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Is Understanding 'Fish as Food' Enough? Reclaiming Power and Politics in Aquatic Food Research and Policy

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ABSTRACT

Fish are an important source of food, livelihood and culture for millions of people worldwide. Yet, policy, research and fisheries management paradigms have not often recognised fish as food. Instead, fish are commonly viewed as a commoditised natural resource for economic development and fishing as a livelihood of last resort. However, in academic research and in some policy and fisheries governance circles, understandings of the importance of fish as food are increasing. This paper explores how understandings of fish as food have evolved in research, policy and governance. It shows that fish are most commonly articulated as food through the framing of food security. Through highlighting research gaps and limitations to securitised approaches to aquatic food systems and fisheries, it argues that a critical power-sensitive research agenda needs to be better engaged with in current 'fish as food' debates and discourse. Overall, this paper will review our understanding of the burgeoning push for conceptualising fish as food in policy, research and governance to identify gaps in our understanding and thus potential future areas for research.

1 | Introduction

The way food is produced and consumed has markedly changed over the last few hundred years. This is partially because of the deepening commodification, appropriation and dispossession from the means of food production by powerful actors (Clapp 2021). Food in contemporary capitalism is not seen as a common good, but rather as a privatised and alienable commodity (Vivero-Pol 2017).¹ This means that food continues to be valued at its market price, rather than for the multiple cultural, laborious, environmental and social processes that went into making the food commodity. The central tensions between food's use value and exchange value (Marx 2000; Vivero-Pol 2017) bear manifold consequences for humanity's health and societies and contribute to perpetuating inequalities in the production, exchange and consumption of food. The deepening commodification of food in the contemporary global food

system thus presents a stark tension between the necessity of eating to live and the compulsion of food commoditisation in 'the political economy of neoliberalism' (McMichael 2014, 947).

This tension between food and its commodification is particularly evident in the aquatic environment. Fish² are some of the most traded food commodities worldwide (Gephart and Pace 2015) and are also a crucial source of food, nutrition, livelihood and culture for many millions of people around the world (Todd 2017; Hicks et al. 2019; Ganseforth 2022). Yet, despite the vital and acknowledged links between fish, food and nutrition, food policies and dominant fisheries management paradigms have not historically developed around an understanding of fish as food (Bennett et al. 2021; Silver et al. 2022).³ Rather, there remains a long-standing emphasis on fish as a commoditised natural resource to be managed for the betterment of economic development and conservation, and a prevalent assumption that

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fishing is a livelihood of 'last resort' (Onyango 2011). As such, the tensions between fish as an economically commoditised natural resource, as a marine resource for conservation, as a culturally valuable livelihood, and as food present significant challenges in moving towards equitable and sustainable fisheries and aquatic food systems.

However, in the last decade or so, there has been a marked increase in scholarly, governance and policy attention to approaching fish as food (HLPE 2014; Levkoe et al. 2017; Bennett et al. 2021; Simmance et al. 2022). Here, it is shown that appreciating fish as an integral part of food systems brings about more holistic understandings of the interconnected nature of the social, economic, environmental and health aspects of fish production and consumption (Levkoe et al. 2017), which ultimately aids global food and nutrition security objectives (McClanahan et al. 2015; Béné et al. 2015; Thilsted et al. 2016).

This paper therefore carries out a narrative literature review of the relatively recent policy, governance and scholarly consensus on situating fish as food. Through exploring the dominant narratives in which fish has been understood as food in policy, governance and research, it shows that fish has most notably been understood 'as food' through the paradigms of food and nutrition security. While food and nutrition security are dominant and useful paradigms through which to frame and understand unequal food access and consumption, the dominant conceptualisation of food security is often presented as a scientific problem rather than a political one (Hopma and Woods 2014). From this exploration of aquatic food literature, it is evident that there remains a lack of research, governance and policy attention to the political economy of aquatic foods, in particular regard to how power dynamics and inequities shape access to aquatic foods in the contemporary, globalised food system.

Through identifying gaps in understanding regarding 'fish as food', the second part of this paper explores what could be next for the fish as food turn, through questioning if solely understanding fish as a part of food systems is enough to ensure healthy environments and equitable diets for all. It asks how power analyses can be centred in this fish as food turn, through exploring what role there is for a combined understanding of critical political economy and food sovereignty in advocating for fish as food in both food policy, research and fisheries governance. As long as the growing (and important) fish as food consensus (Bennett et al. 2021) remains inattentive to how capital shapes the commodification of aquatic food production and consumption, the fish as food debates will remain unable to tackle the broader, thornier power relations which are imbued within inequitable contemporary aquatic food systems. It therefore contributes to a critical and growing literature (i.e., Clapp et al. 2018; Barbesgaard 2018; Campling and Havice 2018) which seeks to develop understandings of the role of power and specific interests in shaping the governance of fisheries and aquatic food systems, and how these, in turn, reinforce inequalities and ecological degradation in fisheries systems.

In this paper, I therefore firstly turn to embedding this paper's understanding of food systems. This is then followed by an exploration of food security literature, which is often considered an anchor concept and central to food sovereignty. I then overview

the extent to which food security and food sovereignty have been taken up in research on fish and in particular, Small-Scale Fisheries (SSF), and how small-scale fishers, traders and processors relate to the food sovereignty social movement. Because there are some gaps and limitations to securitised approaches to food, particularly with regards to political economic power dynamics, I then discuss key debates and contestations regarding food sovereignty. I conclude with a future research agenda to highlight the potential role that a critical food sovereign approach could bring to discussions regarding equitable and sustainable food system transformations. I propose that centring critical political economy in food sovereign approaches to fisheries may better illuminate the power dynamics, which shape access to nutritious fish in the contemporary globalised aquatic food system.

2 | Methodology

A narrative literature review was employed to understand how fish has been understood as food in policy, research and governance. A narrative literature review was chosen because it allows for the researcher to 'describe what is known on a topic while conducting a subjective examination and critique of an entire body of literature' (Sukhera 2022, 414). This was in order to identify and synthesise potential research and knowledge gaps, as well as future research directions in the fish as food literature and its role in equitable and sustainable food systems transformation. The terms 'fish OR "aquatic foods" and "food security" OR availability OR access OR utilization OR stability' and 'fish OR "aquatic foods" AND food sovereignty OR capital OR justice' were utilised in search engines such as Scopus, Web of Science and Overton. Journal articles and grey literature were included in the scope of analysis. Because of the relatively recent scholarship and consensus on fish as food (primarily but not exclusively since 2010), a specific timeframe was not identified. Journal articles and grey literature were analysed for whether they included considerations of power, corporate interests, inequality and broader political economic trends. Journal articles and grey literature were not limited by geographical scope; however, this paper is limited by its focus on papers written in English. I use the term 'narrative' in this paper to discuss and explore the evolving stories and story making constructed around aquatic food systems through food security and food sovereignty framings (Hulst and Yanow 2016).

2.1 | Integrating Aquatic Foods Into Food Systems Thinking

The concept of the food system has gained prominence for policymakers, scholars and practitioners in recent years as a way of diagnosing and discussing problems inherent to the global and localised production, trade and consumption of foods (HLPE; 2017; Béné et al. 2019). Food systems thinking allows for a greater understanding of trade-offs and synergies between complex food production, social and consumption dynamics as well as relevant environmental and social concerns which affect how food is distributed and consumed (Béné et al. 2019). Food systems thinking goes beyond the concept of the commodity value chain (i.e., Ponte and Sturgeon 2015) because of its stance that modifying or

changing interrelated dynamics in the production, distribution and consumption of foods can affect the potential for food security or sustainability (Ingram 2011; Tezzo et al. 2021).

Aquatic foods are commonly neglected as part of the resurgence in food systems scholarship and in subsequent debates surrounding food system transformation (Tezzo et al. 2021; Crona et al. 2023; Nicolini et al. 2024). However, a small but growing literature has drawn attention to the interconnectedness of aquatic food production, provisioning and consumption, which falls more in line with food system-oriented perspectives on aquatic foods (Tezzo et al. 2021; Silver and Stoll 2022). Yet, there still remains ‘considerable opportunity to further develop a food fish systems approach’ (Tezzo et al. 2021, 85), through advancing the study of the complex interactions and interlinking between production, provisioning and consumption of aquatic foods in food systems.

The transformation of food systems necessitates understanding and exploring the interconnected production, provisioning and consumption dynamics, which span across the whole of the aquatic food value chain. However, despite the increasing reference to food systems in food-related scholarship and research, the social, economic and nutritional inequalities in aquatic food systems is still often problematised through the framing of food security (i.e., Elleby et al. 2025), to which the next part of this paper will now turn.

2.2 | What Is Food Security?

Food security is a dominant contemporary frame for analysing how, or if, people can access and consume food in today’s global food system. Food security emerged at an international level during the 1974 world food price crisis at the World Food Conference (Jarosz 2014), because of post-Second World War reconstruction efforts in food system productivity (Maye and Kirwan 2013). The concept was initially conceived of at a state level, so that international food prices could be stabilised (Jarosz 2014). At this time, the cause of hunger globally was conceived of as because of a decline in the availability of food and subsequent food price hikes on the global market (Clapp et al. 2022). Technological innovations which focused on expanding food production were seen as a solution to such food crises (Clapp et al. 2022).

Since 1974, food security discourses have developed under ‘the influence of neoliberal globalisation policies’, which have centred around framings of developmentalism and economic growth (Jarosz 2014, 170). In the 1980s, the concept of food insecurity was introduced, which notably shifted food security discourse away from local, regional, national and global levels, to instead measuring food insecurity at individual or household levels (Borras and Mohamed 2020).

The most widely used and authoritative definition of food security was developed through an (approximately 50 year) iterative process by the Food and Agriculture Organization (FAO). In 1996, food security was said to exist when:

■ All people, at all times, have physical [social] and economic access to sufficient, safe and nutritious food

■ which meets their dietary needs and food preferences for an active and healthy life.

(FAO 1996)

This definition is underpinned by four pillars, namely: ‘availability’, ‘access’, ‘utilisation’ and ‘stability’. Each of these pillars is multi-faceted, their definitions and indices are contested, and are mutually dependent (Webb et al. 2006). Availability is understood as necessary but not necessarily sufficient for access; utilisation refers to who is able to utilise food and its nutrients. Food utilisation depends on access, but access does not guarantee utilisation (i.e., you may be able to access nutritious food but cannot utilise it because you are ill). Stability is a necessary and continuous (across time and seasons) condition for availability, access and utilisation (Clapp et al. 2022). These metrics have been influential in shaping food-related policy, particularly since food price inflation in 2007–2008 (Maye and Kirwan 2013).

The concept of food security reached its global zenith in 2008, where it came to prominence in the World Food Security summit organised by the FAO. This summit symbolised food security’s ‘renewed geopolitical status’ (Maye and Kirwan 2013, 1) through shining a light on how the food price hikes and riots experienced in 2008 posed a threat to global food security. After 2008, policymakers and politicians became increasingly aware of the interdependence of agri-food systems because of food price inflation in oil and basic food staples on international commodity markets (Maye and Kirwan 2013). The two main responses to the food crises experienced in 2008 were firstly that food production needed to increase by 50% by 2030, and this number needed to double by 2050 to feed a world population of 9 billion (Maye and Kirwan 2013). Thus, the productivity mantra as a solution to world food crises rose to the fore again, becoming central to global food security discourse (Maye and Kirwan 2013).

A historical and present-day focus on food productivity levels, however, comes amidst increasing and persistent global hunger and malnutrition because of widening food inequalities and climate change. This has provoked questions regarding if the four-pillared approach to food security can best counter the challenges facing food systems today (Clapp et al. 2022). As such, there have been recent suggestions to add the metrics of ‘sustainability’ and ‘agency’ as central pillars to the definition of food security (Clapp et al. 2022). Here, agency is understood as the ‘capacity of individuals and groups to exercise a degree of control over their own circumstances and to provide meaningful input into governance processes’ (Clapp et al. 2022, 3). Agency in food systems is important, particularly when it comes to marginalised peoples actively participating in food systems decisions, rather than being a passive consumer (Vivero-Pol 2017). Furthermore, the pillar of stability in the definition of food security was borne out of accounting for shorter-term disruptions, such as those created by natural disasters. However, in Clapp et al.’s (2022) view, sustainability allows for ‘the connections between ecosystems, livelihoods, society, and political economy to maintain food systems and support food security into the distant future’ (p. 5). Adding these two metrics to the definition of food security, it is argued, would allow for more nuanced depictions of power, as well as incorporating longer-term

visions for healthy and equitable food systems (Clapp et al. 2022; Termine 2024). The evolving concept of food security has been integral to grasping the different dimensions of hunger and malnutrition and has equally been integral to placing aquatic foods firmly within food-related debates and policies.

2.3 | Food (In)security & Fish: From Neglect to Productivism?

Global hunger and malnutrition are increasing worldwide (FAO 2024a). In 2023, it was estimated that nearly 2.33 billion people did not have access to adequate food (FAO 2024a). Analyses of contemporary issues within global food-related literature have mostly focused on land-based agricultural systems and have not fully considered the role of fisheries and aquaculture in their relation to the issues presented by the contemporary food system (Simmanee et al. 2022). This is even though global consumption of aquatic foods is increasing, with the global average consumption of fish and other seafood reaching a record high of 20.5 kg per person in 2019 (Richter 2022). However, there has been an uptick in recognising fish as food in academic and policy circles, particularly over the last decade. The FAO first recognised the importance of capture fisheries to alleviating hunger in 1945 (Bennett et al. 2018). In 2015, it published *The Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication* (SSF guidelines). These voluntary SSF guidelines emphasised the importance of the connection between SSF and food security. They were the first internationally agreed upon guidelines dedicated to SSF, so were a step towards recognising fish as food. These guidelines also emphasised the importance of the post-harvest sector, something which is generally overlooked in fisheries management. The post-harvest sector is vital to ensuring aquatic food security and is made up of the processes that predominantly occur after fish is landed right up to consumption (including market exchange). Labour in the post-harvest sector is often gendered, with women undertaking much post-harvest fisheries work (Harper et al. 2013). It is estimated that approximately 130 million women worldwide work in the fisheries sector, yet despite increasing acknowledgement in literature, their contributions are often undervalued (Harper et al. 2013).

The connection between food security and fisheries has also been the subject of increased academic research and literature over the last few decades. Research has spanned from the importance of capture fisheries for global food security (Pauly et al. 2005) to emphasising how SSF are vital to ensuring aquatic food security (Loring et al. 2019) and to highlighting the important links between nutritional dietary intakes and fish consumption (Hicks et al. 2019; Omukoto et al. 2024). The complicated relationship between aquaculture and food security has also been explored (Garlock et al. 2022). Aquaculture risks undermining aquatic food security for SSF because of its reliance on small pelagic fish as fishmeal and fish oil (FMFO) (Willer et al. 2024). Additionally, the role of trade, markets, infrastructure, post-harvest losses and food quality and safety has been increasingly noted in literature as vital to ensuring aquatic food security (Akintola and Fakoya 2017; Overå et al. 2022). Other links to food security have been made with regards to inland

fisheries (Funge-Smith and Bennett 2019) as well as the relationship between marine biodiversity and nutrient intakes from fish (Hamilton et al. 2024).

A wide-ranging, rich and broad literature has thus spanned out from conceptualising fish as key to food security (i.e., fish as food). However, much of the 'fish as food' literature does not consider the political economic underpinnings that shape aquatic food production and consumption. As such, consensus regarding operationalising food security is often 'fractured' (Maye and Kirwan 2013). Methods for ensuring food security have long been tied to a productivist ideology, whereby quantity of food produced has been prioritised over quality and access (Maye and Kirwan 2013; Rosin 2013). This has historical echoes in the relationship between fish and fisheries management, whereby the quantity of fish caught within maximum sustainable yields (MSY) was often prioritised for maximum wealth creation (Hubbard 2014). Food security policies and programs still overall tend to be designed with an emphasis on food productivity and supply and are often understood as an exclusively technical problem, rather than a political one (Hopma and Woods 2014).

As previously noted, the exclusion of fish and other seafood are often underaddressed or even left out of food-related policies. This exclusion is also reflected in dominant fisheries management paradigms, where fish is managed for economic efficiency, rather than for its food and nutritional importance (Gephart and Pace 2015; Bennett et al. 2018; Allegretti and Hicks 2022). Dominant fisheries management paradigms have historically developed around the cornerstones of privatisation, marketisation and profit (Mansfield 2004), have often depicted SSF as the opposite of 'modern' (Overå 2011) and have not traditionally recognised fish as food (Bennett et al. 2021). Fisheries biological science has been long intertwined with state-based territorial expansionism. Fisheries science was founded on a pervasive principle that fisheries in the deep oceans were inexhaustible and that productivist fishing policies would also allow for efficient conservation of fishing stocks (Hubbard 2014). Productivism in state-based policies meant that fisheries became managed for maximum economic gain through implementing private property rights, such as in the form of Individual Transferable Quotas (ITQs) (Cunningham et al. 2009; Cardwell 2015) and through encouraging further industrialisation as a means of state-led modernisation and economic development (Mansfield 2010). SSF are also often seen as culpable for the crisis of overfishing in the global South (Mansfield 2010), leading to policies which prioritise of industrialised fishing methods (Ayilu et al. 2023). Dominant paradigms within fisheries science have also developed alongside, and often in the service of, orthodox economic models and colonial interests and logics (Silver et al. 2022). The colonial history of fisheries science and management (Silver et al. 2022) props up and reproduces certain logics which perpetuate inequality in aquatic food systems (i.e., a reverence for maximum wealth creation within sustainable limits in fisheries), leading to some to call for nutrition-sensitive governance in fisheries, in particular for countries in the global South, where fish is vital for diets and livelihoods (Robinson et al. 2022; Allegretti and Hicks 2022). Hence, an understanding of fish as food within mainstream fisheries governance and management paradigms has often been neglected. Consequently, the invisibility of fish as food in fisheries management paradigms and

in food-related literature, means that how power and wealth concentration shapes aquatic food systems is often overlooked by aforementioned discourses on food security and other more technocratic approaches to fish as food. The historical and contemporary legacies of productivism in fisheries science and management means that fish are often produced as commodities for the market. Commoditising fish through productivist management models subjects them to competitive, capitalist dynamics, namely power and wealth concentration and centralisation.

2.4 | Power and Wealth Concentration in Global Aquatic Food Systems

There is significant debate with regards to how food security can be operationalised in a political food system which is controlled by the agri-food complex, corporate power and the state (McMichael 2009; Kass 2023). These concerns are particularly relevant for fisheries. Although often underaddressed in food systems literature and policy (Silver and Stoll 2022), aquatic foods are subject to international market dynamics and industry consolidation. For example, a relatively limited number of large transnational actors exercise power and ownership over fisheries production. Thirteen ‘keystone’ corporations control approximately 11%–16% of global marine catch and own 19%–40% of the most valuable stocks (Österblom et al. 2015).⁴ Firms usually pursue strategic mergers with major market, licence or quota holders and operate at varying nodes in the aquatic food value chain (Österblom et al. 2015). This follows the same trajectory for levels of corporate ownership in terrestrial food production, where it is estimated that through mergers and acquisitions, only four firms control over 60% of the global seed market (Clapp 2021).

This trajectory of ownership and access concentration, combined with economic development policies and globalised markets in fish, has gone hand-in-hand with the increased industrialisation of the global fishing fleet (Arthur et al. 2022). Industrial fishing rose to prominence in the 1900s, where states sought to expand their territory into international waters, promote seafood exports and increase food availability. By the 1960s, many large firms came to prominence in securing access to high-value fisheries and sought to expand their fishing and processing activities within the Global South (Campling and Havice 2018). The continued industry control over high-value fish species is also propped up by the state. In 2018, over 80% of global fisheries subsidies went to the large-scale industrial fisheries sector, including roughly \$7.2 billion in fuel subsidies (Schuhbauer et al. 2020). This means that a fisher involved in the large-scale industrial sector receives 3.5 times more in subsidies than a fisher involved in the small-scale sector (Schuhbauer et al. 2020).

There has been a growing emphasis on ensuring fish food and nutrition security through aquaculture (FAO 2024b), potentially failing to recognise the multiple welfare benefits SSF provide⁵ (Béné et al. 2007). Despite SSF’s contributions, aquaculture now accounts for over half of global fish production (FAO 2024b). Emphasis on aquaculture for ensuring food and nutrition security, however, bears inherent contradictions because of aquaculture’s reliance on wild-caught (often small pelagic fish) for

feeding a few species of carnivorous fish such as salmon (Willer et al. 2024). In 2018, approximately 22 million tonnes of wild-caught fish (often caught in West African waters) were destined for non-food uses, mainly to produce fishmeal and fish oil, which is vital for the aquaculture and petfood industries (Feedback 2024).

The commercial aquaculture sector has also rapidly expanded into an intensive production system that is dominated by a few large corporations (Asche et al. 2013). As an example, farmed aquatic foods, such as Atlantic salmon, are envisioned as playing a vital role in the transition towards sustainable dietary transitions (Gephart et al. 2020) and currently account for 2% of global aquaculture (Naylor et al. 2021). However, just five companies control a 34.8% share of salmon aquaculture production (Österblom et al. 2015). Oftentimes, consumer demand is cited as the key reason for this intensified growth in farmed salmon (Robinson and Fernandes 2025). Yet, the drivers that shape this demand growth are much less understood (Asche et al. 2013). Corporate control over salmon farming has shaped aquatic food demand and consumption in the UK through ‘several purposeful actions from market actors, such as the processing and creation of convenience food products, wide availability, and health and sustainability labelling’ which led to a positive assessment of salmon by UK consumers (Robinson and Fernandes 2025, 5). Salmon has displaced other aquatic foods of better nutritional value from UK diets, while also being marketed for more affluent consumers (Robinson and Fernandes 2025). This also coincides with UK levels of seafood intake remaining below recommended dietary levels (Harrison et al. 2023).

Moreover, in efforts to encourage free market exchange of quotas and licences, the enforcement of property rights to manage fisheries, such as ITQs, allows for ownership to concentrate and consolidate in the hands of the supposedly most efficient and powerful actors within a jurisdiction, negatively impacting SSF (Cardwell and Gear 2013; Haas et al. 2016; Bodwitch 2017; Knott and Neis 2017; Silver and Stoll 2022). Consolidation can be understood as practices carried out by firms, which occur when a small number of companies build and control a large market share of production (Silver and Stoll 2022). ITQs and licences allow for the ability to sell access to fisheries resources, which leads to the financialisation of fisheries and aquaculture (Knott and Neis 2017). Financialisation in the aquatic food sector means that the deregulation of financial markets and institutions has enabled firms to ‘generate wealth through investment, speculation, and other financial products, services and strategies’ (Silver and Stoll 2022, 8). Research suggests accumulative and consolidative tendencies will continue to occur in low-risk and high-value sections of aquatic food value chains (Österblom et al. 2015).

Highly entrenched systems of power are thus at play in fisheries management systems and aquatic food value chains, meaning that access to nutritious and cheap fish is increasingly shaped by corporate and state interests. Yet the growing policy, research and governance consensus around the importance of fish as food (i.e., FAO 2024b) often fails to centre an analysis of power. This failure to acknowledge inequities in fish production and value chains risks perpetuating the same levels of corporate concentration and ownership in aquatic food systems as in agricultural food systems.

It is thus evident that true food security and insecurity cannot be dealt with until the power dynamics and politics which perpetuate hunger, malnutrition and inequity in global food systems are challenged.⁶ Calls for attention to how food security can be achieved, and the social, economic and political contexts, which shape the conditions of food production, mean a more sustained focus on the power dynamics, which perpetuate inequality, dispossession and marine ecological degradation in aquatic food systems.

2.5 | What Is Food Sovereignty?

One approach that foregrounds power and the production of inequality through food systems in contemporary capitalism is food sovereignty. Since its inception in the 1990s by La Via Campesina, the peasant-led food sovereignty social movement has grown to represent more than 200 million small-scale food producers worldwide (La Via Campesina 2021). The food sovereignty movement speaks to issues of power and justice within the globalised food system, representing those who are marginalised and dispossessed by dominant, global agri-food corporations. Definitions of food sovereignty within the social movement have changed over the last few decades. Most recently, it has been defined as:

The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods and their right to defend their food and agriculture systems.

(La Via Campesina 2021, 1)

Much like food security, food sovereignty is a framing through which access to food can be understood. However, it differs from food security because food sovereignty expresses the right for people to define and shape how food is produced, not just consumed. The food sovereignty movement articulates the principle that all people have the right to food and that democratic principles regarding how food policy and trade rules are made are integral to this right (Fairbairn 2008). Questions regarding hunger, according to the food sovereignty movement, should thus be attentive to ‘the social and political configurations around *power over food*’ (Patel 2012). Sovereignty in this case does not mean self-sufficiency, rather it means the power to decide over how, where and who produces food, and the power to decide what a food system should look like. Long-term food security, it is argued, can only be achieved through food sovereignty (Patel 2012). The importance of women within food systems, and the way that gender inequality is created and perpetuated through food systems, is also crucially recognised as key in moving towards food sovereignty (Patel 2012). The food sovereignty movement articulates that food is a basic human right, argues for democratic control over food trade and markets and emphasises the importance of producing and maintaining a healthy food ecosystem (La Via Campesina 1996).

2.6 | Food Sovereignty & Aquatic Foods

Many of the aforementioned debates surrounding food sovereignty have focused on land-based, agricultural dynamics,

meaning that there has been an ‘almost total absence of fish’ in critical food systems understandings such as food regime theory (Foley and Mather 2018, 239). Despite this, food sovereignty activists have paid some attention to the struggles of fisherfolk globally. The locus of struggles for food sovereignty in fisheries has often been centred around issues affecting SSF. Two-thirds of the fish caught by SSF are destined for direct human consumption (FAO 2020). Moreover, approximately 90% of those employed in fisheries work in SSF (Viridin et al. 2023). Despite SSF’s importance to food and livelihood, SSF have often been neglected in fisheries policy in favour of industrial fishing activities (Smith and Basurto 2019).

For the purposes of fisheries management, fisheries have often been divided into small-scale and industrial categories. An industrial fishery can be understood as a ‘geographical area of operation of a complex of capitals whose form of organisation is the firm and whose medium of operation is fishing vessels’ (Campling 2012, 252). There is contrastingly no agreed, singular definition of SSF; however, SSF can encompass ‘all activities along the value chain – pre-harvest, harvest, and post-harvest’ (FAO 2015, ix). SSF are generally involved in petty commodity production, which is characterised by high labour- and low capital-intensive inputs and organised around family labour (Barbesgaard 2025), and cannot be considered as one homogenous group because of differing gendered, racialised and class dimensions. SSF are often marginalised by unequal power-laden relations and decisions made in dominant fisheries management paradigms (FAO 2015; Smith and Basurto 2019). These terms can, however, obscure the diversity and heterogeneity within the small-scale and industrial fisheries sectors (Smith and Basurto 2019).

The prioritisation of the industrial fishery in contemporary policymaking contributes to the marginalisation of SSF, something which is evident in blue economic discourses, which tend to see the ocean as a new economic frontier (Cohen et al. 2019). Within blue economic discourse, conservation of ocean resources and economic growth are not seen as contradictory premises. Furthermore, SSF are not perceived as a part of the blue growth vision and are often squeezed out of policymaking and seafood trade conversation in favour of larger conservation and economic pressures (Cohen et al. 2019). For example, capture fisheries, including SSF, are seen as having no substantial growth potential and are not considered in the European Union’s Blue Growth Strategy (Sulanke and Rybicki 2021).

In 1997, because of increased marginalisation and dispossession, SSF globally banded together to establish the World Forum of Fish Workers and Fish Harvesters, from which the World Forum of Fisher Peoples was established in 2001 (Ertör et al. 2020). The World Forum of Fisher Peoples adopted food sovereignty as a guiding principle in 2007 (KNTI and WFFP 2017) and is part of a larger movement of small-scale fish worker groups around the world which advocate for food sovereignty in fisheries. Stressing the vulnerability of many fishing communities to climate change, as well as emphasising how fishing communities are dispossessed of resources through the implementation of blue growth initiatives, fisher peoples joined voices with La Via Campesina and others in the food sovereignty movement (KNTI and WFFP 2017).

Building upon earlier conceptualisations of food sovereignty agreed at the Nyéléni forum in Mali in 2007, the WFFP and Indonesian Traditional Fisherfolk Union (KNTI) published a document in 2017 defining six pillars of food sovereignty which are specifically relevant to SSF. These pillars are: 1) *Focuses on food for people*; 2) *Values food providers*; 3) *Localises food systems*; 4) *Puts control locally*; 5) *Builds knowledge and skills*; 6) *Works with nature* (WFFP 2017). KNTI & WFFP argue that the dominant framing of food security, which is often used as a means of understanding issues facing SSF, 'ignores the root causes of hunger' in so far as it does not 'address people's rights to access and control of territories' (2017, 6). Put another way, the reasons for food insecurity in SSF lie not in the inadequacy of fish supply, but are rather because of inequity of access to and distribution of food, water, land and other productive resources.

Despite movement towards recognition of food sovereignty in fisheries, fish has still often been neglected in favour of a focus on small-scale and agroecological farming. Still, there exists limited but growing academic sources which explicitly engage with food sovereignty and SSF (Levkoe et al. 2017). Some academic literature relating food sovereignty and fisheries has focused on indigenous self-determination in fisheries governance (Lowitt et al. 2020), the importance of indigenous knowledge for food sovereignty (Alvarez et al. 2025; Carter et al. 2025), the relationship between equitable fisheries co-management and food sovereignty (Quimby et al. 2023), the role of small pelagic fish in achieving food sovereignty (Katikiro and Mahenge 2022), the relationship between SSF, power and access in local food systems (Arthur et al. 2022), the complex role of the state in impeding food sovereignty for fisheries, particularly in West African countries such as Senegal and Ghana (Moreno-Maestro 2023; Standen 2025a), and the convergence of fisheries resource justice movements and food sovereignty (Mills 2018).

There has also been a broader academic fisheries literature which encompasses some of the key themes addressed by the food sovereignty movement, without explicitly mentioning food sovereignty. Themes range from rights-based approaches to fisheries governance (Allison et al. 2012), justice for small-scale fish workers in the blue economy (Cohen et al. 2019), centring small-scale fish workers' voices and needs in decision-making over fisheries governance (Chuenpagdee and Jentoft 2018), and how direct sales of SSF products benefit fisherfolk (Stoll et al. 2015), amongst many other relevant themes. Supporting the aims of food sovereignty, such as gender equality and democratic control over aquatic food systems, allows for fisheries to be seen as a site of social struggle and distributional justice, rather than a site of governmental managerial concern (Bavinck et al. 2018).

In fisheries and aquatic food policy, as opposed to food security, food sovereignty is not a dominant framing when it comes to articulating unequal access to and consumption of aquatic foods. Much reference to food sovereignty and fisheries in policy is related to indigenous knowledges, indigenous self-sufficiency and traditional food practices (World Food Programme 2025). However, the United Nations Special Rapporteur on the Right to Food, Michael Fakhri, noted that the Voluntary SSF Guidelines (2015) were developed in the context of food sovereignty to counter the 'long-standing marginalisation of small-scale fisheries in policy-making processes' (FAO 2025, 17). Food sovereignty in the SSF

guidelines (2015) has been discussed most notably in the context of customary tenure rights and social development (FAO 2025). Food sovereignty was therefore developed in the SSF guidelines (2015) as a means of countering the marginalisation of SSF through loss of access rights, tenure rights, marginalisation of women and the increased privatisation of ocean space (FAO 2025).

The food sovereignty movement has, however, been critiqued for positioning small-scale farmers and fishers as a homogenous group, or as 'capital's other' (Barbesgaard 2025). Political struggles for food sovereignty often revolve around the articulation of the political subject of the 'peasant' food producer,⁷ who has been ecologically and socially dispossessed from their own means of production by corporations. Within this movement, the picture of the peasant within agricultural production is that of 'a cautious figure who balances food with cash-crop production, guided by a strong aversion to ecological and market risk' (Li 2015, 205).⁸

More orthodox Marxist scholars, however, are critics of the conception of the peasant, or the peasant way, within food sovereignty. They suggest that the food sovereignty movement enforces too strict a binary between the all-encompassing corporate food regime and a romanticised idea of the peasantry (Bernstein 2016). This binary can ignore the complications that many small-scale food producers often wish to be 'incorporated into larger commodity networks' (Jansen 2014, 213) and can obscure the class dynamics of peasant and small-scale fisherfolk producers (Bernstein 2010; Barbesgaard 2025). Bernstein goes further to argue that the peasant figure does not exist in the contemporary world, because of peasant modes of food production having been superseded by capitalist social relations of production and reproduction (Bernstein 2006). Critics of food sovereignty also further question the potential for food sovereign and agroecological models of food production to be able to sustain or improve upon current capitalist levels of food production in agriculture (Bernstein 2014; Jansen 2014).

SSF globally are integral to the struggle for food sovereignty in aquatic food systems, despite fisheries not being traditionally centred as part of food sovereignty discourse, and food sovereignty an oft-ignored framing in dominant aquatic food and fisheries policy, research and management paradigms. Understanding (unequal) access to and consumption of fish through food sovereignty arguably allows for a questioning of who gets to access fish, why and under what conditions this fish is produced and consumed. Questions over differentiation in small-scale fisheries remain pertinent (Barbesgaard 2025). Yet, despite a resurgent interest in food sovereignty by fisheries scholars (Levkoe et al. 2017; Quimby et al. 2023), a critical approach to fisheries and aquatic food systems which centres differentiating axes such as gender, class, race, power, inequality and access issues, *and* how these issues span across the whole of the fisheries value chain (from production to consumption), still remains underexplored.

2.7 | Food Sovereignty Meets a Critical Political Economy of Aquatic Food Systems

While the holistic focus on the production and consumption of fish within a food sovereignty framing is a useful means of understanding the complexities and inequities of aquatic food

systems, it remains unclear how a research approach to fisheries and aquatic food systems, which is critical of dominant power hierarchies and class relations, may be engaged with. Formulating a critical food sovereign approach, anchored in critical political economy, to understand the interconnectedness of the political, socio-economic and ecological underpinnings of the production and consumption of fish around the world, could help to illuminate pathways to the equitable and ecologically sensitive transformations of aquatic food systems, which the food sovereignty movement calls for.

Drawing on the theory of food sovereignty, Levkoe et al. suggest that a food sovereign approach to fisheries 'builds on the ongoing work of those seeking to re-envision how we understand small-scale fisheries and their contributions to health, nutrition, and livelihoods' (Levkoe et al. 2017, 69). Levkoe et al. propose that a deeper engagement between food sovereignty and fisheries is needed, as 'a growing body of research on small-scale fisheries seeks to address socio-ecological relationships and issues of power' (2017, 65). Yet, despite such increasing academic interest in food sovereignty and issues of power in fisheries (i.e., Ertör et al. 2020), food sovereignty still remains a contested concept and its evolving aims can be contradictory (Agarwal 2014).

This is because food sovereignty and other food movements' articulation of resistance to the increasing corporate control of food systems (Clapp 2021) can differ and be co-opted as a means of negating the need for fundamental change or transformation within food systems. Holt Giménez and Shattuck (2011) have recognised this tendency and broadly defined the aims of food movements as belonging to four disparate groupings: namely, neoliberal, reformist, progressive and radical trends. The food sovereignty movement can be understood as falling into the two latter camps: the progressive and radical trends. The progressive trend opposes the industrial agri-food complex through practicing alternatives such as organic agriculture or localised food networks. It generally focuses on a 'greening' of food production and consumption (Tilzey 2024). Progressive aspects of food sovereignty can exist comfortably 'within the economic and political frameworks of existing capitalist food systems' (Holt Giménez and Shattuck 2011, 115). Contrastingly, the radical trend in food sovereignty is explicitly anti-capitalist, anti-corporatist and anti-imperialist. It calls for 'structural reforms to markets and property regimes, and class-based, redistributive demands for land, water and resources' (Holt Giménez and Shattuck 2011, 115).

The figure of the peasant (or small-scale fisherfolk) in food sovereignty expresses important political imaginaries, which are vital for articulating political struggles against prevailing and growing inequalities in global aquatic food systems. However, while politically important, such peasant-based imaginaries arguably require the analytical support of critical political economy to situate political struggles within the broader dynamics of capital, labour and value creation in aquatic food systems.⁹

For an aquatic food systems perspective, this implies analysing fisheries as processual sites where capitalist social relations organise the production, circulation and consumption of aquatic foods. Advancing a critical political economy of aquatic food systems therefore requires examining how value is generated

through labour, how it is realised through markets, and how the ownership and control of productive assets structure access to food, income and ecological resources. It also demands attention to the ways accumulation strategies, whether through ocean enclosure, technological intensification, market expansion or global value chain integration, reshape gendered, racialised and class relations within fishing communities and across post-harvest processing, trade and retail. Following social reproduction theorists (Bhattacharya 2017), in this view, questions of nutrition, food access, gendered and racialised reproductive labour, as well as ecological sustainability, are not external to political economy but are constituted by the same dynamics of capital accumulation and class differentiation that underlie the aquatic food system as a whole.

Existing fisheries literature obscures how capitalist relations shape fisheries systems through being 'biologically and economically reductionist' (Campling et al. 2012, 178). Valuable fisheries political economic scholarship has already highlighted key aspects of accumulation, enclosure, property relations and the ecological contradictions of capitalist development in marine spaces (Longo et al. 2015; Clark et al. 2019; Campling et al. 2012; Mallin and Barbesgaard 2020; Havice and Campling 2021; Campling and Colás 2021; Christiansen 2023; Barbesgaard 2025). However, a systematic exploration of the interdependence of aquatic food production, circulation and consumption (i.e., the interdependence between fishing, fish processing, trading and who gets to eat certain aquatic foods as a result) in fisheries political economic literature has been underexplored. There remains a dualism between fisheries production and pre- and post-harvest sectors, echoing a dualism in traditional Marxist analysis between the production of commodities and the reproduction of labour power (Vogel 2017).

Despite the growing aforementioned fisheries literature which references food sovereignty, limited studies interrogate food sovereignty in relation to fish consumption, market dynamics and labour production systems (Campling et al. 2012), specifically in conjunction with theories from critical political economy. As such, combining critical political economy and a food sovereign approach to fisheries could encourage research that 'questions the commodification of [aquatic] food and prioritises the study of power dimensions in agri-food relations' (Gürcan 2018, 324) to counter the dualism between production and reproduction in fisheries scholarship.

Future research which seeks to utilise a critical food sovereign approach to fisheries, namely, how social and economic inequity and marine environmental degradation in fisheries systems is produced and shaped by capital, could thus address some of the following potential future research areas.

3 | Rethinking Aquatic Food Systems Through Critical Food Sovereignty

3.1 | (Free) Labour Across the Fish Value Chain

One way in which to approach aquatic food systems through a critical food sovereign approach would be to broadly analyse how racial and gendered labour relations¹⁰ are shaped by capital

accumulation across the aquatic food value chain. This is because the contemporary, globalised aquatic food system reproduces labour regimes which perpetuate and reproduce systemic racial inequality (Clark 2022). Such fisheries labour regimes exploit often vulnerable migrant workers in industrial and distant waters (DW) fisheries (Marschke and Vandergeest 2023; Yea and Stringer 2023). Industrial fishing is one of the most dangerous occupations in the world (Campling and Colás 2021), with many migrant boat fish workers experiencing precarious and exploitative labour conditions (Kadfak 2024), as well as modern slavery and human trafficking (BBC 2024).

Moreover, despite the importance of pre- and post-harvest sectors in fisheries, fish harvesting has received the most attention within fisheries social science scholarship, as well as fisheries policy, research and governance (Basurto et al. 2020). This focus on fish harvesting has ignored labour processes within the wider fisheries value chain, such as the pre- and post-harvesting sectors. Much of the labour carried out in pre- and post-harvest sectors in fisheries is done by women, most notably in SSF (Williams 2019). The processes of processing, trading and selling fish, as is characteristic of the post-harvest fisheries sectors, are vital for aquatic food systems, yet are often side-lined in dominant analyses of the way in which capital accumulation may shape fisheries, and thus aquatic food trade and consumption patterns. Williams argues for understanding fisheries through a gender lens, which enables us to:

See the full productive fisheries economy, including pre-and post-harvest activities, and the reproductive economy that supports the narrowly defined fisheries production segment consisting mainly of harvesting and large-scale fish trade.

(Williams 2019, 402)

Despite growing attention to the role of women in fisheries, women fishers' labour is frequently overlooked in common understandings of SSF and their respective food systems (Kleiber et al. 2015). For example, 'the FAO only collects statistics on the primary fish production sector', where 'women make up only 14% of workers', leading to most global and national fisheries policies being gender-blind (Gopal et al. 2020, 1). Oftentimes, women's work in fisheries is seen as an extension of household responsibilities and is therefore often given little recognition, meaning that women are often not involved in decision-making processes in the formation of fisheries policies (FAO 2023).

Theories in feminist political economy, such as social reproduction theory, can be useful in deepening a heterodox critical political economic analysis of aquatic food systems to encompass the question of access to, and the politics of, the production, circulation and consumption of aquatic foods. For example, feminist Marxist scholarship notes that capitalist value production always relies on an expanded reproductive circuit of (cheap) nature, care and (free) labour (Fraser 2023). What this means is that capital accumulation is dependent¹¹ on a vast array of social activities, political capacities and natural processes which are defined in capitalist societies as non-economic and are subsequently accorded no 'value' (Fraser 2023), such as childcare, housework, schools, care

work, the family and the importance of 'nature' in sustaining capital accumulation (Moore 2015; Bhattacharya 2017). Understanding fisheries production as dependent on many 'non-economic' processes, which are integral to the social reproduction of aquatic food systems and livelihoods, would be a vital starting point to placing gendered and racialised labour relations at the heart of examining how capital accumulation shapes intersecting inequalities in aquatic food production, exchange and consumption.

3.2 | State-Making, Market Making: Aquatic Food Production and Consumption Patterns

The relationship between state, market and capital has been the subject of complex long-ranging debates (Gramsci 1971; Poulantzas 2000).¹² This is particularly with regards to the ways in which the state can facilitate or impede democratic control over land, food, water and other key resources (Alonso-Fradejas et al. 2015). In food sovereignty, a general focus on the role of the 'local' and the 'global' has neglected the role of the nation-state (Clark 2016), despite food sovereignty legislation being passed in multiple countries such as Mali, Senegal, Nepal and Bolivia (Alonso-Fradejas et al. 2015).

Consequently, the nation-state can have a facilitative or impeding role in creating radical visions of food sovereignty. However, neoliberal states, which often facilitate agribusiness interests, 'are generally seen as a constraining rather than enabling force' for food sovereignty (Clark 2016, 185). This generally contrasts with food-related scholarship, whereby the state is characterised as being displaced by the 'market' (McMichael 2009). Instead, it is argued that 'the state continues to play a central role' through facilitation of corporate-led contemporary food production and distribution (Otero 2012, 284). Thus, the state is key to perpetuating capitalist social property relations. In fisheries, state property relations and regulations are as much key to capital accumulation and resource access as in agriculture because states are 'the primary arbiter of property relations in most inland and marine capture fisheries' (Campling et al. 2012, 179). Yet, how state, market making and production of aquatic foods shape the consumption of aquatic foods has been understudied.¹³

Markets enable the exchange, distribution and consumption of food, are engineered by powerful actors and specific interests in food systems, and are not neutral mediators of supply and demand. Yet, despite the constitutive role of markets to shaping conditions of food production and consumption, much reference to the concept of the market in food systems analyses is 'taken for granted', where 'it is rarely explained what markets are or how they came into existence' (Ouma et al. 2013, 227). For example, the production of need (in a certain type of fish, for example) can be manufactured through advertising (Harvey 2010), disproving the common implication in neoclassical economics and in fisheries governance circles (i.e., FAO 2024b) that a 'naturalised' consumer demand is the sole reason for fish commodity production. Quality and standards-making in food markets, as well as the influence of world market prices, additionally hold significant sway over 'power relations in fisheries production systems' (Campling et al. 2012, 184).

Taking state-sponsored industrial fuel subsidies as an example of state-related market making reveals how a single accumulation strategy shapes the entire aquatic food system: subsidies sustain industrial trawling, intensify competition with SSF, reduce raw material available for women-dominated processing, reorganise value capture along export-oriented chains, and ultimately alter patterns of local consumption and markets as lower-income fish consumers lose access to affordable fish (Skerritt and Sumaila 2021; Standen 2025b). Examples such as this illustrate how a combined critical political economy and food sovereignty framework can connect production, labour, gender, markets and consumption within a unified analysis.

Future research which takes state and market(s) in aquatic foods as key objects of critical analysis, combined with how markets shape conditions of fisheries production and consumption, could be a fruitful avenue in which to build upon a critical food sovereign approach to fisheries. Dissecting what the market is, how consumption patterns and/or demand can be engineered by powerful actors, and how these market dynamics are interrelated with modes of production in all sectors of the fishery (not just harvesting), could be a way in which to centre power dynamics in aquatic food systems.

Developing a critical food sovereign research agenda, which centres the power and politics of aquatic food systems could help to inform the SSF involved in the food sovereignty movement. It could also help to inform academics and practitioners involved in researching equitable and sustainable food system transformations, as well as policymakers involved in fisheries management decisions and aquatic food system debates.

4 | Conclusions

Food is vital for human existence and weaves together many dimensions of social and cultural life. It is, in other words, 'a system of systems, spanning phases from production to consumption (and waste)' (MacRae 2016, 229). Varying disciplines have studied the role of food to highlight wider societal processes at work (Mintz and Bois 2002). Fish, as a fundamental part of many food systems across the globe, is embedded in cultural, political and social patterns existent in many societies today. Fish are also a key source of food, livelihood and culture for many millions of people around the world. Yet, fish has not traditionally been acknowledged as food in fisheries management, policy and science.

A relatively recent turn towards understanding fish as a part of food systems, and in terms of food and nutrition security, means that the importance of aquatic foods to nutrition and health is back on the policy agenda (HLPE 2017; Bennett et al. 2021; FAO 2024a). However, there remains a critical lack of power analyses in such a turn. This paper has therefore focused on two possible and dominant ways of understanding fish as food, namely through the framings of food security and food sovereignty. Scholars, activists and governmental institutions have reiterated the importance of fisheries to food security, particularly for fish dependent communities in the global South who are more vulnerable to the effects of over-fishing and climate change (Maire et al. 2021). However, there

appears to be a divergence in the fish as food turn, where a previous emphasis on the importance of fish to SFF' food systems and livelihoods, is turning towards highlighting the role of aquaculture in ensuring global food security amid a growing human population (FAO 2020, 2024b). Situating aquatic foods as vital to food security is important. However, overlooking the political, social and economic drivers which create and sustain inequities in the aquatic food production-consumption nexus, the fish as food turn may not be enough to counter prevailing power and access concentration tendencies in aquatic food systems (Mansfield 2010; Österblom et al. 2015; Cohen et al. 2019).

Fish are food, and the politics over inequality and marginalisation in fisheries is as important as questions over equity, democratic control and ecological degradation in terrestrial food systems. The politics of aquatic food systems, which small-scale fisherfolk involved in the food sovereignty movement call attention to, is a vital yet little explored research topic. Future academic research could seek to explore the politics of fish within food systems through a power-sensitive approach to fish as food, like food sovereignty. A critical food sovereign approach could illuminate the power-laden relationships between capital accumulation and exploitative modes of aquatic food production, unhealthy and inequitable patterns of food consumption, and how western-based ontological relations with the oceans and seas fundamentally drive marine ecological degradation (i.e., Steinberg 2001). In particular, research into state and market making in aquatic food systems, the role of gendered and racialised labour in aquatic food value chains, and the political economic drivers of social inequities and marine ecological degradation, could further illuminate both aquatic food sovereignty and food security research, governance and policy in this regard. A power-sensitive, critical, food sovereign approach which challenges existing power structures that perpetuate inequity may also aid in resolving the inherent contradiction between fish and food and fish as commodity. In the face of blue economy initiatives, climate change and concentration of corporate wealth and control in fisheries, a renewed focus on the politics of fish as food could assist in moving towards an equitable and sustainable transformation of the global aquatic food system; something which is vital for the millions of people who rely on aquatic foods globally.

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Conflicts of Interest

The author declares no conflicts of interest.

Data Availability Statement

The data that support the details of this paper are available on request from the corresponding author.

Endnotes

- ¹ This tension between food as a common good and as a commodity is well encapsulated in Bill Clinton's efforts to atone for the food price hikes, deficits, and food riots in 2008. Here, he said: 'food is not a commodity like others... it is crazy for us to think we can develop a lot of these countries [by] treating food like it was a colour television set' (Bill Clinton, quoted in Patel 2010). Despite Bill Clinton's perhaps ironic statement, food continues to be treated as a commodity, instead of integral to the survival and flourishing of all life on Earth.
- ² Throughout this paper, I refer to 'fish as food' while acknowledging its deeply anthropocentric leanings. Arguably, food justice and inequalities emphasise human agency and singularities, particularly in how injustice occurs to humans (Goodman 2001), which enforces the binary between 'nature' and 'society'. Approaching fish as food through a different ontological perspective, would for example, entail a different and important type of analysis; however, it is beyond the scope of this paper to do so. As such, this paper focuses on 'fish as food' for human consumption primarily.
- ³ In this paper, I refer to fish and aquatic foods (otherwise known as 'blue foods') often interchangeably. Fish if referred to can be understood as aquatic foods, and I acknowledge that not all aquatic foods are fish. I use the term aquatic foods as it is commonly understood as an all-encompassing term for 'animals, plants, and microorganisms, as well as cell-and plant-based foods of aquatic origin emerging from new technologies' which can include 'finfish, crustaceans (such as crabs and shrimp), cephalopods (octopus and squids), other molluscs (clams, cockles and seasnails), aquatic plants (water spinach; *Ipomoea aquatica*), algae (seaweed) and other aquatic animals (mammals, insects and sea cucumbers)' (Golden et al. 2021, 316). This includes the important contribution that freshwater fisheries (lakes, rivers) make to aquatic food systems.
- ⁴ Power through corporate control in aquatic food sectors is motivated by a spectrum of logics. Profit-oriented fishing targets high-value stocks and drives overexploitation in fisheries globally (Sethi et al. 2010).
- ⁵ Despite the growing trend in the concentration of wealth, power and industrialisation in fisheries, SSF are still estimated to land approximately 40% of the world's fishery catch (FAO 2023).
- ⁶ As Patel notes, 'it is entirely possible for people to be food secure in prison or under a dictatorship' (Patel 2009, 665).
- ⁷ Articulated by scholars such as Van der Ploeg, peasant farming can be understood as different to entrepreneurial and capitalist farming. Here, peasant farming is said to have 'a different internal logic', whereby 'commodities are produced for downstream markets, but grounded on low levels of the commoditisation of the main resources' (van der Ploeg 2013, 1004). Entrepreneurial farming on the other hand is where resources, but not labour, is fully commoditised. Capitalist farming is where all resources and labour are commoditised (van der Ploeg 2013). The peasant way is seen to encapsulate a pathway to food sovereignty, because of its incomplete commoditisation of productive resources, which is so characteristic of capitalist and entrepreneurial farming (van der Ploeg 2013).
- ⁸ As Li explains: 'much of the mobilization around food sovereignty is directed against the global corporate food regime, and presents a maximally inclusive, hence generic, picture of the kind of non-global, non-corporate (i.e., national, local, small farm-based) food regime that needs to be defended' (Li 2015, 206).
- ⁹ Capital can be understood as a dynamic social relation throughout this paper, where its economic and social power is 'rooted in a system of property and commodity relations' secured through

ideological and political rule (Bernstein 2010, 116). Marx (2000) noted, in his theory of surplus-value, that capital accumulation depended on extracting 'more value from the labourers than they needed to produce themselves' (Harvey 2012, 7). because of competitive relations within the capitalist class, members of this class strive to exploit workers to maximise surplus value. As such, those who do not own productive property are compelled to sell their labour power through markets to those who do own productive property, and to 'purchase what they collectively produce through consumer markets' (Cahill 2020, 34).

- ¹⁰ One of the key demands of the food sovereignty movement is women's rights (Patel 2012).
- ¹¹ Or parasitic (Fraser 2023).
- ¹² It is beyond the scope of this paper to delve into these debates.
- ¹³ What would it mean to combine a political economic approach, which also seriously problematises markets, 'in all their hybrid, variegated, and heterogeneous forms' (Peck 2012, 118)?

References

- Agarwal, B. 2014. "Food Sovereignty, Food Security and Democratic Choice: Critical Contradictions, Difficult Conciliations." *Journal of Peasant Studies* 41, no. 6: 1247–1268. <https://doi.org/10.1080/03066150.2013.876996>.
- Akintola, S. L., and K. A. Fakoya. 2017. "Small-Scale Fisheries in the Context of Traditional Post-Harvest Practice and the Quest for Food and Nutritional Security in Nigeria." *Agriculture & Food Security* 6, no. 1: 34. <https://doi.org/10.1186/s40066-017-0110-z>.
- Allegretti, A., and C. C. Hicks. 2022. "Getting the Right Nutrients to Those Who Need Them Most": Towards Nutrition-Sensitive Governance of Fisheries in the Global South." *Reviews in Fish Biology and Fisheries* 33, no. 3: 561–571. <https://doi.org/10.1007/s1160-022-09743-6>.
- Allison, E. H., B. D. Ratner, B. Åsgård, R. Willmann, R. Pomeroy, and J. Kurien. 2012. "Rights-Based Fisheries Governance: From Fishing Rights to Human Rights." *Fish and Fisheries* 13, no. 1: 14–29. <https://doi.org/10.1111/j.1467-2979.2011.00405.x>.
- Alonso-Fradejas, A., S. M. Borrás, M. Cobo, D. Crespo, and M. J. Robbins. 2015. "Food Sovereignty: Convergence and Contradictions, Conditions and Challenges." *Third World Quarterly* 36, no. 3: 431–448. <https://doi.org/10.1080/01436597.2015.1023567>.
- Alvarez, R., D. Caniullán, J. Catín, et al. 2025. "Reciprocal Contributions: Indigenous Perspectives and Voices on Marine-Coastal Experiences in the Channels of Northern Patagonia, Chile." *People and Nature* 7, no. 5: 1086–1098. <https://doi.org/10.1002/pan3.70004>.
- Arthur, R. I., D. J. Skerrett, A. Schuhbauer, N. Ebrahim, R. M. Friend, and U. R. Sumaila. 2022. "Small-Scale Fisheries and Local Food Systems: Transformations, Threats and Opportunities." *Fish and Fisheries* 23, no. 1: 109–124. <https://doi.org/10.1111/faf.12602>.
- Asche, F., K. H. Roll, H. N. Sandvold, A. Sørvig, and D. Zhang. 2013. "Salmon Aquaculture: Larger Companies and Increased Production." *Aquaculture Economics & Management* 17, no. 3: 322–339. <https://doi.org/10.1080/13657305.2013.812156>.
- Ayili, R. K., M. Fabinyi, K. Barclay, and M. A. Bawa. 2023. "Blue Economy: Industrialisation and Coastal Fishing Livelihoods in Ghana." *Reviews in Fish Biology and Fisheries* 33, no. 3: 801–818. <https://doi.org/10.1007/s1160-022-09749-0>.
- Barbesgaard, M. 2018. "Blue Growth: Savior or Ocean Grabbing?" *Journal of Peasant Studies* 45, no. 1: 130–149. <https://doi.org/10.1080/03066150.2017.1377186>.
- Barbesgaard, M. 2025. "The Class Dynamics of Ocean Grabbing: Who Are the "Fisher Peoples"?" *Journal of Agrarian Change* 25, no. 3: e70011. <https://doi.org/10.1111/joac.70011>.

- Basurto, X., A. Bennett, E. Lindkvist, and M. Schlüter. 2020. "Governing the Commons Beyond Harvesting: An Empirical Illustration From Fishing." *PLoS One* 15, no. 4: e0231575. <https://doi.org/10.1371/journal.pone.0231575>.
- Bavinck, M., S. Jentoft, and J. Scholtens. 2018. "Fisheries as Social Struggle: A Reinvigorated Social Science Research Agenda." *Marine Policy* 94: 46–52. <https://doi.org/10.1016/j.marpol.2018.04.026>.
- BBC News. 2024. "Fishermen on Scots Trawler Win £20,000 Modern Slavery Claim." <https://www.bbc.com/news/articles/cqj0ln81yyjo>.
- Béné, C., M. Barange, R. Subasinghe, et al. 2015. "Feeding 9 Billion by 2050 – Putting Fish Back on the Menu." *Food Security* 7, no. 2: 261–274. <https://doi.org/10.1007/s12571-015-0427-z>.
- Béné, C., G. Macfadyen, and E. H. Allison. 2007. "Increasing the Contribution of Small-Scale Fisheries to Poverty Alleviation and Food Security." Food & Agriculture Org.
- Béné, C., P. Oosterveer, L. Lamotte, et al. 2019. "When Food Systems Meet Sustainability – Current Narratives and Implications for Actions." *World Development* 113: 116–130. <https://doi.org/10.1016/j.worlddev.2018.08.011>.
- Bennett, A., X. Basurto, J. Virdin, et al. 2021. "Recognize Fish as Food in Policy Discourse and Development Funding." *Ambio* 50, no. 5: 981–989. <https://doi.org/10.1007/s13280-020-01451-4>.
- Bennett, A., P. Patil, K. Kleisner, D. Rader, J. Virdin, and X. Basurto. 2018. *Contribution of Fisheries to Food and Nutrition Security: Current Knowledge, Policy, and Research. (NI Report 18-02)*. Duke University Accessed March 23, 2026. <https://wfpc.sanford.duke.edu/reports/contribution-fisheries-food-nutrition-security-current-knowledge-policy-and-research/>.
- Bernstein, H. 2006. "Is There an Agrarian Question in the 21st Century?" *Canadian Journal of Development Studies/Revue Canadienne d'études du Développement* 27, no. 4: 449–460. <https://doi.org/10.1080/02255189.2006.9669166>.
- Bernstein, H. 2010. *Class Dynamics of Agrarian Change*. Lynne Rienner Publishers.
- Bernstein, H. 2014. "Food Sovereignty via the "Peasant Way": A Sceptical View." *Journal of Peasant Studies* 41, no. 6: 1031–1063. <https://doi.org/10.1080/03066150.2013.852082>.
- Bernstein, H. 2016. "Agrarian Political Economy and Modern World Capitalism: The Contributions of Food Regime Analysis." *Journal of Peasant Studies* 43, no. 3: 611–647. <https://doi.org/10.1080/03066150.2015.1101456>.
- Bhattacharya, T. 2017. "Introduction: Mapping Social Reproduction Theory." In *Social Reproduction Theory. Remapping Class, Recentring Oppression*. Pluto Press.
- Bodwitch, H. 2017. "Challenges for New Zealand's Individual Transferable Quota System: Processor Consolidation, Fisher Exclusion, & Māori Quota Rights." *Marine Policy* 80: 88–95. <https://doi.org/10.1016/j.marpol.2016.11.030>.
- Borras, A. M., and F. A. Mohamed. 2020. "Health Inequities and the Shifting Paradigms of Food Security, Food Insecurity, and Food Sovereignty." *International Journal of Health Services* 50, no. 3: 299–313. <https://doi.org/10.1177/0020731420913184>.
- Cahill, D. 2020. "Market Analysis Beyond Market Fetishism." *Environment and Planning A: Economy and Space* 52, no. 1: 27–45. <https://doi.org/10.1177/0308518X18820917>.
- Campling, L., and A. Colás. 2021. *Capitalism and the Sea: The Maritime Factor in the Making of the Modern World*. Verso.
- Campling, L., and E. Havice. 2018. "The Global Environmental Politics and Political Economy of Seafood Systems." *Global Environmental Politics* 18, no. 2: 72–92. https://doi.org/10.1162/glep_a_00453.
- Campling, L., E. Havice, and P. McCall Howard. 2012. "The Political Economy and Ecology of Capture Fisheries: Market Dynamics, Resource Access and Relations of Exploitation and Resistance: The Political Economy and Ecology of Capture Fisheries." *Journal of Agrarian Change* 12, no. 2–3: 177–203. <https://doi.org/10.1111/j.1471-0366.2011.00356.x>.
- 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, no. 2–3: 252–278. <https://doi.org/10.1111/j.1471-0366.2011.00354.x>.
- Cardwell, E. 2015. "Power and Performativity in the Creation of the UK Fishing-Rights Market." *Journal of Cultural Economy* 8, no. 6: 705–720. <https://doi.org/10.1080/17530350.2015.1050441>.
- Cardwell, E., and R. Gear. 2013. "Transferable Quotas, Efficiency and Crew Ownership in Whalsay, Shetland." *Marine Policy* 40: 160–166. <https://doi.org/10.1016/j.marpol.2013.01.013>.
- Carter, N. A., C. Beaudoin, K. Bird, et al. 2025. "Niqivut (Our Food)—Dimensions of Inuit Country Food Harvesting and Significance in Arctic Canada: Bountiful, Seasonal, "Soul Food"." *Arctic Science* 11: 1–15. <https://doi.org/10.1139/as-2024-0007>.
- Christiansen, J. 2023. "Fishing for Finance." PhD thesis, Lancaster University. Accessed January 28, 2025. <https://doi.org/10.17635/lancaster/thesis/2064>.
- Chuenpagdee, R., and S. Jentoft. 2018. "Transforming the Governance of Small-Scale Fisheries." *Maritime Studies* 17, no. 1: 101–115. <https://doi.org/10.1007/s40152-018-0087-7>.
- Clapp, J. 2021. "The Problem With Growing Corporate Concentration and Power in the Global Food System." *Nature Food* 2, no. 6: 404–408. <https://doi.org/10.1038/s43016-021-00297-7>.
- Clapp, J., W. G. Moseley, B. Burlingame, and P. Termine. 2022. "Viewpoint: The Case for a Six-Dimensional Food Security Framework." *Food Policy* 106: 102164. <https://doi.org/10.1016/j.foodpol.2021.102164>.
- Clapp, J., P. Newell, and Z. W. Brent. 2018. "The Global Political Economy of Climate Change, Agriculture and Food Systems." *Journal of Peasant Studies* 45, no. 1: 80–88. <https://doi.org/10.1080/03066150.2017.1381602>.
- Clark, B., S. B. Longo, R. Clausen, and D. Auerbach. 2019. "From Sea Slaves to Slime Lines: Commodification and Unequal Ecological Exchange in Global Marine Fisheries." In *Ecologically Unequal Exchange: Environmental Injustice in Comparative and Historical Perspective*, edited by R. S. Frey, P. K. Gellert, and H. F. Dahms, 195–219. Springer International Publishing. https://doi.org/10.1007/978-3-319-89740-0_8.
- Clark, P. 2016. "Can the State Foster Food Sovereignty? Insights From the Case of Ecuador." *Journal of Agrarian Change* 16, no. 2: 183–205. <https://doi.org/10.1111/joac.12094>.
- 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, no. 3: 648–662. <https://doi.org/10.1111/faf.12639>.
- Cohen, P. J., N. L. Andrew, J. Cinner, et al. 2019. "Securing a Just Space for Small-Scale Fisheries in the Blue Economy." *Frontiers in Marine Science* 6: 171. <https://doi.org/10.3389/fmars.2019.00171>.
- Crona, B. I., E. Wassénius, M. Jonell, et al. 2023. "Four Ways Blue Foods Can Help Achieve Food System Ambitions Across Nations." *Nature* 616, no. 7955: 104–112. <https://doi.org/10.1038/s41586-023-05737-x>.
- Cunningham, S., A. E. Neiland, M. Arbuckle, and T. Bostock. 2009. "Wealth-Based Fisheries Management: Using Fisheries Wealth to Orchestrate Sound Fisheries Policy in Practice." *Marine Resource Economics* 24, no. 3: 271–287. <https://doi.org/10.1086/mre.24.3.42629655>.
- Elleby, C., I. P. Domínguez, R. Nielsen, M. Nielsen, and A. Hoff. 2025. "Introducing Maximum Sustainable Yield Targets in Fisheries Could

- Enhance Global Food Security.” *Communications Earth & Environment* 6, no. 1: 33. <https://doi.org/10.1038/s43247-024-01851-4>.
- Ertör, I., A. Said, A. Blanchard, et al. 2020. *Situating Small-Scale Fisheries in the Global Struggle for Agroecology and Food Sovereignty*. Transnational Institute, Association Pleine Mer, Solidaritas Perempuan Accessed January 25, 2025. https://www.tni.org/files/publication-downloads/web_english_foodfish_final.pdf.
- Fairbairn, M. 2008. “Framing Resistance: International Food Regimes and the Roots of Food Sovereignty.” Thesis. Accessed August 8, 2024. <https://minds.wisconsin.edu/handle/1793/31140>.
- FAO. 1996. “The State of Food and Agriculture.” Rome, Italy. <https://www.fao.org/3/w1358e/w1358e00.htm>.
- FAO. 2015. “Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication.” Food and Agriculture Organization of the United Nations, Rome. <https://openknowledge.fao.org/server/api/core/bitstreams/edffbfbc-81e5-4208-a36f-334ff81ac10f/content>.
- FAO. 2020. *The State of Food Security and Nutrition in the World 2020*. FAO, IFAD, UNICEF, WFP and WHO Accessed January 10, 2025. <https://openknowledge.fao.org/handle/20.500.14283/ca9692en>.
- FAO. 2023. *Why the Gender Transformative Approach is Critical to Achieving More Equitable and Resilient Small-Scale Fisheries in Sub-Saharan Africa*. FAO. <https://doi.org/10.4060/cc5134en>.
- FAO. 2024a. *The State of Food Security and Nutrition in the World 2024. Financing to End Hunger, Food Insecurity and Malnutrition in All Its Forms*. FAO; IFAD; UNICEF; WFP; WHO. Accessed January 10, 2025. <https://openknowledge.fao.org/handle/20.500.14283/cd1254en>.
- FAO. 2024b. *The State of World Fisheries and Aquaculture 2024*. FAO. Accessed May 26, 2025. <https://openknowledge.fao.org/handle/20.500.14283/cd0683en>.
- FAO. 2025. *Proceedings of the Second Small-Scale Fisheries Summit*. FAO Accessed May 26, 2025. <https://openknowledge.fao.org/handle/20.500.14283/cd3997en>.
- FAO, Duke University, and WorldFish. 2023. *Illuminating Hidden Harvests: The Contributions of Small-Scale Fisheries to Sustainable Development*. FAO, Duke University, WorldFish. <https://doi.org/10.4060/cc4576en>.
- Feedback. 2024. “Blue Empire: How the Norwegian Salmon Industry Extracts Nutrition and Undermines Livelihoods in West Africa.” Accessed January 28, 2025. <https://feedbackglobal.org/wp-content/uploads/2024/01/Feedback-BlueEmpire-Jan24.pdf>.
- Foley, P., and C. Mather. 2018. “Bringing Seafood Into Food Regime Analysis: The Global Political Economy of Newfoundland and Labrador Fisheries.” In *Food Futures: Growing a Sustainable Food System for Newfoundland and Labrador*, edited by C. Keske, 237–270. Memorial University Press. <https://doi.org/10.1515/9781894725460-017>.
- Fraser, N. 2023. *Cannibal Capitalism: How Our System Is Devouring Democracy, Care, and the Planet - and What we Can Do About It*. Verso.
- Funge-Smith, S., and A. Bennett. 2019. “A Fresh Look at Inland Fisheries and Their Role in Food Security and Livelihoods.” *Fish and Fisheries* 20, no. 6: 1176–1195. <https://doi.org/10.1111/faf.12403>.
- Ganseforth, S. 2022. “Shifting Matter and Meanings in Japanese Seafood Assemblages: Fish as Functional Food Cyborgs and Emblematic Cultural Commodities.” *Green Letters* 26, no. 1: 56–71. <https://doi.org/10.1080/14688417.2021.2023033>.
- Garlock, T., F. Asche, J. Anderson, et al. 2022. “Aquaculture: The Missing Contributor in the Food Security Agenda.” *Global Food Security* 32: 100620. <https://doi.org/10.1016/j.gfs.2022.100620>.
- Gephart, J. A., P. J. G. Henriksson, R. Parker, et al. 2020. “Scenarios for Global Aquaculture and Its Role in Human Nutrition.” *Reviews in Fisheries Science & Aquaculture* 29, no. 1: 122–138. <https://doi.org/10.1080/23308249.2020.1782342>.
- Gephart, J. A., and M. L. Pace. 2015. “Structure and Evolution of the Global Seafood Trade Network.” *Environmental Research Letters* 10, no. 12: 125014. <https://doi.org/10.1088/1748-9326/10/12/125014>.
- Golden, C. D., J. Z. Koehn, A. Shepon, et al. 2021. “Aquatic Foods to Nourish Nations.” *Nature* 598, no. 7880: 315–320. <https://doi.org/10.1038/s41586-021-03917-1>.
- Goodman, D. 2001. “Ontology Matters: The Relational Materiality of Nature and Agro-Food Studies.” *Sociologia Ruralis* 41, no. 2: 182–200. <https://doi.org/10.1111/1467-9523.00177>.
- Gopal, N., H. M. Hapke, K. Kusakabe, S. Rajaratnam, and M. J. Williams. 2020. “Expanding the Horizons for Women in Fisheries and Aquaculture.” *Gender, Technology and Development* 24, no. 1: 1–9. <https://doi.org/10.1080/09718524.2020.1736353>.
- Gramsci, A. 1971. *Selections From the Prison Notebooks of Antonio Gramsci*. Lawrence & Wishart.
- Gürçan, E. C. 2018. “Theorizing Food Sovereignty From a Class-Analytical Lens: The Case of Agrarian Mobilization in Argentina.” *Agrarian South: Journal of Political Economy* 7, no. 3: 320–350. <https://doi.org/10.1177/2277976018800608>.
- Haas, A. R., D. N. Edwards, and U. R. Sumaila. 2016. “Corporate Concentration and Processor Control: Insights From the Salmon and Herring Fisheries in British Columbia.” *Marine Policy* 68: 83–90. <https://doi.org/10.1016/j.marpol.2016.02.019>.
- Hamilton, M., E. Maire, C. Monteil, et al. 2024. “Drivers of Nutrient Intakes From Fisheries in French Polynesia.” *Ecosystems and People* 20, no. 1: 2351385. <https://doi.org/10.1080/26395916.2024.2351385>.
- Harper, S., D. Zeller, M. Hauzer, D. Pauly, and U. R. Sumaila. 2013. “Women and Fisheries: Contribution to Food Security and Local Economies.” *Marine Policy* 39: 56–63. <https://doi.org/10.1016/j.marpol.2012.10.018>.
- Harrison, L. O. J., G. H. Engelhard, R. H. Thurstan, and A. M. Sturrock. 2023. “Widening Mismatch Between UK Seafood Production and Consumer Demand: A 120-Year Perspective.” *Reviews in Fish Biology and Fisheries* 33, no. 4: 1387–1408. <https://doi.org/10.1007/s11160-023-09776-5>.
- Harvey, D. 2010. *A Companion to Marx's Capital*. Verso.
- Harvey, D. 2012. “History Versus Theory: A Commentary on Marx's Method in Capital.” <https://doi.org/10.1163/1569206X-12341241>.
- Havice, E., and L. Campling. 2021. “Chapter 42: Industrial Fisheries and Oceanic Accumulation.” In *Handbook of Critical Agrarian Studies*, edited by H. Akram-Lodhi, K. Dietz, B. Engels, and B. McKay. Routledge Accessed October 23, 2024. <https://www.elgaronline.com/edcollchap/edcoll/9781788972451/9781788972451.00053.xml>.
- Hicks, C. C., P. J. Cohen, N. A. J. Graham, et al. 2019. “Harnessing Global Fisheries to Tackle Micronutrient Deficiencies.” *Nature* 574, no. 7776: 95–98. <https://doi.org/10.1038/s41586-019-1592-6>.
- HLPE. 2014. “Sustainable Fisheries and Aquaculture for Food Security and Nutrition.” A Report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome 2014. Accessed January 30, 2025. <https://openknowledge.fao.org/server/api/core/bitstreams/350d9c16-fce5-4f85-9324-a41939bb3b89/content>.
- HLPE. 2017. “Nutrition and Food Systems.” A Report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome. Accessed August 27, 2025. <https://openknowledge.fao.org/server/api/core/bitstreams/4ac1286e-ee3-4f1d-b5bd-d92f5d1ce738/content>.
- Holt Giménez, E., and A. Shattuck. 2011. “Food Crises, Food Regimes and Food Movements: Rumbblings of Reform or Tides of Transformation?”

- Journal of Peasant Studies* 38, no. 1: 109–144. <https://doi.org/10.1080/03066150.2010.538578>.
- Hopma, J., and M. Woods. 2014. “Political Geographies of “Food Security” and “Food Sovereignty.”” *Geography Compass* 8, no. 11: 773–784. <https://doi.org/10.1111/gec3.12163>.
- Hubbard, J. 2014. “In the Wake of Politics: The Political and Economic Construction of Fisheries Biology, 1860–1970.” *Isis* 105, no. 2: 364–378. <https://doi.org/10.1086/676572>.
- Hulst, M., and D. Yanow. 2016. “From Policy “Frames” to “Framing”: Theorizing a More Dynamic, Political Approach.” *American Review of Public Administration* 46, no. 1: 92–112. <https://doi.org/10.1177/0275074014533142>.
- Ingram, J. 2011. “A Food Systems Approach to Researching Food Security and Its Interactions With Global Environmental Change.” *Food Security* 3, no. 4: 417–431. <https://doi.org/10.1007/s12571-011-0149-9>.
- Jansen, K. 2014. “The Debate on Food Sovereignty Theory: Agrarian Capitalism, Dispossession and Agroecology.” *Journal of Peasant Studies* 42, no. 1: 213–232. <https://doi.org/10.1080/03066150.2014.945166>.
- Jarosz, L. 2014. “Comparing Food Security and Food Sovereignty Discourses.” *Dialogues in Human Geography* 4, no. 2: 168–181. <https://doi.org/10.1177/2043820614537161>.
- Kadfak, A. 2024. “The Labor Governance Frontier in Fisheries: A Critical Review and Future Outlook.” *Society & Natural Resources* 37, no. 12: 1710–1721. <https://doi.org/10.1080/08941920.2024.2411689>.
- Kass, H. 2023. “Food Anarchy and the State Monopoly on Hunger.” *Journal of Peasant Studies* 50, no. 3: 1187–1206. <https://doi.org/10.1080/03066150.2022.2101099>.
- Katikiro, R. E., and J. Mahenge. 2022. “Small Pelagic Marine Fisheries for Food Sovereignty? The Case of the Dagua Fishery at Three Coastal Sites in Tanzania.” *Western Indian Ocean Journal of Marine Science* 1/2022: 119–134. <https://doi.org/10.4314/wiojms.vii/2022.9>.
- Kleiber, D., L. M. Harris, and A. C. J. Vincent. 2015. “Gender and Small-Scale Fisheries: A Case for Counting Women and Beyond.” *Fish and Fisheries* 16, no. 4: 547–562. <https://doi.org/10.1111/faf.12075>.
- Knott, C., and B. Neis. 2017. “Privatization, Financialization and Ocean Grabbing in New Brunswick Herring Fisheries and Salmon Aquaculture.” *Marine Policy* 80: 10–18. <https://doi.org/10.1016/j.marpol.2016.10.022>.
- KNTI and WFP International Secretariat. 2017. *Agroecology and Food Sovereignty in Small-Scale Fisheries*. International Secretariat of the World Forum of Fisher Peoples (WFPF) Accessed 25 January 2025. https://worldfishers.org/wp-content/uploads/2017/09/WFPF.Food_Sov_web_.pdf.
- La Via Campesina. 1996. *The Right to Produce and Access to Land*. La via Campesina Accessed 28 January 2025. <https://safsc.org.za/wp-content/uploads/2015/09/1996-Declaration-of-Food-Sovereignty.pdf>.
- La Via Campesina. 2021. *La via Campesina: The Global Voice of Peasants!* La Via Campesina Accessed 5 July 2023. <https://viacampesina.org/en/wp-content/uploads/sites/2/2021/12/LVC-EN-Brochure-2021-03F.pdf>.
- Levkoe, C., K. Lowitt, and C. Nelson. 2017. ““Fish as Food”: Exploring a Food Sovereignty Approach to Small-Scale Fisheries.” *Marine Policy* 80: 65–70. <https://doi.org/10.1016/j.marpol.2017.08.018>.
- Li, T. M. 2015. “Can There Be Food Sovereignty Here?” *Journal of Peasant Studies* 42, no. 1: 205–211. <https://doi.org/10.1080/03066150.2014.938058>.
- Longo, S. B., R. Clausen, and B. Clark. 2015. *The Tragedy of the Commodity: Oceans, Fisheries, and Aquaculture*. Rutgers University Press.
- Loring, P. A., D. V. Fazzino II, M. Agapito, R. Chuenpagdee, G. Gannon, and M. Isaacs. 2019. “Fish and Food Security in Small-Scale Fisheries.” In *Transdisciplinarity for Small-Scale Fisheries Governance: Analysis and Practice*, edited by R. Chuenpagdee and S. Jentoft, 55–73. Springer International Publishing. https://doi.org/10.1007/978-3-319-94938-3_4.
- Lowitt, K., C. Z. Levkoe, and C. Nelson. 2020. “Where Are the Fish? Using a “Fish as Food” Framework to Explore the Thunder Bay Area Fisheries.” *Northern Review* 49: 39–65. <https://doi.org/10.22584/nr49.2019.008>.
- MacRae, G. 2016. “Food Sovereignty and the Anthropology of Food: Ethnographic Approaches to Policy and Practice.” *Anthropological Forum* 26, no. 3: 227–232. <https://doi.org/10.1080/00664677.2016.1201456>.
- Maire, E., N. A. J. Graham, M. A. MacNeil, et al. 2021. “Micronutrient Supply From Global Marine Fisheries Under Climate Change and Overfishing.” *Current Biology* 31, no. 18: 4132–4138.e3. <https://doi.org/10.1016/j.cub.2021.06.067>.
- Mallin, F., and M. Barbesgaard. 2020. “Awash With Contradiction: Capital, Ocean Space and the Logics of the Blue Economy Paradigm.” *Geoforum* 113: 121–132. <https://doi.org/10.1016/j.geoforum.2020.04.021>.
- Mansfield, B. 2004. “Neoliberalism in the Oceans: “Rationalization,” Property Rights, and the Commons Question.” *Geoforum* 35, no. 3: 313–326. <https://doi.org/10.1016/j.geoforum.2003.05.002>.
- Mansfield, B. 2010. “‘Moder’ Industrial Fisheries and the Crisis of Overfishing.” In *Global Political Ecology*. Routledge.
- 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: 146–167. <https://doi.org/10.1332/27523349Y2023D000000003>.
- Marx, K. 2000. *Capital, Volume I*. Electric Book Company Accessed 5 July 2021. <http://ebookcentral.proquest.com/lib/lancaster/detail.action?docID=3008518>.
- Maye, D., and J. Kirwan. 2013. “Food Security: A Fractured Consensus.” *Journal of Rural Studies* 29: 1–6. <https://doi.org/10.1016/j.jrurstud.2012.12.001>.
- McClanahan, T., E. H. Allison, and J. E. Cinner. 2015. “Managing Fisheries for Human and Food Security.” *Fish and Fisheries* 16, no. 1: 78–103. <https://doi.org/10.1111/faf.12045>.
- McMichael, P. 2009. “A Food Regime Analysis of the “World Food Crisis”.” *Agriculture and Human Values* 26, no. 4: 281–295. <https://doi.org/10.1007/s10460-009-9218-5>.
- McMichael, P. 2014. “Historicizing Food Sovereignty.” *Journal of Peasant Studies* 41, no. 6: 933–957. <https://doi.org/10.1080/03066150.2013.876999>.
- Mills, E. N. 2018. “Implicating “Fisheries Justice” Movements in Food and Climate Politics.” *Third World Quarterly* 39, no. 7: 1270–1289. <https://doi.org/10.1080/01436597.2017.1416288>.
- Mintz, S. W., and C. M. D. Bois. 2002. “The Anthropology of Food and Eating.” *Annual Review of Anthropology* 31: 99–119. <https://www.jstor.org/stable/4132873>.
- Moore, J. 2015. *Capitalism in the Web of Life: Ecology and the Accumulation of Capital*. Verso.
- Moreno-Maestro, S. 2023. “Autonomous Projects in the Face of the Global Fishing Market: Women Fish Processors in Senegal in a Context of Climate Emergency.” *Review of African Political Economy* 50: 388–401. <https://doi.org/10.1080/03056244.2023.2293607>.
- Naylor, R. L., R. W. Hardy, A. H. Buschmann, et al. 2021. “A 20-Year Retrospective Review of Global Aquaculture.” *Nature* 591, no. 7851: 551–563. <https://doi.org/10.1038/s41586-021-03308-6>.
- Nicolini, G., A. Bladon, J. Clarke, A. Ducros, and A. Guarin. 2024. *The Role of Seafood in UK Food Systems Transformation*. International Institute for Environment and Development.

- Omukoto, J. O., N. A. J. Graham, and C. C. Hicks. 2024. "Fish Contributions Toward Nutritional Security in Kenya." *Food Security* 16, no. 4: 951–971. <https://doi.org/10.1007/s12571-024-01459-8>.
- Onyango, P. O. 2011. "Occupation of Last Resort? Small-Scale Fishing in Lake Victoria, Tanzania." In *Poverty Mosaics: Realities and Prospects in Small-Scale Fisheries*, edited by S. Jentoft and A. Eide, 97–124. Springer Netherlands. https://doi.org/10.1007/978-94-007-1582-0_6.
- Österblom, H., J.-B. Jouffray, C. Folke, and J. Rockström. 2015. "Transnational Corporations as "Keystone Actors" in Marine Ecosystems." *PLoS One* 10, no. 5: e0127533. <https://doi.org/10.1371/journal.pone.0127533>.
- Otero, G. 2012. "The Neoliberal Food Regime in Latin America: State, Agribusiness Transnational Corporations and Biotechnology." *Canadian Journal of Development Studies = Revue Canadienne D'études du Développement* 33, no. 3: 282–294. <https://doi.org/10.1080/02255189.2012.711747>.
- Ouma, S., M. Boeckler, and P. Lindner. 2013. "Extending the Margins of Marketization: Frontier Regions and the Making of Agro-Export Markets in Northern Ghana." *Geoforum* 48: 225–235. <https://doi.org/10.1016/j.geoforum.2012.01.011>.
- Overå, R. 2011. "Modernisation Narratives and Small-Scale Fisheries in Ghana and Zambia." *Forum for Development Studies* 38, no. 3: 321–343. <https://doi.org/10.1080/08039410.2011.596569>.
- Overå, R., A. Atter, S. Amponsah, and M. Kjellevoid. 2022. "Market Women's Skills, Constraints, and Agency in Supplying Affordable, Safe, and High-Quality Fish in Ghana." *Maritime Studies* 21, no. 4: 485–500. <https://doi.org/10.1007/s40152-022-00279-w>.
- Patel, R. 2009. "Food sovereignty." *Journal of Peasant Studies* 36, no. 3: 663–706.
- Patel, R. 2010. "Mozambique's Food Riots – The True Face of Global Warming." *The Observer*, 4 September. Accessed January 28, 2025. <https://www.theguardian.com/commentisfree/2010/sep/05/mozambique-food-riots-patel>.
- Patel, R. C. 2012. "Food Sovereignty: Power, Gender, and the Right to Food." *PLoS Medicine* 9, no. 6: e1001223. <https://doi.org/10.1371/journal.pmed.1001223>.
- Pauly, D., R. Watson, and J. Alder. 2005. "Global Trends in World Fisheries: Impacts on Marine Ecosystems and Food Security." *Philosophical Transactions of the Royal Society, B: Biological Sciences* 360, no. 1453: 5–12. <https://doi.org/10.1098/rstb.2004.1574>.
- Peck, J. 2012. "Economic Geography: Island Life." *Dialogues in Human Geography* 2, no. 2: 113–133. <https://doi.org/10.1177/2043820612443779>.
- Ponte, S., and T. Sturgeon. 2015. "Explaining Governance in Global Value Chains: A Modular Theory-Building Effort." In *Global Value Chains and Global Production Networks*. Routledge.
- Poulantzas, N. A. 2000. *State, Power, Socialism*. Verso (Verso Classics).
- Quimby, B., A. D. Roque, E. K. I. Nèbié, et al. 2023. "Blue Food Sovereignty Benefits Social-Ecological Resilience: A Case Study of Small-Scale Fisheries co-Management and Mariculture in Samoa." *Human Ecology* 51, no. 2: 279–289. <https://doi.org/10.1007/s10745-023-00401-4>.
- Richter, F. 2022. *This Chart Shows Which Countries Consume the Most or Least Fish*. World Economic Forum Accessed January 28, 2025. <https://www.weforum.org/stories/2022/11/chart-shows-countries-consume-fish-food-security/>.
- Robinson, J. P., and J. Fernandes. 2025. "The Hidden Role of Market-Making in the Rise of Farmed Salmon." *Environmental Research Letters* 20, no. 8: 084061. <https://doi.org/10.1088/1748-9326/adec05>.
- Robinson, J. P. W., K. L. Nash, J. L. Blanchard, et al. 2022. "Managing Fisheries for Maximum Nutrient Yield." *Fish and Fisheries* 23, no. 4: 800–811. <https://doi.org/10.1111/faf.12649>.
- Rosin, C. 2013. "Food Security and the Justification of Productivism in New Zealand." *Journal of Rural Studies* 29: 50–58. <https://doi.org/10.1016/j.jrurstud.2012.01.015>.
- Schuhbauer, A., R. Newton, W. Malcorps, et al. 2020. "The Global Fisheries Subsidies Divide Between Small- and Large-Scale Fisheries." *Frontiers in Marine Science* 7: 539. <https://doi.org/10.3389/fmars.2020.539214>.
- Sethi, S. A., T. A. Branch, and R. Watson. 2010. "Global Fishery Development Patterns Are Driven by Profit but Not Trophic Level." *Proceedings of the National Academy of Sciences* 107, no. 27: 12163–12167. <https://doi.org/10.1073/pnas.1003236107>.
- Silver, J. J., D. K. Okamoto, D. Armitage, et al. 2022. "Fish, People, and Systems of Power: Understanding and Disrupting Feedback Between Colonialism and Fisheries Science." *American Naturalist* 200, no. 1: 168–180. <https://doi.org/10.1086/720152>.
- Silver, J. J., and J. S. Stoll. 2022. "A Framework for Investigating Commercial License and Quota Holdings in an Era of Fisheries Consolidation, Concentration and Financialization." *Marine Policy* 143: 105179. <https://doi.org/10.1016/j.marpol.2022.105179>.
- Simmance, F. A., P. J. Cohen, C. Huchery, et al. 2022. "Nudging Fisheries and Aquaculture Research Towards Food Systems." *Fish and Fisheries* 23, no. 1: 34–53. <https://doi.org/10.1111/faf.12597>.
- Skerritt, D. J., and U. R. Sumaila. 2021. "Assessing the Spatial Burden of Harmful Fisheries Subsidies." *Zenodo*. <https://doi.org/10.5281/ZENODO.5009060>.
- Smith, H., and X. Basurto. 2019. "Defining Small-Scale Fisheries and Examining the Role of Science in Shaping Perceptions of Who and What Counts: A Systematic Review." *Frontiers in Marine Science* 6: 236. <https://doi.org/10.3389/fmars.2019.00236>.
- Standen, S. 2025a. "Marine Degradation and Market Dependency in Ghana: Food Sovereignty as a Critique of Capital in Aquatic Food Systems." *Journal of Agrarian Change* 25, no. 3: e70013. <https://doi.org/10.1111/joac.70013>.
- Standen, S. 2025b. "Developing the Market, Developing the Fishery? Post-Harvest Associations in the Making of the Fish Market in Ghana." *Marine Policy* 172: 106536. <https://doi.org/10.1016/j.marpol.2024.106536>.
- Steinberg, P. E. 2001. *The Social Construction of the Ocean*. Cambridge University Press.
- Stoll, J. S., B. A. Dubik, and L. M. Campbell. 2015. "Local Seafood: Rethinking the Direct Marketing Paradigm." *Ecology and Society* 20, no. 2: art40. <https://www.jstor.org/stable/26270202>.
- Sukhera, J. 2022. "Narrative Reviews: Flexible, Rigorous, and Practical." *Journal of Graduate Medical Education* 14, no. 4: 414–417. <https://doi.org/10.4300/jgme-d-22-00480.1>.
- Sulanke, E., and S. Rybicki. 2021. "Community Development Quotas and Support of Small-Scale Fisheries as Two Key Concepts for Blue Growth in Fisheries." *Frontiers in Marine Science* 8: 752764. <https://doi.org/10.3389/fmars.2021.752764>.
- Termine, P. 2024. "Ensuring Food Security: Why Agency and Sustainability Matter." HLPE – High Level Panel of Experts. Accessed January 26, 2025. <https://www.fao.org/cfs/cfs-hlpe/insights/news-insights/news-detail/ensuring-food-security--why-agency-and-sustainability-matter/en>.
- Tezzo, X., S. R. Bush, P. Oosterveer, and B. Belton. 2021. "Food System Perspective on Fisheries and Aquaculture Development in Asia." *Agriculture and Human Values* 38, no. 1: 73–90. <https://doi.org/10.1007/s10460-020-10037-5>.
- Thilsted, S. H., A. Thorne-Lyman, P. Webb, et al. 2016. "Sustaining Healthy Diets: The Role of Capture Fisheries and Aquaculture for Improving Nutrition in the Post-2015 Era." *Food Policy* 61: 126–131. <https://doi.org/10.1016/j.foodpol.2016.02.005>.

- Tilzey, M. 2024. "Food Democracy as Radical Political Agroecology: Securing Autonomy (Alterity) by Subverting the State-Capital Nexus." *Frontiers in Sustainable Food Systems* 8: 1044999. <https://doi.org/10.3389/fsufs.2024.1044999>.
- Todd, Z. 2017. "Fish, Kin and Hope: Tending to Water Violations in amiskwaciwāskahikan and Treaty Six Territory." *Afterall: A Journal of Art, Context and Enquiry* 43: 102–107. <https://doi.org/10.1086/692559>.
- van der Ploeg, J. D. 2013. *Peasants and the Art of Farming: A Chayanovian Manifesto*. Fernwood. Accessed October 18, 2024. <https://library.wur.nl/WebQuery/wurpubs/441695>.
- Virdin, J., X. Basurto, G. Nico, et al. 2023. "Fishing for Subsistence Constitutes a Livelihood Safety Net for Populations Dependent on Aquatic Foods Around the World." *Nature Food* 4, no. 10: 874–885. <https://doi.org/10.1038/s43016-023-00844-4>.
- Vivero-Pol, J. L. 2017. "Food as Commons or Commodity? Exploring the Links Between Normative Valuations and Agency in Food Transition." *Sustainability* 9, no. 3: 442. <https://doi.org/10.3390/su9030442>.
- Vogel, L. 2017. "Foreword." In *Social Reproduction Theory. Remapping Class, Recentring Oppression*. Pluto Press.
- Webb, P., J. Coates, E. A. Frongillo, B. L. Rogers, A. Swindale, and P. Bilinsky. 2006. "Measuring Household Food Insecurity: Why It's So Important and Yet So Difficult to Do." *Journal of Nutrition* 136, no. 5: 1404S–1408S. <https://doi.org/10.1093/jn/136.5.1404S>.
- Willer, D. F., R. Newton, W. Malcorps, et al. 2024. "Wild Fish Consumption Can Balance Nutrient Retention in Farmed Fish." *Nature Food* 5: 1–9. <https://doi.org/10.1038/s43016-024-00932-z>.
- Williams, M. 2019. "Expanding the Horizons: Connecting Gender and Fisheries to the Political Economy." *Maritime Studies* 18, no. 3: 399–407. <https://doi.org/10.1007/s40152-019-00149-y>.
- World Food Programme. 2025. "The future of food systems in the Amazon." Accessed May 26, 2025. <https://www.wfp.org/publications/future-food-systems-amazon>.
- Yea, S., and C. Stringer. 2023. "The Informalisation of Precarious Work in Fishing Crew: Experiences of Fijian Fishers on Distant Water Vessels." *Marine Policy* 155: 105709. <https://doi.org/10.1016/j.marpol.2023.105709>.