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The Labor Governance Frontier in Fisheries: A Critical Review and Future Outlook

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ABSTRACT

Industrial fisheries are some of the most dangerous workplaces in the world. This paper argues that oceans deserve to be understood as ‘working spaces’ embedded within complex jurisdictions, material processes, and social relations. I coin the term ‘labor governance frontier’ to develop a conceptual analysis that captures the ways in which material processes and governance programs, introduced by state and non-state actors, seek to expand and improve labor rights at sea. Labor in fisheries is an emerging field that has caught the attention of diverse disciplines. I argue that, to date, little research has explored workers’ individual and collective agency in relation to the materiality of working at sea. I explore the potential of the concepts labor regime, labor precarity, and hybrid governance, to comprehend and expand the labor governance frontier. I conclude by outlining a research agenda for labor governance frontiers.

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Introduction

This paper aims to open up scholarly discussions on labor exploitation in fisheries by arguing that oceans deserve to be understood as ‘working spaces’ embedded within complex jurisdictions, material processes, and social relations. As a framework, ‘ocean frontier’ demonstrates contradictory understandings of ‘ocean frontier’ as a metaphorical ‘wilderness’ or ‘untouched’ territorial space versus ‘ocean frontier’ as a shifting epistemological boundary, where existing institutional orders are constantly contested and in motion to govern the space (Havice and Zalik 2018). The later framing of ocean frontier is what this paper attempts to expand by asking, *to what extent is human labor, turning marine ecologies into marketable resources, governed and exploited?* The challenge of governing labor in fisheries lands, therefore, on the unresolved jurisdictional complications of access to the rights and property of oceans (Campling et al. 2024). In this paper, therefore, I coin the term ‘labor governance frontier’ to conceptually capture and analyze the ways in which material processes and governance programs, introduced by state and non-state actors, seek to expand to improve labor rights at sea.

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The past decade has witnessed a growing realization that working conditions for fish workers are unacceptable—indeed, appalling—according to many basic standards (Vandergeest 2018). Industrial fishing, in comparison to land-based occupations, is considered one of the most dangerous workplaces in the world (Campling and Colás 2023). I refer to industrial fishery ‘as a geographical area of operation of a complex of capitals whose form of organization is the firm and whose medium of operation is fishing vessels’ (Campling 2012, 252). Unlike small-scale fisheries, industrial fisheries depend on hired labor. The process of industrialization in fishing has progressed from hiring local workers along coastal areas to hiring migrant workers, due to the higher demand for labor and increasingly harsh working conditions that local workers are unwilling to bear (Vandergeest and Marschke 2020).

Work in fisheries is extremely precarious due to the unpredictable nature of catches, unregulated working hours, and hazardous conditions (including storms, accidents, dangerous equipment, a moving boat, exhaustion). Fish workers are being excluded from land-based labor laws and regulations (Vandergeest and Marschke 2021). Fish workers, especially those working on distance fishing fleets, work under multifaceted regulations of flag state, port state, national water, or high seas, while they are obliged to follow vessel-owner and crew-agency rules (Campling and Colás 2023; Yea, Stringer, and Palmer 2022). The isolation of fishing vessels on the high seas makes it difficult to govern activities on board. Debates among academics, the public, and policymakers reflect growing concerns over this governing challenge; and we can begin to observe a shifting narrative of oceans – from being seen as devoid of socio-cultural relations (Carver, 2023) to viewing them as spaces of complex working hierarchies, conditions, and worker agency (Campling and Colás 2018; Kadfak 2024).

The labor governance frontier became part of the international agenda in the early 2000s, when modern slavery scandals surfaced in S.E. Asia, particularly with reference to physical abuse and trafficking of Myanmar and Cambodian migrant fish workers on Thai-owned vessels operating from remote islands of Indonesia (Vandergeest and Marschke 2020). Since then, other forms of labor rights violations occurring globally have been reported in news media, reports and other academic writings. For instance, the Environmental Justice Foundation (EJF) released a report on child labor on Vietnamese fishing fleets (EJF 2019), and journalist Ian Urbina published powerful stories on the forced labor and crimes against Uyghur fish workers on Chinese distance fishing fleets, and continued to expose unethical and unsustainable Chinese seafood supply chain (Urbina 2023).

Other scholars have ethnographically explored how Vietnamese offshore fish workers fled their Taiwanese vessels while at port in Trinidad and Tobago (Le 2022b) and the problematic recruitment processes that avoid responsibility for migrant workers from Cambodia, Philippines, and Indonesia on Taiwanese and Korean fishing vessels (Yea 2022; Yea and Stringer 2021). The kinds of labor rights violations they have revealed are not exclusive to developing countries. In New Zealand’s waters, for example, turbulence occurred when Indonesian fish workers abandoned their vessels and later fought in court over labor- and human-rights abuses occurring on Korean foreign-charter vessels (Stringer et al. 2016). Investigations by the Guardian and International Transport Workers’ Federation (ITF) also documented inequality and labor abuse based on racialized hierarchies among fish workers in both Irish and UK fisheries, where African

and Asian fish workers are reportedly treated differently by the captain than their British and Irish counterparts. African and Asian migrant workers also are assigned more hazardous fishing activities with less pay than workers holding UK or Irish citizenship, while they also face precarity due to their immigration status (Marschke and Vandergeest 2023; Murphy, Doyle, and Thompson 2023).

While labor in fisheries has become an important focus of research in diverse fields, but current literature lacks a critical engagement in questioning what makes the ocean as a ‘working space’ especially difficult to govern. In the following sections, I review the literature on labor in fisheries in the past decade, and discuss its gaps, then turn to the concepts of labor regime, labor precarity, and hybrid governance, situated within labor studies and political economy, that have the potential to comprehend the labor governance frontier. In the last section I map out a research agenda that would move the labor governance frontier forward.

Review of Labor in Fisheries Literature

Over the past decade, scholars from four broad strands of thought – resource-governance, business-and-supply-chains, critical-labor, and critical human geography – have begun acknowledging and addressing the unacceptable working conditions within fisheries. Within these fields, early research explored the correlation between labor exploitation and marine resource depletion (Tickler et al. 2018) due to the growing interest in the intersection of labor exploitation, unsustainable and illegal fishing, and climate change (Belton, Marschke, and Vandergeest 2019). This scholarship explored labor exploitation through the important themes of free/unfree labor, human trafficking, and modern slavery. The theme of free/unfree labor occurs throughout labor mobility routes, from countries of origin to destination workplaces on vessels far out at sea (Yea, Stringer, and Palmer 2022). This work laid important groundwork for connecting labor exploitation with migration processes, including workers’ homeland situations, which helps explain why workers decide to sell their labor at sea (Le 2022a) and how their control over their migration and working conditions progressively decreases along the migratory path while working at sea (Yea, Stringer, and Palmer 2022). Labor violations are also understood as a failure of market mechanisms to include labor rights in supply chains’ accountability (Stringer et al. 2016). Clark and Longo (2022) used statistical analysis to argue that labor exploitation in the Thai fishing industry is a result of competitive markets and a stressed marine ecosystem.

Fishing also became a major sector of concern for organizations and legislation that are working against modern-slavery. The association of seafood with ‘modern slavery’ damaged firms’ reputations and provoked a rapid response, mostly short-term pilot projects that claimed to improve labor-grievance mechanisms and communication channels for reporting abuses (Kadfak and Widengård 2022). But there is a risk in framing labor exploitation, labor-rights violations, and poor working conditions through the ambiguous and loosely defined term ‘modern slavery’ (Vandergeest and Marschke 2020). This is because the slavery/trafficking frame reinforces the idea of freedom for laboring bodies as a solution while ignoring the labor processes in which these bodies are enmeshed. Unfree labor bodies, from captured or trafficked fish workers, centers policy interventions on ‘rescue’ instead of workers-employers relations, working

conditions, and work hierarchies embedded within labor processes production sites. It also limits the definition of unacceptable working conditions to the indicators of forced labor, neglecting many other aspects, including those identified by workers: precarious wages, restrictive visas, access to Wi-Fi on vessels, the right to organize, and more.

Very little of the research to date has explored workers' individual and collective agency in shaping their migration and working conditions, which is increasing due to a combination of growing connectivity, a proliferation of worker organizations based in ports and home towns, and the support of NGOs and labor organizations. Moreover, existing studies have not yet analyzed what legally binding mechanisms on supply-chain actors could improve working conditions at sea, nor has it asked what workers' aspirations are for acceptable working conditions. The next section proposes three potential concepts to further address the labor governance frontier.

Three Potential Concepts to Explore the Labor Governance Frontier in Fisheries

Situated within the broader fields of labor studies and political economy are three concepts –labor regimes, labor precarity, and hybrid governance – that I argue could offer critical insights into the labor governance frontier in fisheries. At the end of each sub-section, I will map out a research agenda that would help expand the epistemological boundary of the labor governance frontier for future research.

Labor Regime Theory

Interdisciplinary scholarship on labor regime theory has provided a broad-based understanding of labor (re)production at different scales of political-economic and socio-cultural relations, across spaces and places from the local to the global (Baglioni et al. 2022). Recently, Campling and Colás (2023) endeavored to conceptualize a 'maritime labor regime' by exploring capitalist exploitation and its regulation of oceanic seafarers and distant-water fishing crews in different times, spaces, and oceanic regions. Their attempt helped broaden the way in which labor-regime analysis in fisheries can expand beyond the labor processes of boats at sea, by recognizing 'the range of social relations at various scales that shape (and are shaped by) labor processes, such as articulations with local and national political economies, state regulation and private ordering of particular sectors or industries, and specific histories and cultures of labor organizing and resistance' (Campling and Colás, 66). In this way, labor regime theory can address the necessity of reframing the ocean as a 'working space', whereby the ocean is no longer a vacant resource frontier but a multi-sited space of human-ocean relations (Havice and Zalik 2018).¹

Publications by agrarian change scholars Li (2011, 2017), White and Wijaya (2022), and Kaur (2014) are particularly useful for tapping into the labor regime concept, given that these authors' analyses have included ecology and governing techniques such as regulatory migration regimes or accessibility to land. Each labor regime is unique, based on common ground of the assemblage of elements that sets the conditions under which people work (Li 2017). They also center the analysis of labor

relations and labor activities in relation to commodification processes for natural resources. Their publications bring into view how changes in the materiality of farming practices, such as shifting types of crop, influence the preferred type of workers and/or daily activities. These shifts in materiality, in turn, affect the broader structure of the labor regime (Kaur 2014; White and Wijaya 2022).

I argue that scholars engaged in labor governance frontiers could learn from these earlier works on agricultural and land-based activities. The material requirements for making fishing trips, and their associated technologies, make and shape everyday working conditions of specific work places at sea. For instance, fishing technologies and practices (fishing equipment, types of vessels, length at sea, targeted species) define rest/work patterns, activities on board, relationships with coworkers, captain and employer, and spaces and facilities on board (Vandergeest and Marschke 2021). Moreover, MacDonnell and Vandergeest (2024) have recorded the differences of resting versus working hours and activities on board between squid jiggers and longliner fishers. Their work reaffirms how labor requirements depend on the nature of commodification, including vessel type, target species, location of fishing grounds, and weather (Ibid). Fishing trips range widely from daily to more than a year for many distant-water vessels. The nature of fishing makes it hard for fish workers to mobilize collective actions or negotiate for better working conditions or payment beyond their fishing vessel. Similarly, Velásquez and Ayala (2023) have recently explored how the commodification of nature affects the development of labor relations and collective action with artisanal fishing, industrial fishing, and aquaculture in Chile. Their conclusion emphasizes how labor agency and the organization of labor processes are affected by a 'strategy of appropriation and commodification of nature (Velásquez and Ayala 2023, 19).

Aligned with Baglioni et al.'s (2022) perspective on a future agenda for labor regime research, I see an urgent need for research on labor governance frontiers to expand its focus into social reproduction, as dynamics that share labor conditions, connecting land and sea activities (see example, Chakravarty and Sharma 2024). In contrast to the more established fields of extraction and agriculture resource commodification (Côte 2023; Raeymaekers 2024; Vela-Almeida and Karlsen 2023), feminist political economy and labor geography bring promise to exploring the invisible processes of social reproduction in relation to global seafood production. When 'life becomes work' (Winders and Smith 2019), which is often the case for fish workers working in 'floating platforms of production' (Campling and Colás 2018) at sea, social/labor reproduction is challenged by the undividable work-life within or beyond production sites. Moreover, policy interventions need to acknowledge and account for the work that takes place beyond the production sites of fishing vessels. An understanding of workers' positionality and the (re)production of social differences – in terms, for example, of gender, race, class – cannot be left out of the analysis of labor exploitation and control over workers' own movements (Rushemuka and Côte 2024).

Labor Precarity

In addressing labor precarity, I refer to Waite's broad definition (Waite 2009, 426) as 'life worlds characterized by uncertainty and insecurity that are either thought to

originate from a generalized societal malaise, or as a result of particular experiences derived from neo-liberal labor markets'. Labor precarity serves, then, as a concept to explore the conditions and mobility of labor (Waite 2009), which attracts scholars from various fields to explore questions of formal versus informal work, migration strategy, choices of workers' movement, work versus life of (migrant) workers, and inclusion versus exclusion of state responsibility for social protection (Pye et al. 2012; Standing 2014; Strauss 2017; Waite 2009).

As Coe (2013) argued, we should not dilute the heterogeneity and complexity of what precarious work might mean in various contexts; therefore, to make labor precarity useful in a fisheries context, it is important to start honing in on core questions: how is precarity produced in the context of fisheries and how does such precarity lead to exploitation? Early research on labor in fisheries pointed to precarity as the root cause of forced labor, partly because fish workers are excluded from formal systems, often as a result of being migrants, as seen in examples of undocumented fish workers in Thailand (Kadfak 2024; Marschke and Vandergeest 2016). Evidence to date suggests that exploitation of fish workers occurs more often among migrant workers, who make up a large portion of fish workers on offshore fishing vessels, than among those who have citizenship (Stringer, Whittaker, and Simmons 2016; Yea and Stringer 2021). Labor precarity allows us to analyze workers' migration lifeworlds as part of their everyday experiences, expanding the limited view of forced labor or trafficking frameworks, which leads to 'sorting victims' among workers (Strauss 2017).

Precarious legal status is often the cause of limited welfare support and labor rights, which allows for varying degrees of exploitation (Murphy, Doyle, and Thompson 2023). For instance, in the case of death and disappearance of migrant fish workers in Thailand, even though workers are registered and eligible for social protection under the law, the precarity of their short-term employment and immigration status has prevented them or their relatives from receiving full compensation (Chantavanich and Jitpong 2023). Combined with undocumented or informal status, fish workers tend to have limited agency to improve their working situations or counter abuse in the work place, which directly impacts their precarity (Vandergeest and Marschke 2021). Moreover, the trans-local and transnational nature of their work make it harder to fish workers to form unions (Campling and Colás 2023).

The lack of mechanisms to monitor workers during fishing trips allows employers or captains to inflict different forms of punishment on their crew (Stringer, Whittaker, and Simmons 2016). While the lack of monitoring at sea cannot be solved directly by improving precarious employment, documented migration status and premanent contracts have proven to be useful for workers, allowing them to stay in the country while suing employers in court for a full compensation of mispayment, in the Irish case (Marschke and Vandergeest 2023). Monitoring and tracing violations at sea continue to be a challenge, which will be discussed in the last section.

Scholars have addressed ways in which labor precariousness can be reduced. The labor governance frontier in fisheries could benefit from engaging with current debates within labor geography to 'provide a rallying point for precarious migrants to organize and desist the debilitating effects of neoliberalism that manifest themselves for many in terms of exploitative working conditions' (Waite 2009, 427). Early developments in labor geography have emphasized on spatial turn to make space for workers' ability to

produce and manipulate the geographic space where they live and work, in order to reproduce and respond to other capitalist actors (Herod 1997; Waite 2009). Moreover, labor geography puts a focus on the spatialized precarity of migrant workers and worker agency through migration (Strauss, 2018) and on workers' role of resistance in shaping labor markets (Gialis and Herod 2014). Labor geography has also deepened our analysis of jurisdiction as 'both a socio-spatial and legal technicality' (Strauss 2017, 141), where legal characteristics – in my case, the lawlessness characteristic of the ocean – contribute to vulnerable migrant workers, with potential risk for labor exploitation.

Hybrid Governance

The concept of hybrid governance is essential, given that the challenges presented by the labor governance frontier have translated into fragmented governing packages by diverse actors, but have yet amounted to cohesive activities or truly hybrid efforts. I find Ponte and Daugbjerg's (2015) explanation of hybrid governance especially useful. They refer to the term transnational hybrid governance as 'the sources of legitimacy and authority that blend into regulative processes, and with the effects of different institutional designs and organizational fields on economic, social, and environmental outcomes' (Ponte and Daugbjerg 2015, 96–97). Hybrid governance not only addresses the blurring boundaries between public and private actors (Vandergeest, 2007) but also recognizes 'the emergence of new actors and spaces outside the territorial state and the way these can influence the environmental consequences of production and consumption in ways that exceed the reach of formal state regulation' (Bridge and Perreault 2009, 480).

Hybrid governance allows us to pay attention to how governance works through actors in multiple sectors, whereby institutions sometimes act jointly in pursuit of a common goal and other times pursue distinct goals in concert (Corson 2010; Ponte and Daugbjerg 2015). Multiple actors who operate within and beyond the domestic regulatory settings, who additionally follow different codes, standards, and legal regulations, make up the new hybrid governance arrangements (Riisgaard 2009). Interest in hybrid governance emerges in response to global inclinations to expand roles for markets, private- (or profit) sector actors and not-for-profit actors, which have become increasingly important in the governance of conservation and natural resources (Corson 2010). Hybrid governance not only brings together actors from multiple sectors but often works across jurisdictional borders – in part through the involvement of transnational corporations, NGOs, unions, and international agencies, such as UN organizations and, in part, because resources and labor are not governed strictly according to national boundaries (Ponte and Daugbjerg 2015). All these conditions are pertinent for to the hybrid and trans-boundary governance of seafood sectors globally, where multiple actors are actively implementing new institutional arrangements to meet the goal of increasing labor standards.

Turning to fisheries research, critical social scientists have raised concerns about the need for hybrid governance to address labor rights within fisheries through, for instance, the decent works framework (Garcia Lozano et al. 2021), equity in the blue economy (Bennett et al. 2022), a human-rights-based approach, and maximum

sustainable employment (Bavinck, Scholtens, and Fabinyi 2024). These scholars give weight to understanding resource owners and a community-based approach as a solution to achieving more equitable and well-distributed employment opportunities among residents along coastal communities. In addition, these scholars have further emphasized and argued for hybridity of actors' involvement in governing the ocean to create a more just among coastal communities and resource producers in the blue economy agenda (Bennett et al. 2022).

Recently, hybrid governance has revealed multi-stakeholder interventions to improve labor rights along fisheries supply chains. For instance, in the case of Thailand, local labor NGOs have moved away from a watchdog role to becoming partners with companies with direct involvement in internal change within cooperate mechanisms (Kadfak, Wilhelm, and Oskarsson 2023; Wilhelm et al. 2020). Moreover, there has been a rise of nongovernmental social governance tools in seafood supply chains, including procurement guidelines, codes of conduct, standards and certificates, and data-reporting tools that take human rights into consideration. These tools have been promoted via international NGOs or NGOs-private partnerships (see examples in Sparks et al. 2022, 8), which have considered volunteering and lack of enforcement or punishment. Much more research on hybrid governance is needed, as I discuss further in the following section.

Taking Labor Governance Frontier Forward

This article brings forward the discussion of ocean as 'working spaces' and argues for a more critical engagement to understand the challenge of governing of work at sea. I therefore proposes concepts of labor regime, labor precarity, and hybrid governance, situated within labor studies and political economy, to help operationalize 'labor governance frontier' in fisheries. Since the early 2000s, significant work has emerged from the relatively new field of labor in fisheries, which is promising given that violations of labor rights on fishing vessels have been occurring for a long time (Campling and Colás 2018). But limited monitoring and limited possibilities for investigations at sea continue to make it difficult to detect abuse or violations of labor standards. Therefore, there is, first and foremost, a need to pay more attention to research methods and to rethink methodological boundaries within the labor governance frontier. Investigative journalists and labor activists have been frontrunners in exposing serious abuses on fishing vessels (EJF 2019; Urbina 2023). For scholars, it is not easy to adopt this kind of investigative approach; but scholars have begun employing ethnographic methods of tracing individual workers across regions (Chakravarty and Sharma 2024) or national jurisdictions (Le 2022b) and conducting port-based research (Selig et al. 2022), court-case analyses, and targeted interviews with trafficked workers (Marschke and Vandergeest 2023; Yea 2022) to document labor rights violations and the effectiveness of governance programs. Research on labor governance frontiers requires ethical clearance and cultural and context-sensitive engagement. Scholars may seek to expand methodological boundaries toward transdisciplinary research by working closely with worker representatives, unions, or local NGOs, to engage from within the movement.

Second, I illustrate the potential expansion of social reproduction, which I want to reemphasise by drawing attention to scholars who have already started to critically engage with social reproduction concepts in fisheries. Social reproduction helps make

visible the hidden cost of reproduction, and for many migrant workers, the hidden cost falls on home communities, not at the production site (Chakravarty and Sharma 2024; Kelly and Ducusin 2024; Le 2022a). Social reproduction also provides a shaper lens to understand hierarchies and labor relations at sea, where the discrimination and injustice are reproduced according to race and ethnicity (Chakravarty and Sharma 2024; Clark 2022; Marschke and Vandergeest 2023). Social reproduction is also necessary to explore and understand the role of gender in this male dominant space.

Third, there is a need to explore the promise and the potential commitment of proposed labor standards in fisheries. In recent years, nongovernment certifications are increasingly applied to address ethical concerns in seafood production; but even when such labor standards are implemented, they appear to fall far short of their goal for multiple reasons. So far, ethical certificates are mostly voluntary nongovernmental tools that adopt top-down approaches but lack workers' participation in their design (Sparks et al. 2022). This is why state and legally binding mechanisms are seen as critically important to addressing these challenges. Scholars working on the labor governance frontier will soon turn their intention to binding legal interventions from state and intra-state actors, which are increasing relevant for the labor governance frontier, not only because of potential economic punishments of sanction or fines, but because they transcend national jurisdictions by directing interventions toward the mode of production along supply chains. Emerging examples include the new EU Mandatory Human Rights and Environmental Due Diligence (mHREDD) law (Wilhelm 2024) and the EU Forced Labor Regulation, whereby violations of labor rights in supply chains will come with legal consequences.

Note

1. I do not disagree with Campling and Colás' argument (2023, 73) that work at sea shares many land-based characteristics, e.g. labour processes, ethnic segmentation, strict labour discipline, and combined work-life in confined space. However, here I would argue that resource appropriation in fisheries creates rather specific working conditions (see also Chakravarty and Sharma, 2024) and complex jurisdictions and regulations that call for more attention.

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References

Baglioni, E., Campling, L., Coe, N. M., and A. Smith., eds. 2022. *Labour regimes and global production*. Newcastle-upon-Tyne, UK: Agenda Publishing. doi: [10.1017/9781788213622](https://doi.org/10.1017/9781788213622).

- Bavinck, M., J. Scholtens, and M. Fabinyi. 2024. Maximum sustainable employment: Adding to the beacons of wild fisheries governance. *Fish and Fisheries* 25 (4):619–29. doi: [10.1111/faf.12829](https://doi.org/10.1111/faf.12829).
- Belton, B., M. Marschke, and P. Vandergeest. 2019. Fisheries development, labour and working conditions on Myanmar's marine resource frontier. *Journal of Rural Studies* 69:204–13. doi: [10.1016/j.jrurstud.2019.05.007](https://doi.org/10.1016/j.jrurstud.2019.05.007).
- Bennett, N. J., S. Villasante, M. J. Espinosa-Romero, P. F. Lopes, S. A. Selim, and E. H. Allison. 2022. Social sustainability and equity in the blue economy. *One Earth* 5 (9):964–8. doi: [10.1016/j.oneear.2022.08.004](https://doi.org/10.1016/j.oneear.2022.08.004).
- Bridge, G., and T. Perreault. 2009. Environmental governance. *A Companion to Environmental Geography* 475–497. doi: [10.1002/9781444305722](https://doi.org/10.1002/9781444305722).
- Campling, L. 2012. The tuna 'commodity frontier': Business strategies and environment in the industrial tuna fisheries of the Western Indian Ocean. *Journal of Agrarian Change* 12 (2-3):252–78. doi: [10.1111/j.1471-0366.2011.00354.x](https://doi.org/10.1111/j.1471-0366.2011.00354.x).
- Campling, L., and A. Colás. 2018. Capitalism and the sea: Sovereignty, territory and appropriation in the global ocean. *Environment and Planning D: Society and Space* 36 (4):776–94. doi: [10.1177/0263775817737319](https://doi.org/10.1177/0263775817737319).
- Campling, L., and A. Colás. 2023. Maritime labour regimes in the neoliberal era. *Development* 66 (1-2):65–75. doi: [10.1057/s41301-023-00369-0](https://doi.org/10.1057/s41301-023-00369-0).
- Campling, L., E. Havice, J. Viridin, G. Carmine, M. Andriamahefazafy, M. Barbesgaard, S. Chakravarty, B. Gorez, D. Hetherington, H. Kim, et al. 2024. A geopolitical-economy of distant water fisheries access arrangements. *NPJ Ocean Sustainability* 3 (1):26. doi: [10.1038/s44183-024-00060-y](https://doi.org/10.1038/s44183-024-00060-y).
- Carver, R. 2023. Extraction and the ocean "Frontier": Dispossession, exclusion, and resistance in Namibia. *Antipode* 55 (2):327–47. doi: [10.1111/anti.12890](https://doi.org/10.1111/anti.12890).
- Chakravarty, S., and I. Sharma. 2024. Between forests and coasts: Fishworkers on the move in India. *Journal of Agrarian Change* 24 (3): e12583. doi: [10.1111/joac.12583](https://doi.org/10.1111/joac.12583).
- Chantavanich, S., and W. Jitpong. 2023. Precarity and social protection of migrant fishers in Thailand: Case studies of death and disappearance at sea. *Marine Policy* 155:105743. doi: [10.1016/j.marpol.2023.105743](https://doi.org/10.1016/j.marpol.2023.105743).
- Clark, T. P. 2022. Racial capitalism and the sea: Development and change in Black maritime labour, and what it means for fisheries and a blue economy. *Fish and Fisheries* 23 (3):648–62. doi: [10.1111/faf.12639](https://doi.org/10.1111/faf.12639).
- Clark, T. P., and S. B. Longo. 2022. Global labor value chains, commodification, and the socio-ecological structure of severe exploitation. A case study of the Thai seafood sector. *The Journal of Peasant Studies* 49 (3):652–76. doi: [10.1080/03066150.2021.1890041](https://doi.org/10.1080/03066150.2021.1890041).
- Coe, N. M. 2013. Geographies of production III: Making space for labour. *Progress in Human Geography* 37 (2):271–84. doi: [10.1177/0309132512441318](https://doi.org/10.1177/0309132512441318).
- Corson, C. 2010. Shifting environmental governance in a neoliberal world: US AID for conservation. *Antipode* 42 (3):576–602. doi: [10.1111/j.1467-8330.2010.00764.x](https://doi.org/10.1111/j.1467-8330.2010.00764.x).
- Côte, M. 2023. Furious depletion—Conceptualizing artisan mining and extractivism through gender, race, and environment. *Frontiers in Human Dynamics* 5:1097195. doi: [10.3389/fhumd.2023.1097195](https://doi.org/10.3389/fhumd.2023.1097195).
- EJF (Environmental Justice Foundation). 2019. Caught in the net: Illegal fishing and child labour in Vietnam's fishing fleet. <https://ejfoundation.org/reports/caught-in-the-net-illegal-fishing-and-child-labour-in-vietnams-fishing-fleet> (Accessed 18 May 2024).
- García Lozano, A. J., J. L. Decker Sparks, D. P. Durgana, C. M. Farthing, J. Fitzpatrick, B. Krough-Poulsen, G. McDonald, S. McDonald, Y. Ota, N. Sarto, et al. 2021. Decent work in fisheries: Current trends and key considerations for future research and policy. *Marine Policy* 136:104922. doi: [10.1016/j.marpol.2021.104922](https://doi.org/10.1016/j.marpol.2021.104922).
- Gialis, S., and A. Herod. 2014. Of steel and strawberries: Greek workers struggle against informal and flexible working arrangements during the crisis. *Geoforum* 57:138–49. doi: [10.1016/j.geoforum.2014.08.014](https://doi.org/10.1016/j.geoforum.2014.08.014).

- Havice, E., and A. Zalik. 2018. Ocean frontiers: Epistemologies, jurisdictions, commodifications. *International Social Science Journal* 68 (229-230):219–35. doi: [10.1111/issj.12198](https://doi.org/10.1111/issj.12198).
- Herod, A. 1997. From a geography of labor to a labor geography: Labor's spatial fix and the Geography of capitalism. *Antipode* 29 (1):1–31. doi: [10.1111/1467-8330.00033](https://doi.org/10.1111/1467-8330.00033).
- Kadfak, A. 2024. Labour in fisheries through migration studies: Burmese fish worker regularisation and agency in the Thai Fishing Industry. *Geopolitics* January:1–24. doi: [10.1080/14650045.2024.2302422](https://doi.org/10.1080/14650045.2024.2302422).
- Kadfak, A., and M. Widengård. 2022. From fish to fishworker traceability in Thai fisheries reform. *Environment and Planning E: Nature and Space* 6 (2):1322–42. doi: [10.1177/25148486221104992](https://doi.org/10.1177/25148486221104992).
- Kadfak, A., M. Wilhelm, and P. Oskarsson. 2023. Thai labour NGOs during the 'modern slavery' reforms: NGO transitions in a post-aid world. *Development and Change* 54 (3):570–600. doi: [10.1111/dech.12761](https://doi.org/10.1111/dech.12761).
- Kaur, A. 2014. Plantation systems, labour regimes and the state in Malaysia, 1900–2012. *Journal of Agrarian Change* 14 (2):190–213. doi: [10.1111/joac.12061](https://doi.org/10.1111/joac.12061).
- Kelly, P. F., and R. J. Ducusin. 2024. Social reproduction, migration and labour control regimes: Understanding Filipino crew experiences in the UK fishing fleet. *Work in the Global Economy* 4 (1):11–29. doi: [10.1332/27324176Y2024D000000011](https://doi.org/10.1332/27324176Y2024D000000011).
- Le, A. N. 2022a. The homeland and the high seas: Cross-border connections between Vietnamese migrant fish workers' home villages and industrial fisheries. *Maritime Studies* 21 (3):379–88. doi: [10.1007/s40152-022-00272-3](https://doi.org/10.1007/s40152-022-00272-3).
- Le, A. N. 2022b. Unanticipated transformations of infrapolitics. *The Journal of Peasant Studies* 49 (5):999–1018. doi: [10.1080/03066150.2021.1888722](https://doi.org/10.1080/03066150.2021.1888722).
- Li, T. M. 2011. Centering labor in the land grab debate. *Journal of Peasant Studies* 38 (2):281–98. doi: [10.1080/03066150.2011.559009](https://doi.org/10.1080/03066150.2011.559009).
- Li, T. M. 2017. The price of un/freedom: Indonesia's colonial and contemporary plantation labor regimes. *Comparative Studies in Society and History* 59 (2):245–76. doi: [10.1017/S0010417517000044](https://doi.org/10.1017/S0010417517000044).
- MacDonnell, M., and P. Vandergeest. 2024. Fisher experience on distant water fishing vessels: The implications of variation by vessel type for employment standards. *Maritime Studies* 23 (2):1–17. doi: [10.1007/s40152-024-00365-1](https://doi.org/10.1007/s40152-024-00365-1).
- Marschke, M., and P. Vandergeest. 2016. Slavery scandals: Unpacking labour challenges and policy responses within the off-shore fisheries sector. *Marine Policy* 68:39–46. doi: [10.1016/j.marpol.2016.02.009](https://doi.org/10.1016/j.marpol.2016.02.009).
- Marschke, M., and P. Vandergeest. 2023. Migrant workers in Irish fisheries: Exploring the contradictions through the lens of racial capitalism. *Global Social Challenges Journal* 2 (2):146–67. doi: [10.1332/27523349Y2023D000000003](https://doi.org/10.1332/27523349Y2023D000000003).
- Murphy, C., D. M. Doyle, and S. Thompson. 2023. Workers' perspectives on state-constructed vulnerability to labour exploitation: Experiences of migrant fishers in Ireland. *Social & Legal Studies* 32 (4):562–85. doi: [10.1177/09646639221122466](https://doi.org/10.1177/09646639221122466).
- Ponte, S., and C. Daugbjerg. 2015. Biofuel sustainability and the formation of transnational hybrid governance. *Environmental Politics* 24 (1):96–114. doi: [10.1080/09644016.2014.954776](https://doi.org/10.1080/09644016.2014.954776).
- Pye, O., R. Daud, Y. Harmono, and Tatat. 2012. Precarious lives: Transnational biographies of migrant oil palm workers. *Asia Pacific Viewpoint* 53 (3):330–42. doi: [10.1111/j.1467-8373.2012.01496.x](https://doi.org/10.1111/j.1467-8373.2012.01496.x).
- Raeymaekers, T. 2024. *The natural border: Bounding migrant farmwork in the black Mediterranean*. Ithaca, NY: Cornell University Press.
- Riisgaard, L. 2009. Global value chains, labor organization and private social standards: Lessons from East African cut flower industries. *World Development* 37 (2):326–40. doi: [10.1016/j.worlddev.2008.03.003](https://doi.org/10.1016/j.worlddev.2008.03.003).
- Rushemuka, M. N., and M. Côte. 2024. Artisanal and small-scale mining through a "labour regime" lens: Consolidating a research agenda on labour exploitation. *Journal of Rural Studies* 105:103189. doi: [10.1016/j.jrurstud.2023.103189](https://doi.org/10.1016/j.jrurstud.2023.103189).
- Selig, E. R., S. Nakayama, C. C. Wabnitz, H. Österblom, J. Spijkers, N. A. Miller, J. Bebbington, and J. L. Decker Sparks. 2022. Revealing global risks of labor abuse and illegal, unreported, and unregulated fishing. *Nature Communications* 13 (1):1612. doi: [10.1038/s41467-022-28916-2](https://doi.org/10.1038/s41467-022-28916-2).

- Sparks, J. L. D., L. Matthews, D. Cárdenas, and C. Williams. 2022. Worker-less social responsibility: How the proliferation of voluntary labour governance tools in seafood marginalise the workers they claim to protect. *Marine Policy* 139:105044. doi: [10.1016/j.marpol.2022.105044](https://doi.org/10.1016/j.marpol.2022.105044).
- Standing, G. 2014. Understanding the precariat through labour and work. *Development and Change* 45 (5):963–80. doi: [10.1111/dech.12120](https://doi.org/10.1111/dech.12120).
- Strauss, K. 2017. Sorting victims from workers: Forced labour, trafficking, and the process of jurisdiction. *Progress in Human Geography* 41 (2):140–58. doi: [10.1177/0309132516629002](https://doi.org/10.1177/0309132516629002).
- Strauss, K. 2018. Labour geography 1. *Progress in Human Geography* 42 (4):622–30. doi: [10.1177/0309132517717786](https://doi.org/10.1177/0309132517717786).
- Stringer, C., S. Hughes, D. H. Whittaker, N. Haworth, and G. Simmons. 2016. Labour standards and regulation in global value chains: The case of the New Zealand fishing industry. *Environment and Planning A: Economy and Space* 48 (10):1910–27. doi: [10.1177/0308518X16652397](https://doi.org/10.1177/0308518X16652397).
- Stringer, C., D. H. Whittaker, and G. Simmons. 2016. New Zealand's turbulent waters: The use of forced labour in the fishing industry. *Global Networks* 16 (1):3–24. doi: [10.1111/glob.12077](https://doi.org/10.1111/glob.12077).
- Tickler, D., J. J. Meeuwig, K. Bryant, F. David, J. A. Forrest, E. Gordon, J. J. Larsen, B. Oh, D. Pauly, U. R. Sumaila, et al. 2018. Modern slavery and the race to fish. *Nature Communications* 9 (1):4643. doi: [10.1038/s41467-018-07118-9](https://doi.org/10.1038/s41467-018-07118-9).
- Urbina, I. 2023. The crimes behind the seafood you eat. *The New Yorker Magazine*. Accessed date 17 June 2024.
- Vandergeest, P. 2007. Certification and communities: Alternatives for regulating the environmental and social impacts of shrimp farming. *World Development* 35 (7):1152–71. doi: [10.1016/j.worlddev.2006.12.002](https://doi.org/10.1016/j.worlddev.2006.12.002).
- Vandergeest, P. 2018. Law and lawlessness in industrial fishing: Frontiers in regulating labour relations in Asia. *International Social Science Journal* 68 (229-230):325–41. doi: [10.1111/issj.12195](https://doi.org/10.1111/issj.12195).
- Vandergeest, P., and M. Marschke. 2020. Modern slavery and freedom: Exploring contradictions through labour scandals in the Thai fisheries. *Antipode* 52 (1):291–315. doi: [10.1111/anti.12575](https://doi.org/10.1111/anti.12575).
- Vandergeest, P., and M. Marschke. 2021. Beyond slavery scandals: Explaining working conditions among fish workers in Taiwan and Thailand. *Marine Policy* 132:104685. doi: [10.1016/j.marpol.2021.104685](https://doi.org/10.1016/j.marpol.2021.104685).
- Vela-Almeida, D., and A. Karlsen. 2023. Reinforcing path marginalization: Revealing the unaccounted labour organization at a mining frontier in Indonesia. *Cambridge Journal of Regions, Economy and Society* 16 (3):481–94. doi: [10.1093/cjres/rsad018](https://doi.org/10.1093/cjres/rsad018).
- Velásquez, D., and J. Ayala. 2023. Production of nature and labour agency. How the subsumption of nature affects trade union action in the fishery and aquaculture sectors in Aysén, Chile. *Environment and Planning E: Nature and Space* 7 (2):25148486231192091. doi: [10.1177/25148486231192091](https://doi.org/10.1177/25148486231192091).
- Waite, L. 2009. A place and space for a critical geography of precarity? *Geography Compass* 3 (1):412–33. doi: [10.1111/j.1749-8198.2008.00184.x](https://doi.org/10.1111/j.1749-8198.2008.00184.x).
- White, B., and H. Wijaya. 2022. What kind of labour regime is contract farming? Contracting and sharecropping in Java compared. *Journal of Agrarian Change* 22 (1):19–35. doi: [10.1111/joac.12459](https://doi.org/10.1111/joac.12459).
- Wilhelm, M. 2024. Mandatory due diligence legislation: A paradigm shift for the governance of sustainability in global value chains? *Journal of International Business Policy*:1–7. doi: [10.1057/s42214-024-00193-4](https://doi.org/10.1057/s42214-024-00193-4).
- Wilhelm, M., A. Kadfak, V. Bhakoo, and K. Skattang. 2020. Private governance of human and labor rights in seafood supply chains—The case of the modern slavery crisis in Thailand. *Marine Policy* 115:103833. doi: [10.1016/j.marpol.2020.103833](https://doi.org/10.1016/j.marpol.2020.103833).
- Winders, J., and B. E. Smith. 2019. Social reproduction and capitalist production: A genealogy of dominant imaginaries. *Progress in Human Geography* 43 (5):871–89. doi: [10.1177/0309132518791730](https://doi.org/10.1177/0309132518791730).
- Yea, S. 2022. Human trafficking and jurisdictional exceptionalism in the global fishing industry: A case study of Singapore. *Geopolitics* 27 (1):238–59. doi: [10.1080/14650045.2020.1741548](https://doi.org/10.1080/14650045.2020.1741548).
- Yea, S., and C. Stringer. 2021. Caught in a vicious cycle: Connecting forced labour and environmental exploitation through a case study of Asia-Pacific. *Marine Policy* 134:104825. doi: [10.1016/j.marpol.2021.104825](https://doi.org/10.1016/j.marpol.2021.104825).
- Yea, S., C. Stringer, and W. Palmer. 2022. Funnels of unfreedom: Time-spaces of recruitment and (im) mobility in the trajectories of trafficked migrant fishers. *Annals of the American Association of Geographers* 113 (1):291–306. doi: [10.1080/24694452.2022.2084016](https://doi.org/10.1080/24694452.2022.2084016).