerbated after the nineties (Guha, 2012). This 'investment induced dispossession' (Damodaran & Padel, 2018) has resulted in a loss of access to land and forests that result in a destruction of social structures of Adivasi life; this includes political and economic structures, religion and material culture (Padel & Das, 2010).

Sundargarh district in Odisha and Simdega district in Jharkhand are the most represented home regions of the interviewed Adivasi fishworkers. Forming a triangle at the borders of the three states, the home regions of the workers contemporarily in Goa are characterized by predominantly Adivasi population and high forest cover. Both districts are a Scheduled Areas,¹⁰ with Sundergarh having more than 50% Adivasi population, with 40.4% of forested land (Kujur & Minz, 2021) and Simdega having 70% Adivasi population with 32% of the area under forest cover.¹¹ There are several different Adivasi groups in the area.¹² While parts of Sundergarh are recognized to be industrial areas, both districts have a majority of the population dependent on rainfed subsistence agriculture (Davidsdottir, 2021; Kujur & Minz, 2021). A human rights activist, Taramani Sahu, from Jharkhand told us that Adivasis who migrate occupy hilly areas, farming parcels of land, both with and without land titles. All the workers we spoke with indicated that they primarily worked in agriculture on their own lands alongside and prior to working in fishing. They grow primarily paddy, with groundnut, mustard, almonds and vegetables, and the produce is both consumed by the household and sold in local markets.

It is well known that the trajectories of dispossession of Adivasi communities that began with colonial capitalism have continued in independent India. For example, analysing census data from the 2001 and 2011 Census of India, Prasad (2016) points to multiple forms of state-led development that have resulted in growing indebtedness, landlessness, displacement and migration from Adivasi regions. These include the removal of subsidies for agricultural inputs, trade restrictions on agricultural products, shifts in management of land and forest areas, the diversion of forestland for non-forest use and rapid urbanization. Our interviews revealed that while the districts from where Adivasi people were migrating into fishing were not directly mining-affected, they were rendered similarly precarious on account of processes of alienation from land and the capture of forest areas. Alienation together with reduced income from non-timber forest produce, stagnant agriculture and limited opportunities for non-farm self-employment, push tribal households into cycles of food insecurity and forced migration (Keshri & Bhagat, 2012; Mehta, 2011). As Kela (2006) also concludes, the purposeful ruination and disintegration of material basis of reproduction have pushed Adivasi people into a cycle of migration and debt.

Sundargarh and Simdega districts are both characterized by high rates of seasonal migration by both men and women from marginalized groups that include Adivasi groups, Scheduled Caste, Muslim and low-income families (Sucharita & Rout, 2020; Kujur & Minz, 2021; Sarkar, 2023). Agrarian livelihoods can no longer sustain many households. An in-depth study (Kujur & Minz, 2021)¹³ of the Sundergarh region finds that one out of every two tribal households rely on manual labour or migration for sustenance. Similarly, a study by the Jharkhand Anti-Trafficking Network (n.d.) in Jharkhand finds that the stagnation of agrarian livelihoods has meant that seeking daily wages under state schemes and short migrations for labouring in nearby areas has been a coping strategy. As indicated by

⁹A demand for greater Jharkhand has existed since the 1950s and has risen again sporadically in the region and includes parts of present-day Odisha, West Bengal, Chhattisgarh and Bihar. This includes the Sundergarh region.

¹⁰These are areas demarcated as having a majority Scheduled Tribe (ST) populations, governed under the Fifth Schedule of the Constitution. The Fifth Schedule is meant to provide special provisions for administration and control of Scheduled Areas and Tribes. For example, the constitution of tribal administrative bodies and prohibition on the alienation of land from ST communities, and so on.

¹¹See district profile of Simdega (<https://simdega.nic.in/en/about-district/>) and district profile of Sundergarh (<https://sundergarh.nic.in/about-district/>).

¹²This includes Munda, Oraon and Kharia, both following Sarna (Adivasi religion distinct from Hinduism) and Christian faiths.

¹³This is the only study during this research that identifies fishing and fish farming as one of the occupations at destination for Adivasi people.

Mosse et al. (2005) in the context of Adivasi migration in western India, seasonal migration is the only way in which settled agricultural livelihoods are possible.

All the workers told us the agriculture was insufficient to meet the family's needs and combined with the lack of employment opportunities in their regions this was the primary reason for them to migrate. They migrated immediately after the sowing season in June–July, a seasonality in migration that corresponds with the resumption of fishing after the Indian monsoons in Goa. A distinction was made between subsistence—reflected in being able to feed oneself—and the need for cash, which they are unable to meet via agriculture or employment in the region. This echoes Ferguson (2019), who writes that, 'the work of subsisting, of reproducing life, is no longer possible unless one, first, has access to a wage (or other forms of money income)' (p. 12). Dilip¹⁴ from Simdega shared that agriculture allows for the stomach to be filled but pays for nothing else. Most interviewees were the only people to migrate from their family, and this decision to migrate is taken by the family collectively, rather than individually, pointing to the community and shared nature of decision making on migration. This also reflects the smaller nature of landholding being cultivated that does not require the entire family's labour and a lack of other forms of work available. Studies in the region also find that women's agricultural labour sustains agrarian households (Naresh, 2014), allowing men to migrate. The workers we spoke with were, in majority, the only people migrating from their households, with other family members working the land and or in the forest. Our conversations indicated that other people from their family and communities, including the women, also migrate at different times.

A cash income is critical for survival. The need for cash is not wholly separate from farming—as Hembron, from Simdega, in his late 40s, who had migrated to Goa for the first time shared, he needed cash to buy seeds for farming or rent a tractor if the ground is hard. Robert similarly shared that cash is needed to pay back loans taken from local moneylenders for agriculture, often taken at very high interest rates. Climate uncertainty also mattered, and interviewees shared that the unpredictability of rain has made their practice of rain fed agriculture unsustainable. This was tied to the lack of irrigation in the region. Interviewees also mentioned events such as health crisis, the desire to send their children to an English medium school or house construction requiring additional cash reserves, leading them to migrate. Workers painted a picture of difficulty in accessing affordable healthcare, further education and the inadequacy of existing forms of social protection, including opportunities offered by state-based employment guarantee schemes.

Many groups of workers were from the same village, worked on one owner's vessel and had travelled together to Goa. A considerable number of Adivasis were quite young, 14–20 years of age, and were migrating for the first time. Others shared varied experiences of wage work migration.¹⁵ The opportunities for work were sought via networks of kin or contractors from their own and neighbouring villages. This was reiterated in interviews with two of the labour contractors from Simdega who had initially migrated to work as fishing labour. Over time, they had come to be in the employment of the patroa¹⁶ and were involved in sourcing labour for him; one of the contractors was a manager of the vessel and responsible for fishing and crewing affairs. While some workers came to Goa on buses organized by the patroa,¹⁷ with the help of labour contractors, others were sent train tickets. Interviewees shared that sometimes contractors wait at the train station to ensure that 'their workers' are not taken by someone else. Both contractors indicated that Simdega sees extremely high migration. Both contractors were in relatively secure employment, provided housing and accommodation and have settled with their families in Goa. Their key responsibility is to find workers and oversee them throughout the fishing season.

¹⁴All names of fishing crew and workers have been anonymized. They still reflect the diversity of belief systems within Adivasi workers we met.

¹⁵Goa is a popular destination for workers from distant geographies, including Jharkhand and Chhattisgarh (Devi, 2020). Devi (2019) reports that at a national level, Goa reports the highest proportion of migrants from other states as a percentage to total population of Goa (18.5% of Goa's population comprised on out-of-state migrants in 2011). Almost 30% of the migrants moved to Goa for employment. None of the Adivasi workers we spoke with had worked in other industries in Goa.

¹⁶Patroa is the Portuguese term used colloquially to refer to boss, owner or manager.

¹⁷This might be a more recent strategy to secure workers. We were told by an activist in Simdega that buses for workers were first observed during the pandemic.

All the workers told us that they are promised rupees 10,000–12,000 a month (US\$ 120–140) to be paid as a lumpsum via bank transfer, at the end of the fishing season. Since boarding and lodging takes place on the vessel, most of the wages are saved. This was preferred over daily wage work as the other option available for them. The security of a monthly wage and lumpsum annual earnings of approximately rupees one lac (US\$ 1,200) is a significant reserve and security for sustaining the home. At the same time, workers also mentioned seeking better work conditions and wage shares at different regional centres. Against the backdrop of the conditions in the forest regions, in the next section, we contextualize the working conditions of Adivasi fishworkers in Goa.

5 | WORK AT SEA

The post-Independence development of Indian fisheries replicates the global pattern of spatial expansion away from land and intensification in fishing gears (Ansell, 2020; Bhatthal, 2005). Alongside the introduction of trawling technology in India in 1954, purse seining was introduced in some regional states. While trawling targets bottom-dwelling species, purse seining targets pelagic schooling fish such as sardines, mackerel and anchovies, and carangids that dwell closer to the surface. Almost 80–90% of India's sardines and mackerel catch is landed by seine-operating boats operating along the southwest coast of the country. Purse-seine operations are undertaken in the territorial waters of each state and in the adjoining Indian EEZ.

Exploratory purse seine fishing was introduced in Portugal ruled Goa in 1957. With the commercial introduction of these gears, 'the number of purse seiners increased to 42 by 1969 and to 225 in 1994' (Pravin & Meenakumari, 2016, pp. 162–163); in 2022, there are 314 purse seiners registered in the state (DOF, 2022). In 2016, 17% of the national purse-seine vessels were registered to Goa; by comparison, Goa operates less than 2% of the national trawl fleet (Central Marine Fisheries Research Institute, Government of India, CMFRI, 2006). In the last decade, catch landings in Goa are overwhelmingly landed by purse seiners accounting for 98% of the large pelagic landings in Goa (Rajesh et al., 2020). Seafood purchasers reaffirmed research (Faria, 2019) that landed fish caters to a diversity of domestic and international markets.

In Goa, a new fishing vessel can only be commissioned by decommissioning an older one. While the total number of purse seine vessels has not significantly increased since they were introduced, there has been an increase in the capacity of the vessel measured in terms of vessel size, engine power, voyage range and storage capacity. Our fieldwork and existing research (Pravin & Meenakumari, 2016) show that Goa's purse seiners are amongst the largest capacity vessels in the country. Workers spoke to us about fishing in waters as far as Gujarat to the North, regularly spending up to 2 weeks at sea. This demonstrates the spatial expansion and technological intensification of Goan fisheries. The Goan state, which has the shortest coastline of India, has a comparatively substantial purse seine fishery.

Purse seine vessels are the most expensive fishing vessels to build and operate in India. A new purse seiner costed about US\$ 235,000 in 2018–2019 to build (roughly three times the cost of a trawling vessel), and the annual operating costs were approximately US\$ 321,025 in that period (roughly two and a half times the cost of a trawling vessel) (van Anrooy et al., 2020). Conversations with vessel owners made it clear that capital¹⁸ investments in the fishing industry overlapped with capital investments in other industries in Goa. While the number of purse seiners is relatively small in comparison to other mechanized gears such as trawlers, they are highly efficient gears, and thus, the returns on account of value of fish landed are far higher than trawlers; in 2020, for example, annual revenues from purse seiners were reported to be nearly five times that of trawlers (van Anrooy et al., 2020).

Pelagic fisheries show seasonal variations, both spatially and temporally—the movement of pelagic species closer or further away from shore and the difference in availability during similar seasons in different years (Dhiju Das et al., 2019; Hamza et al., 2022). This variability shapes the vertical capital-nature relationship by inflecting

¹⁸For example, one of the vessel owners we spoke to owned hotels, petrol pumps, a seafood supply business and an ice plant.

uncertainty into returns from the fishery.¹⁹ Faria's (2019) research on purse-seine operations point to one metric—fishing trip durations—which change through the year because of species variability. Vessel captains told us that in the post-monsoon months, due to fresh water entering the sea from the rivers, fish spawn closer to shore resulting in shorter trips. In later months, vessels travel further in search of fish. The landing data in the sardine and mackerel fishery, the mainstay of Goa's pelagic landings (See Figure 3), show annual variations. For example, in 2015–2016, there was a 55.3% reduction in landings in Goa (CMFRI Annual Report, 2006), and in 2019–2020, there was a 44% decline (CMFRI Annual Report, 2020) compared to the preceding year. When we visited the harbours in 2023, a deficit monsoon was being cited by many of the vessel operators as resulting in reduced landings, after a bumper year of landings in 2022. All the vessel captains we spoke to indicated that fishing had become an uncertain source of income.²⁰

This variability interacts with the bordering of the Indian EEZ as discussed in Section 3.1 to shape the horizontal relationship between fishing vessels (see Figure 1). As Mohamed et al. (2018) report, almost 70% of India's catch is taken from the Indian EEZ, where 'vessels land catch taken from the 12-200 NM of one maritime state, in landing centres of another maritime state' (p. 9). Fishing vessels, both within and outside of Goa, compete over the same fisheries resources that spawn and migrate along the southwest coast of India. This competition is evident in the tussles between vessels of Goa and the northern neighbouring state of Maharashtra, where vessels from the two states regularly breach each other's territorial waters in search of fish, often creating conflicts (Team Herald, 2021). One Goan captain spoke of the Maharashtra maritime police monitoring the territorial boundary between the two states and often boarding the vessels for inspections. Driven by this competition, when a vessel encounters fish, it must be able to maximize hauls before having to return to shore, in turn intensifying working routines, as one worker told us that when there is fish, 'din raat jaal tan na padta hain' (we must haul the nets day and night).

When vessels are unable to find sufficient fish, they try and attract the fish to come to the vessel. Two owners mentioned that the use of LED lights is disallowed under Indian fishing laws, which is imperative to generate profits. However, one vessel captain was clear that the indiscriminate targeting of fish using these lights was leading to declines in the fishery. This competition compels crews to successfully find and catch fish, return them to port before they begin to perish, restock the vessel and return to sea, a process that repeats through the fishing season. On purse seiners, fuel accounts for the largest share of operational costs, approximately 60% of the total (van Anrooy et al., 2020). This creates the imperative for the operator to maximize the days fishing (Campling, 2012). Since the state imposes strict quotas on the amount of fuel that can be subsidized to each boat owner, profit-maximizing strategies of capital come to bear upon the workers.

The labour process on purse-seine vessels in Goa is influenced by the ecological properties as well as by the competitive dynamics of the pelagic fishery that they operate in. The labour process of purse-seine boats, thus, is distinct from other mechanized boats. In comparison to trawlers, purse seine vessels require a larger work force. Even though some vessels are fitted with hydraulic equipment, much of the hauling, setting and repairing of the purse seine nets, and the sorting of fish is done manually. On average, workers told us that between 25 and 40 workers on each boat spent 3 to 4 h hauling the net and 2 h sorting the fish, often three times per day, resulting in 15 to 18 h working days. Pain in the back and hands from hauling and setting the nets was expressed by many. On our visits to the harbours, we witnessed Adivasi workers working on and off the vessel—as the vessel docked, the crew would first offload the fish on to waiting trucks, and then, they would offload the nets onto the jetty where it would be repaired and loaded back. Once this was done, they would load ice and rations and soon be preparing to head to sea. During our time at the harbour, we observed boats returning from fishing trips lasting 10 to 12 days and heading out to sea within a period of 12 to 14 h, resulting in an endless cycle of work, both on land and at sea over the period of the 10-month fishing season.

¹⁹See Campling (2012) on the horizontal relationship between 'competing fishing firms' and the vertical relationship 'between capital and the environmental conditions of production' (p. 252).

²⁰The captains work on catch-share arrangements where they earn a pre-determined percentage of the value of the total catch.

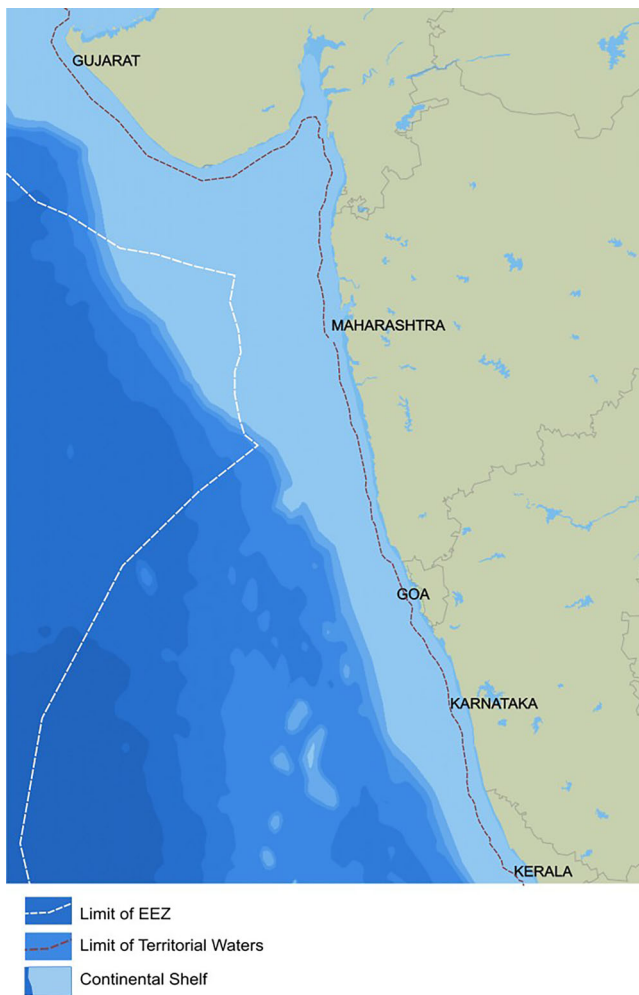


FIGURE 1 A map of the west coast of India showing the interaction between the bordering on land and at sea and their interaction with the continental shelf. *Source:* base layer obtained via Mapbox, with maritime borders drawn by authors.

The purse seine fishery currently targets stocks that are certified as sustainable and returns from the fishery are very profitable for the boat owners. On the other hand, compared to other mechanized gears and regional states, the share of profits paid to workers in this fishery is low (van Anrooy et al., 2020). Thus, working conditions on board ‘should be read as a tactic aimed primarily at maximizing the rate of profit, rather than as an adaptation to ecological decline’ (Belton & et al, 2019, p. 211). Rather than understanding the purse seine fishery as merely creating a demand for the workers, which have now come to be filled by Adivasi people, we stress that the fishery is productive because of the graded nature of the labour regime. We qualify this in the next section.

6 | GRADED INEQUALITY

In this section, we draw upon the framework of graded inequality to describe the conditions of work in Goa. ‘The principle of gradation and rank’ (Ambedkar, 1987, p.25) materializes in multiple ways: hierarchy on board, distribution of profits, working conditions and attitudes towards the Adivasi workers. We elaborate on these below.

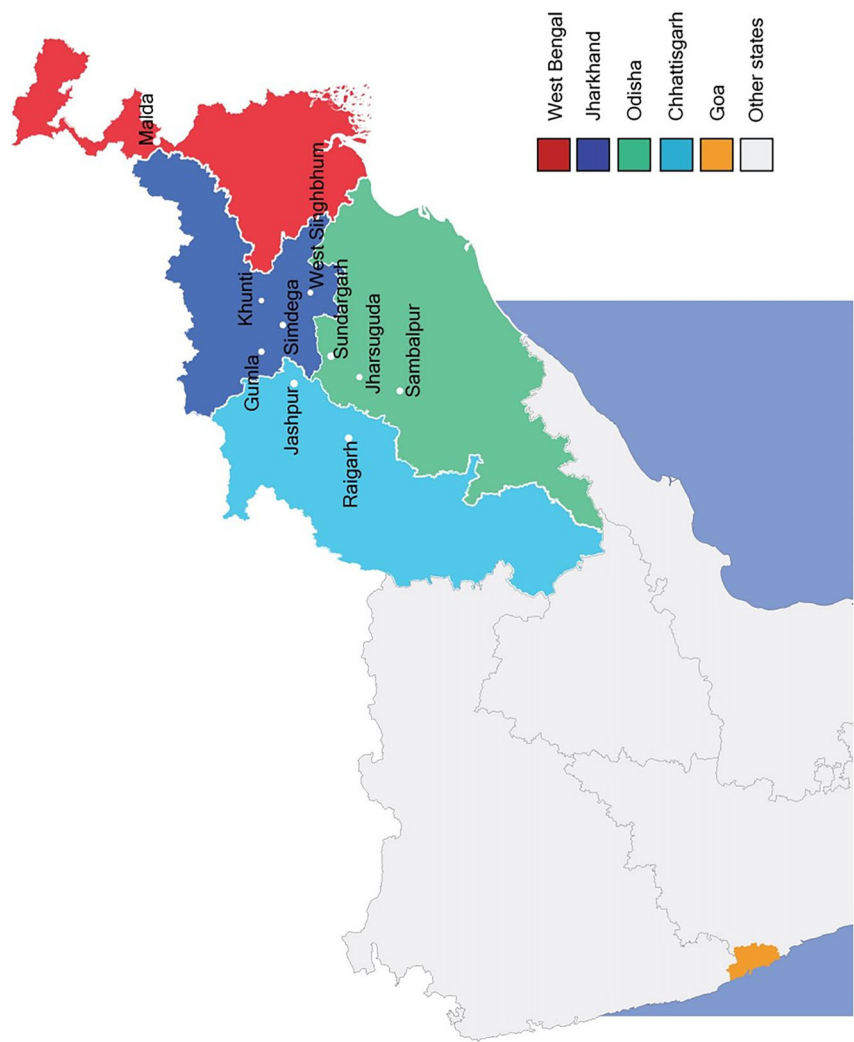


FIGURE 2 Approximate mapping of home regions of Adivasi fishworkers with current state boundaries. Source: created by authors, based on relief documentation and fieldwork.

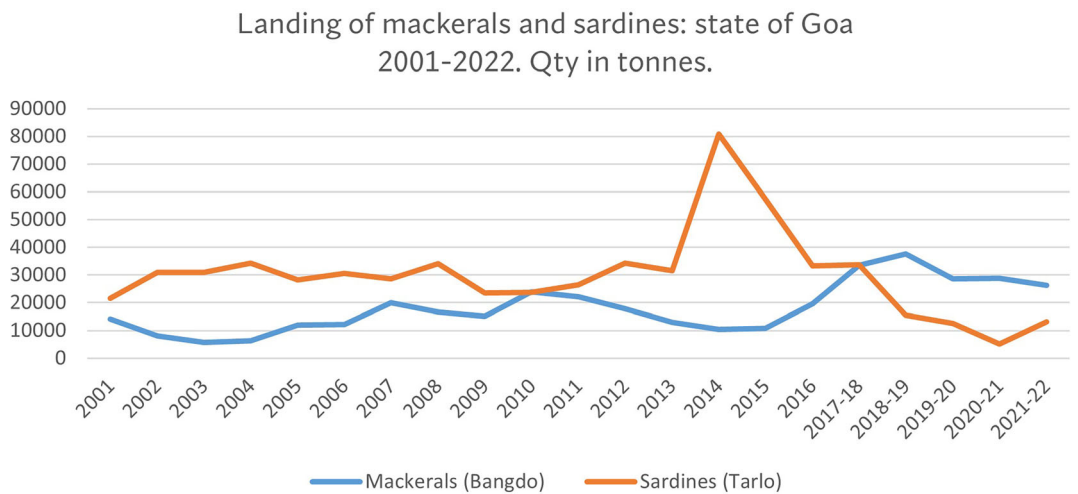


FIGURE 3 The annually fluctuating nature of the two main species of marine fish landed in Goa. *Source:* Annual Landing Reports, Department of Fisheries, Government of Goa (2020, 2022).

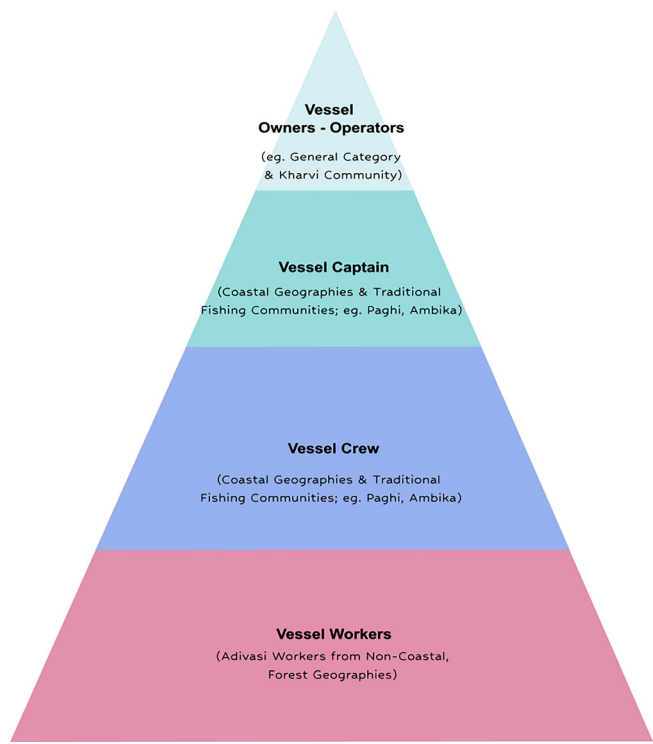


FIGURE 4 A mapping of graded inequality and hierarchy on board fishing vessels in Goa.

The work division on board is graded (see Figure 4 below). At the top are mechanized vessel owner-operators who come from General Category and Kharvi community groups in Goa (see Faria, 2019). They do not work at sea, referred tongue-in-cheek by one vessel captain as 'ACDC', meaning those who often give orders from an AC room. They liaise closely with the captains (regionally referred to as *paghis*²¹) of the fishing vessels, who are the de facto bosses of the vessels. The paghi works with a team of 2–3 people, who act as fish-spotters and winch operators. As was evident from different interactions, these higher-up roles are filled by people from inland and fishing communities or those who have acquired the skill. For a majority of the vessels in Goa, the paghis come from the southern state of Karnataka, while on a few vessels from the eastern state of Andhra Pradesh. These communities broadly belong to productive caste groups,²² classified as Other Backward Castes (OBC). The workers occupying the bottom rung are Adivasi peoples from central and eastern India, who are classified as Scheduled Tribes.

While the owners made the bulk of the profits, the paghi and his crew worked on catch-share arrangements; approximately 20% of the profits are shared by the top four workers. Adivasi people worked on fixed wages with no bonus arrangements. Furthermore, while monthly wages of INR 10,000–12,000 (US\$ 125–150) were promised to workers, multiple interviewees told us that wage theft was common in Goa; at the end of the fishing season, owners only partially paid the wages due to the workers. One of the paghis, we met multiple times said that workers had no power to demand full wages and that in cases where they did, vessel owners had responded with physical violence. The lack of full payment in the last season was implied by a labour contractor as being one of the reasons why workers were reluctant to return to Goa and were instead moving to neighbouring states to work. It was also perhaps why many of the workers who had come to Goa so far were young and were coming for the first time. We also learnt that a few deaths have occurred in the harbours without any compensation being paid by owners.

This hierarchy also manifested in the spatial construction and division of spaces on the vessel. The vessel acts as the sole accommodation for the workers for their stay of 10 months in Goa. While four senior crew share one floor of the cabin, almost 30 workers share the other floor of the same size. Heat, lack of space and ventilation mean that Adivasi workers pitch tarpaulins at the stern of the boat and sleep outdoors when conditions permit. Around the harbour, we found many workers taking naps in different shaded areas, likely cooler spaces than their accommodation on board. Moreover, there are no toilets or shower spaces. Each worker is rationed one bucket of fresh water to bathe every 3–4 days if the fishing trips are shorter and every 6–7 days if the trips are longer. Raju anna, one of the paghis, told us that even though the food eaten by everyone on board is the same, they eat separately. For one of the workers, eating of marine fish and rice devoid of vegetables with every meal was unfamiliar.

The devaluation of Adivasi labour was starkly visible in our conversations and interviews. Rather than as fishers, Adivasis were referred to as net-pullers or just labourers. This corresponds to the lack of opportunities to learn or progress upwards in the gradation on board. Not just in the present, paghis were clear that Adivasi people did not have the capacity to upskill; rather, they facilitated these opportunities for their own caste and kin groups. Workers told us that their suggestions on fishing operations are dismissed. They are not allowed to climb up the mast to assist with spotting fish. Sanjeev, with a technical degree, was disallowed from entering the engine room of the vessel. His co-worker with 7 years of experience reiterated that Adivasi people will never be allowed to progress within the current industry.

Shopkeepers, suppliers and paghis generalized Adivasi people as gullible and not integrated with the modern economy, which made them easy to swindle and dependent on contractors and crew managers. Across the board, there was an infantilizing of the Adivasi person. Moreover, with no separation of leisure and work time, workers were constantly being herded from the boat to land and back. During our fieldwork, a major festival took place. While the senior crew left for celebrations, Adivasi workers were restricted to their vessels, and we observed them undertaking maintenance work. As we learnt, paghi and senior crew regularly returned to their homes in the

²¹Paghi is the caste name of inland fishers in Karnataka who were the initial migrants into Goa's fishing industry. The name is now synonymous with senior crew on board.

²²Despite the caste divisions on board, we want to highlight that the caste groups working at sea, even in the higher up roles, belong to what Kancha Ilaiah (2018) theorizes as being productive on account of 'producing basic resources—food, clothing, housing, art, music and so on'.

neighbouring state of Karnataka to attend to personal and community commitments during the fishing season; it was only the Adivasi workers who spent the entire year living on the fishing vessel.

The graded nature of the labour chain was reinforced in our conversations with other workers who were loaders of ice and fish on the docks or worked as truckers. A loader from Tamil Nadu, Bowul, told us that he was paid rupees 30,000 (USD \$360) for a month, which was substantially higher than the wages for Adivasi workers. He indicated that he and others would never agree to do such hard work, under difficult conditions for such little pay. When we asked another, we were told that it was only the 'hard bodies' of the Adivasi that could sustain such hard labour. These interactions alongside the above observations made evident the comparative scale within which different workers are positioned. It reiterated that it is not only the labour of the Adivasi workers but rather their time and body that are under regulation and control. The fishing harbour and fishing vessel act as a microcosm of the caste system, reflecting how caste as graded inequality functions at a structural level (Hiwrale, 2020).

7 | CONCLUSION

We began the paper to understand how Adivasi people became workers in the fishing industry. Based on data generated during relief efforts during the pandemic, primary research and secondary literature across the fields of labour, migration, forest and fisheries economies, we developed a framework that synthesizes the approaches of agrarian political economy and social reproduction in context of the fishing industry. This enabled us to draw linkages between the social and material conditions of the forest and coastal regions, while also recognizing their specificities. While we trace dispossession and accumulation in both geographies, our site of analysis is the fishing industry in Goa.

Thinking with social reproduction and feminist geography highlights that social relations are constituted in the movement between the forest and coast. In mapping home regions of Adivasi communities, we find contiguous forest territories divided by state borders. Situating the region of home historically and their division through state borders brought focus on historical and contemporary processes by which Adivasi communities are dispossessed. It indicates how questions of identity and historical injustice is 'obscured by hegemonic spatial imaginations' (Hyndman, 2004, p. 314). To centre the experiences of migrant workers perhaps demands that the question of labour be seen as more than work, exceeding law and dominant forms of imagining spaces and geographies.

Interviews suggested that Adivasi migration is a collective decision made by the family and migration occurs with known people in the community. Adivasi fishworkers migrate for up to 10 months per year, and this movement is between two non-urban geographies and across land and sea. While migration of Adivasi communities has been recorded to be lasting for 6 to 8 months and coinciding with the harvest of the paddy fields (Shah & Lerche, 2020), the migration in fishing lasted for 10 months per year and coincided with the fishing season as opposed to the agricultural season. On being asked why Goa, workers pointed out that it was due to the security of a monthly wage and added savings due to minimal costs of stay and travel, as compared to other precarious daily wage jobs. We found that while working at sea is exploitative and difficult, it can also be a source of enjoyment for some. Interviewees shared a strong connection with home and with working on the land. While migration is studied in existing literature both as a form of oppression or as a space of opportunity (Yadav, 2020), our interactions suggested they exist together. While compulsion leads people to migrate, opportunity and choice exist within this compulsion. The presence of Adivasi fishworkers must be read as a snapshot in time of a dynamic labour regime. The dynamism is indicated in different ways. Workers are on the lookout for better work opportunities, with some moving to other states where wages are higher. Others are not returning to Goa due to low wages and instances of wage theft.

The analysis finds that Indian fisheries has characteristics of a capitalist industry. Framing fishing as a form of terraqueous territoriality (Campling & Colás, 2021) enables us to situate Adivasi people as workers on board

fishing vessels, while centring their connections to land. Our research hints at capitalist strategies in Indian fisheries contending with bordering processes and the biophysical properties of the fishery, in turn, shaping the labour process on board. We emphasize, however, that rather than thinking of the presence of Adivasi workers as responding to a demand for workers, it is the labour of the Adivasi fishworker that makes this fishery profitable.

The compulsion to migrate makes workers subject to exploitation by vessel owners which is evident in the harsh conditions of work, lack of accountability of health and safety and withholding of wages until the end of the fishing season. Consequently, the graded nature of this labour process premised on social location and community identity, in this case Adivasi communities, must be understood as central to accumulation strategies in the fishery. Dr. Ambedkar's formulation of graded inequality illuminates how the materiality of caste defines the possibilities, opportunities and conditions of work. This is evident in how the body of the Adivasi person is always available, the limitation on their upward mobility, the profit sharing in fishery and the attitudes of owners and other workers towards them. It demonstrates that more work is needed to understand caste as structuring options and work conditions in the fishing industry, not just for Dalit communities, but also for Adivasi and other marginalized workers in the South Asian context.

This paper makes a few observations, which we hope can foster a research agenda. There is a need to expand research that does not restrict itself to administrative state borders, both on land and at sea. Doing this reveals non-hegemonic configurations, for example, those that centre peoples' journeys. The journey of the Adivasi migrant worker peels apart the layers of obscurity to reveal how the extractive neoliberal developments and the accompanying violence and dispossession in disparate geographies are connected. While this paper drew on community social reproduction, more work on fishworkers' social reproduction on board, on questions of care and security on the vessel, and their relationship with women and children's labour at home is required. Mezzadri (2019) writes that paying attention to the realm of social reproduction enlarges 'the social parameters of what is defined as a labour struggle to accommodate all those whose work is subjected and subordinated to the capitalist relation in more hidden ways' (p. 39). For those of us engaged in work and research with fishworkers' and forest-workers' movements in India, deepening analysis of material conditions across forest and sea geographies also expand conceptual boundaries. It challenges us to think beyond academic, disciplinary and activist distinctions that hide the multiple axes of location, identity and domination and their contemporary manifestations. It points to solidarities that can be built between communities geographically separated but interwoven today.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article, as no new data were created or analysed in this study.

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