Research Square

Preprints are preliminary reports that have not undergone peer review. They should not be considered conclusive, used to inform clinical practice, or referenced by the media as validated information.

Marine Protected Areas, Conservation Dispossession and Slow Violence in Blue Economy Governance in the Indian Ocean

Bosudha Bandyopadhyay
Amity University

Shivangi Sharma
sharma.shivangi.mf3@bsmu.edu.ua

Shivangi Sharma, Research Scholar Bukovinian State Medical University

Research Article

Keywords: Marine Protected Areas, the Blue Economy, Slow Violence, Conservation dispossession, Seascape justice, Indian Ocean, Feminist political ecology, Artisanal fisheries, Blue humanities

Posted Date: September 9th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10466617/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License. Read Full License

Additional Declarations: No competing interests reported.

Abstract

In the twenty first century Marine Protected Areas (MPAs) have emerged as the keystone tool of global ocean governance and has come to be seen as a way to reconcile the conservation of biodiversity and the pursuit of sustainable economic development, within a larger framework known as the Blue Economy. This paper suggests that behind this rhetoric lies a more disturbing reality-that MPA governance in the Indian Ocean littoral regularly trades off the conservation of marine biodiversity in favour of the livelihoods, territorial rights, and ecological knowledge of the artisanal fishing communities whose labour, knowledge and stewardship have historically made these seascapes thrive. The paper extends the concept of conservation dispossession, which is inspired by Rob Nixon's slow violence framework, Stacy Alaimo's blue humanities and Arlie Hochschild's second shift thesis to marine labour and is developed across three case studies: MPA governance in the Maldives, the displacement of small-scale fisheries in Sri Lanka's Gulf of Mannar Marine National Park, and the overlapping spaces of marine conservation and tourism capital in Seychelles. The paper also concludes that conservation dispossession is systematically gendered, with the feminised labour of coastal processes like processing, drying, marketing and reproductive tasks are invisible in the Blue Economy paradigm, and economic benefits of marine conservation is attributed to male-coded sectors of tourism, sport fishing and blue carbon finance. Finally, the paper suggests seascape justice as a conceptual and political tool to assess MPA governance as viewed from the point of view of the communities' relationship to the sea that enables conservation.

1. Introduction: The Ocean as Frontier

The early twenty-first century has seen the global ocean emerge as a new frontier of capital, where exhaustion of land resources, spread of digital monitoring technologies and the converging influence of international conservation governance have produced what can be called the 'blue turn'[1]. The *Blue Turn* is basically an accumulation of the systematic extension of commodity relations, property rights, and market logics into marine and coastal environments that were previously organised around common use, customary governance, and the subsistence practices of coastal communities[2]. The *blue turn* as a concept was developed by the Small Island Developing States in the late 2000s, followed by its adoption by the World Bank, the United Nations and the major conservation NGOs as the paradigm framework for ocean governance. It promises to reconcile the conservation of marine biodiversity with the generation of sustainable economic growth, and positions MPAs, ecotourism, blue carbon markets and sustainable aquaculture as the tools through which this reconciliation will be realised[3]. This paper is a critique of this promise. It suggests that the Blue Economy, as it is being implemented in the Indian Ocean region, is not an engine for balancing conservation and development, but rather an approach which serves the interests of accumulation of capital in the form of accumulation of interest for the tourism industry, the international conservation NGO network, and the developing blue carbon market[4]. In the Blue Economy paradigm, the communities that have historically depended on the labour, knowledge, and ownership of the marine systems in the Indian Ocean are not identified as key stakeholders, but rather as barriers to

overcome, populations to relocate, or beneficiaries of livelihoods development initiatives. Artisanal fishing communities of the Maldives, small-scale fishing communities of the Gulf of Mannar in Sri Lanka, and the coastal communities of the Seychelles, are not considered as key stakeholders involved in the process of ocean governance, but rather as issues to be managed, populations to be displaced, or beneficiaries of livelihoods development programmes[5]. This paper attempts three theoretical gestures in support of this argument. The first is an elaboration of the concept of conservation dispossession, which draws on David Harvey's work on the accumulation by dispossession, and adds a specificity to it for the mechanism by which customary fishing rights and common seascape tenures are erased by MPA governance[6]. The first is an elaboration of the concept of conservation dispossession, which builds on David Harvey's work on the accumulation by dispossession, and a specificity to it for the mechanism by which customary fishing rights and common seascape tenures are erased by MPA governance[7]. The second is the use of Rob Nixon's slow violence theory to the temporality of conservation dispossession, which is a slow violence that is mediated by law, bureaucratically produced, and hidden from the public sphere of conservation media attention and the episodic nature of policy review. The third is a feminist political ecology critique of the gendered aspects of conservation dispossession, highlighting the feminised nature of the labour inherent in coastal economies, which is excluded from the study of the Blue Economy by the system[8]. The third is a feminist political ecology critique of the gendered aspects of conservation dispossession, drawing attention to the feminised nature of the labour inherent in coastal economies that is left out of the study of the Blue Economy by the system[9].

2.Theoretical Framework: Slow Violence, Blue Accumulation and the Gendered Seascape

2.1 Slow Violence and the Temporal Politics of Conservation Dispossession

This article draws on the theoretical resource of Rob Nixon's *Slow Violence and the Environmentalism of the Poor* (2011)[10] for the analysis of MPA governance. Slow violence is "a violence that occurs over a long time, in the background, a violence of attrition and exasperation, a violence that is neither spectacular nor instantaneous, but is attritional and exasperational, often not even recognised as violence," says Nixon[11]. This is the temporal dimension of the gradualness, the dispersion, the invisibility, that is what is common to conservation dispossession. Displacement of artisanal fishing communities out of marine areas that are designated as MPAs does not typically occur as a single, dramatic event which may be concentrated in space, but rather over a period of

years or decades, by the progressive narrowing of fishing areas, by the failure to renew traditional fishing licences, by criminalisation of previously customary activities, and by the gradual erosion of the community institutions by which common use of the seasccape was once managed. When he extrapolates his argument from the literary to the social science realm, it is in the name of making slow violence visible, through literature, and other forms of narration, and that this is not a natural process, but

a political production[12]. The representational function that the case studies in this paper attempt to fulfil are not only to represent the outcomes of MPA governance, but to represent how those outcomes are realised, maintained and hidden from view in the dominant narratives of the Blue Economy[13]. Nixon's framework, however, is quite in need of a great deal of extension for the marine context. His slow violence analysis relies mainly on case studies from the ground, such as deforestation, toxic contamination, river pollution, and his sense of community-place-environment relationships is based around a land-based idea of place and dwelling. The marine environment has different spatial and temporal connections between communities and ecosystems where the ocean is not owned but utilised, not bounded but traversed, not stationary but dynamically responsive to the effects of the tidal, seasonal and climatic cycles that extend beyond any fixed territorial unit. Delivering the same type of relationship between community and environment to the marine world demands a more malleable understanding of the relation between the two that the Blue Humanities tradition, as elaborated in the following subsection, can uniquely offer[14].

2.2 Blue Humanities and Theorising Marine Space

Blue Humanities provides a conceptual vocabulary specific to the ocean. It is an interdisciplinary approach that emerged from the acknowledgment that the ocean has been epistemically marginalised in the interests of the terrestrial, continental and land-based assumptions. Steve Mentz argues in his book Ocean (2020)[15] that rather than being an unmarked space between land masses, the ocean is "a dynamic, multiscalar, and politically active environment", which has its own agency, temporality and ecological import. The notion of the ocean as a dynamic space, rather than a passive container, has important implications for the theorisation of MPA governance because the idea of enclosing marine space within fixed MPA boundaries is not just a technical conservation action, but a significant ontological intervention. The terrestrial concepts and ideas of territory, boundary, and property are applied to an environment that does not accept them. Stacy Alaimo's notion of transcorporeality, as developed in *Bodily Natures: Science, Environment, and the Material Self* (2010)[16] and extended to the marine realm in *Exposed: Environmental Politics and Pleasures in Posthuman Times* (2016)[10], is a additional theoretical resource. Alaimo's position is that the human body is neither a closed nor an isolated system, but rather is built through its material entanglements with a more-than-human world, one that is embodied in food, water, air, toxins, and the organisms it inhabits, which circulate through and through it, making the possibility of a clear distinction between human and non-human impossible. Specifically in the marine context, this entanglement is embodied in the most literal sense[17]. For example the fisherfolk, whose lives are dependent on the ocean, are constituted by the ocean, their bodies nourished by the ocean, their rhythms shaped by the tidal and seasonal cycles of the ocean, their identities shaped by their embodied experiences in the ocean's very particular ecological communities. Conservation dispossession is not just an economic loss; it is a corporeal loss, a cutting off from the transcorporeal embeddings in which coastal communities are formed as the human communities they are[18]. The political aspects of this theory are best highlighted in the work of Frantz Fanon, who discusses the colonial space in *The Wretched of the Earth* (1961). This terrestrial analysis of colonial

dispossession, as this paper argues, needs to be extended to the marine realm[19]. The idea that colonial space is organised by systematically excluding colonised communities from the spaces and resources that colonial power considers valuable is directly applicable to the governance of MPA in the postcolonial Indian Ocean[20]. The spaces and resources that have historically been used, managed and depended upon by the artisanal fishing communities are being enclosed, in the name of conservation, by a governance apparatus whose institutional actors, funding flows, and conceptual frameworks largely originate from the colonial conservation tradition of which Roderick Neumann, William Adams and others in the political ecology tradition have documented so much[21].

2.3 Accumulation by Dispossession and the Blue Economy

David Harvey's theory of accumulation by dispossession is developed in The New Imperialism (2003)[22] and subsequently expanded in his work, in which he explains how pre-existing forms of common property, public goods, and collective social organisation are transformed into privately appropriable assets by legal, bureaucratic and coercive techniques. While Harvey's main examples relate to the terrestrial commons, the logic he outlines also applies to the marine commons. In political ecology terms, promoting an MPA is an act of enclosure – a transformation of a common seascape from customary governance to a zone administered by a state or an NGO, during which the customarily managed community is partially, if not completely, excluded. This paper suggests that the Blue Economy paradigm is an articulation of accumulation by dispossession in the marine realm; this we term as blue accumulation. There are 3 main ways that blue accumulates. First, territorial enclosure: that which involves transforming common fishing areas into MPAs, no-take zones and tourism concession zones from which artisanal fishing is prohibited or limited. The second is knowledge dispossession: the removal of the knowledge of the local, artisanal fishers and fishermen, and the replacement of this knowledge by the scientific and technical knowledge of conservation biology, which then informs and validates governance decisions that benefit the interests of the tourist industry and the conservation NGO complex over the interests of coastal communities. The third is labour substitution: the replacement of place-based, ecologically calibrated, embedded labour of artisanal fishing communities with the forms of labour that are valorised by the Blue Economy: tourism employment, marine park management and blue carbon monitoring – forms of labour that are generally less secure, less remunerative, and more capital-dependent than the fishing labour they supplant[23].

2.4 Feminist Political Ecology and the Gendered Blue Economy

The feminist political ecology tradition, which ranges from the edited volume *Feminist Political Ecology* (1996) by Dianne Rocheleau, Barbara Thomas-Slayter and Esther Wangari through to *Beyond Mothering Earth* (2006)[24] by Sherilyn MacGregor and the more recent work of Giovanna Di Chiro, the one thing that is persistent is the assertion that the political ecology of resource governance is always a political ecology of gender. This feminist perspective is much needed for governance of MPAs in the Indian Ocean. Artisanal fishing economies of the Maldives, Sri Lanka and Seychelles are both highly gendered

and heavily segregated in terms of their division of labour where men are central to fishing and diving, while women are central to cleaning, drying, salting and smoking (and to marketing) the fish, and to reproductive labour (child care, cooking, household management). In the Blue Economy paradigm, harvesting of marine resources is the focus, reproductive labour and processing is treated as outside the scope of ocean governance, because it is not quantified and it is located in a specific space or subject to exclusion. The result is that as far as the practical effect of the invisibility goes, conservation dispossession affects women more harshly, in more ways and less politically in the open than it effects men. At the very least, the effect of MPA designation on men's fishing activity is evident in the formal economy, with changes to fish catch statistics, fishing licences revoked, livelihood diversification plans set up and implemented. By contrast, the impact on women's processing and marketing labour is invisible – it gets no attention in the environmental impact assessments that accompany designation as an MPA, in fact it is not recorded in the livelihood impact data collected by conservation NGOs, or it is not discussed in livelihoods programmes, which are the norm when addressing fishing community displacement[25]. Women just lose the work — and it doesn't show on any official record of conservation's costs. The idea of the "second shift" (the paid work coupled with domestic "reproductive work" which women in dual income households perform) needs to be extended and adapted for the context of the coast. as discussed. For artisanal fishing economies, the concept of interest is the "coastal triple shift" that the women of artisanal fishing communities often perform, things like, post-harvest processing labour, marketing and trading labour, and domestic productive labour. Conservation dispossession is an attack on all three shifts at once because it erodes the post-harvest labour, erodes the marketing labour, and makes reproductive labour more difficult because of the economic stress, food insecurity and community conflict which is typical of MPA-related displacement, without any corresponding compensation for the extra reproductive labour such stresses involve[26].

3. Actors, flows and frameworks in the governance of MPA in the Indian Ocean

To comprehend conservation dispossession in the Indian Ocean one must grasp the political economy of the institutions, financial flows, and governance processes that generate the designation and management of MPAs. This is a political economy that is complex, multi-scalar, and where the artisanal fishing community is systematically underrepresented in the interests of conservation NGOs, tourism capital, and state bureaucracies[27]. The institutional architecture of Indian Ocean MPA governance is centred at the international level, with a series of overlapping frameworks:-

a. Convention on Biological Diversity (CBD), which has a 30×30 target, where by 2030, 30 percent of the world's oceans are to be under protection

b. the UN Sustainable Development Goals, more specifically SDG14 (Life Below Water) setting the target to extend MPA coverage

c. the IUCN World Commission on Protected Areas that provides the technical standards and expert authority that legitimate MPA designation on the international scale.

These frameworks establish strong incentives with the backing of international funding, debt relief and international prestige, especially for small island developing states (SIDS) for national governments to increase MPA coverage even if the social outcomes are negative[28]. MPA governance at the national and sub-national level is usually shaped by a mix of state conservation agencies, international conservation NGOs (The Nature Conservancy, Conservation International, and the World Wildlife Fund) and the tourism sector, which has an interest in the conservation of healthy reef ecosystems as the foundation for its business models, often not recognized in public discourse on the governance of the Blue Economy[29]. The governance architecture of a majority of the Indian Ocean MPAs is extremely weak in the representation of the artisanal fishing communities most closely impacted by designation[30]. These communities are either not represented at all or are only provided for in governance structures lacking effective veto power over conservation decisions made that impact their rights and livelihoods. Over the last few years, the financial structure of Indian Ocean MPA governance has picked up significant changes because of the onset of the blue carbon market. It is a system of valuation for coastal and marine ecosystems (mangroves, seagrasses, kelp forests) as carbon sinks that can be protected by the sale of carbon offset credits on international voluntary carbon markets. In theory, blue carbon finance is a good option for the sustainable financing of MPA management since it is an income source that doesn't rely on tourists or fishing fees[31]. However, the blue carbon market in practice is a reincarnation of the governance structure of the conservation dispossession of the past. The communities whose traditional management practices have historically maintained the value of the mangrove and seagrass ecosystems receive little or no part of the carbon revenues that their custodianship makes possible, while the financial benefits accrue to the state agencies, NGOs, and carbon market intermediaries who control the carbon certification and trading infrastructure[32].

4. Case Study I — The Maldives: Tourism Enclosure and the Displacement of Subsistence Fishing

4.1 Historical Formation: From Atoll Commons to Resort Archipelago

This section explores how the Atoll Commons transformed into a Resort Archipelago.

The severity of the blue buildup in modern Maldives can be fully grasped by retracing the historical shift in Maldivian marine tenure over the past 50 years or so. Until the 1970s, the reef and lagoon resources of the Maldivian archipelago were regulated under a highly intricate, island-specific customary system of claims:- each inhabited island's community had rights to the reef flat and lagoon land surrounding it, and

fishing rights, anchorage rights and access to resources were negotiated at the island level via island-level councils (*katheeb* administration) and it was without the context of centralised legislation[33]. The pre-tourism economy of Maldivia was based on tuna fishing, which was conducted by a pole-and-line method that was based on close and generationally learned knowledge of the existing systems, the behaviour of baitfish and the seasonal migration of tuna that was intertwined with the customary tenure system that determined who was permitted to fish on specific reefs and channels[34].

The turning point in the development is conventionally set at 1972 when the first purpose-built tourist resort, Kurumba Village, opened on an uninhabited island near Malé at the start of the 1980s. That was an experiment in the margins and quickly turned into the development policy of the nation. Maldivian Tourism Act (1983)[35], followed by the tourism master plans (1996, 2007, 2013), formalized the concept of one island, one resort, where entire atolls and their associated reefs were allocated to exclusive resort developments on long leases with the government which continues to hold formal title to all reef and lagoon space as sovereign territory. This legal structure is an important part of the paper's argument[36]. The enclosure of Maldivian marine space for resort development did not involve the expropriation of legally recognized property rather it only involved the state's decision to lease "its own" submerged land to resort operators, thereby concealing in legal terms the customary claims on which the enclosure was actually based[37].

In the early 2020s, the Maldives had more than 160 resort islands, the vast majority of which used some kind of exclusive-use system where the surrounding reef and lagoon were effectively "owned" by the resort for the duration of the guest's stay, and fishing vessels could not access house-reefs except by formal boundaries or by informal security measures. Remarkably, since 2010, resort development has spread into previously unallocated atolls in the central and southern archipelago, leaving some 28 percent of the shallow reef area of the Maldives managed for tourism, or even tourism alone[38].

4.2 Addressing the convergence of conservation and tourism through architecture

The Maldivian case is more than just an interesting example, it shows quite dramatically how the two forms of capital-marine conservation and tourism are structurally intertwined rather than in competition. Resort operators have strong commercial incentives to safeguard 'their'house reefs, as the health of the reef is a vital asset on which the luxury diving/snorkelling tourism product relies upon, many resort operators fund their own reef monitoring, coral restoration and shark conservation programmes, and several resorts have been able to successfully lobby for formal MPA designation around their concession areas, which also protects the general good of the environment but at the same time strengthens the resorts' monopoly over the reef, vis-à-vis competing interests from the artisanal fishers[39].

This convergence is seen in the Hanifaru Bay Marine Protected Area (MPA) in Baa Atoll which was established in 2009 and subsequently became part of the UNESCO Biosphere Reserve of the Baa Atoll

(2011)[40]. The resort cluster around Hanifaru Bay draws dive tourism of high value to the bay because of the occurrence of one of the world's biggest seasonally occurring congregations of reef manta rays and whale sharks. Proclaimed in conservation science terms as having an exceptional megafauna value, MPA status was strongly advocated by resort operators who had a direct commercial interest in retaining undisturbed manta and whale shark populations for dive tourism, along with the official exclusion of local fishing communities of the Baa Atoll of the site from their fishing grounds. The designation process was extensive and included as many as possible resort operators and international conservation scientists, while also limiting the fishing communities of nearby inhabited islands (*Dharavandhoo and Kihaadhoo*)[41] that were using the margins of the bay for net fishing without compensation or formal recognition of the loss.

4.3 Gendered Displacement: The collapse of the Maldive fish economy

The gendered aspects of Maldivian conservation dispossession are clearly evident in the history of the Maldivian fish processing economy. *Hiki mas* is a boiled, smoked and sun-dried tuna product which has been a key export commodity in the Maldivian economy for centuries and has been noted in Chinese and Arab trade accounts since the medieval period. Until the late twentieth century, *hiki mas* processing was organized almost exclusively as women's work, where women controlled all the stages of boiling, smoking, and sun-drying, earned money from the sale of *hiki mas* locally, and possessed the expertise (generationally handed down)[42] of the curing process, the quality of fish, and the knowledge of the seasonal availability of tuna.

The raw tuna available for *hiki mas* processing in many island communities started to decrease significantly as a result of the progressive enclosure of reef and lagoon areas by the space of resort operations and as the space of the reef and lagoon areas in atolls next to resort development progressively closed access to the artisanal pole-and-line fishery. The remaining pole and line fisheries data indicates that the remaining tuna stocks are being concentrated in the southern and far northern atolls away from the central clusters of resorts, thus placing women's ability to process and sell their fish at a disadvantage even where they have access to pole and line fisheries, because of the peripheralisation of fishing-dependent atolls relative to the resort concentration[43].

The result is a gendered economic displacement which is not accounted for by any Maldivian tourism or fisheries statistic as part of the cost of tourism development. The significant increase in services GDP from tourism and the decrease in the share of fisheries sector in national income is an unequivocal measure of successful economic diversification. This blurring of the line between the real and the virtual obscures the concrete loss of women's livelihoods related to *hiki mas* harvesting, a loss that has occurred as marine governance in the resorts has increasingly restricted access to a raw material source, while the economic opportunities in the tourism industry have been disproportionately offered to male and foreign workers in the work sectors

(like diving teaching and water sports, hospitality) traditionally dominated by them[44].

4.4 Climate-Conservation Convergence and the Limits of the Resilience Narrative

The Maldivian case also provides an illustration of this paper's focus on 'climate-conservation convergence'. Climate-conservation convergence is defined as the capacity of the real and severe climate vulnerability of a low-lying atoll state (the average elevation is below 1.5 metres above sea level and is threatened by projected sea-level rise) and is required to be harnessed by climate-conservation and climate-friendly tourism governance to the benefit of accelerating enclosure processes that are likely to encounter greater political opposition[45]. The prevailing global story of Maldivian climate vulnerability, which was played up in the domestic discourse of the Maldivian "diplomatic agenda" (even the former president Mohamed Nasheed's successful international climate activism), has already been translated into the Maldives as a climate emergency requiring 'urgent and 'existential' resilience measures for the country's reefs and their surrounding biodiversity, which can only be effected through the process of a 'blue economy'.

To say that Maldivian climate vulnerability is genuine and severe is not an exaggeration, but it is to note that while these actors are producing the political urgency, the trade in artisanal fishing practices and the most climate-compatible economic activity in the archipelago is most strongly served by exclusionary and accelerating enclosure, and that the affordability of climate-resilience does not fall equally upon all of them. Yet, the carbon-intensive resort tourism sector is the one that has taken the brunt of the costs of marine spatial enclosure while the other is the pole and line fishing industry, has little bycatch and has historically developed over many centuries[46].

5. Case- Study-II- Sri Lanks's Gulf of Mannar- Marine National Park, Small Scale Fisheries and the Governance of exclusion

5.1 Ecological and Social Geography of the Gulf

The Gulf of Mannar Marine National Park (GMMNP)[47] is one of the oldest and most widely researched MPA's in South Asia, and one of the most documented examples of conservation dispossession in the Indian Ocean, covering an area of about 10,475 square kilometres of shallow coastal waters between Sri Lanka and India, designated in 1986. Within the Park, there are 21 islands, large areas of coral reefs, seagrass beds and mangrove forests that support incredible biodiversity, such as several species of endangered marine turtles, dugong and a global population of resident dolphins. Seagrass beds in the Gulf are among the largest in South Asia and form important dugong habitat, and have long been a focus for international investment in marine conservation, including the continuous assistance provided by the IUCN, the Global Environment Facility and a series of bilateral donor-supported biodiversity projects since the early 1990s[48].

The park also covers (or borders) the traditional fishing grounds of about 120,000 small-scale fisher folk, with predominantly Tamil and Muslim communities along the coastline of the Gulf in the districts of Mannar, Puttalam and part of Jaffna, as well as a significant fishing community in Sinhala. Fishing practice in the Gulf is typically varied and gear-heavy:- small-scale trawling, beach-seine netting, chank (sacred conch) diving and an internationally significant artisanal pearl and chank fishery where fishing operations are documented and continuous dating back more than two millennia which are mentioned in classical Tamil and Sinhala sources, as well as in colonial Portuguese, Dutch and British administrative records[49].

5.2 The Slow Violence of Administrative Restriction

The history of the Gulf of Mannar Marine National Park is a case study of all the possible forms of conservation dispossession, as described in Nixon's Slow Violence. The designation of the park under the Fauna and Flora Protection Ordinance (FfPO) 1986 has resulted in a complex and arbitrary structure of law and regulations that limits fishing in the core zones of the park, although the intensity of enforcement, the boundaries of the core zones, and the licensing requirements have been amended over a lengthy, poorly-documented period, and between overlapping and often conflicting jurisdictions of the Department of Wildlife Conservation, the Department of Fisheries and Aquatic Resources, and the Sri Lanka Navy, institutions which have presented their own source of confusion and arbitrary enforcement for fishing communities in the Gulf[50].

This incremental restriction never had been the subject of one comprehensive environmental and social impact assessment, which would have considered the impact of all its component parts together, on fishing livelihoods, but rather each individual, minor administrative decision, such as a no-fishing buffer zone around a turtle nesting beach here, a seasonal closure for dugong protection there, a naval security exclusion zone for an unrelated issue that just so happened to overlap with traditional beach-seine grounds -all of which had a cumulative spatial and economic impact on fishing communities that was never aggregated, measured, and compensated as a single policy outcome. It is the way in which nearly four decades of these seemingly non-spectacular, non-instantaneous, but "attritional and exponential" restrictions have resulted in a significant narrowing of the "spatial and temporal freedom" of the fishing communities living in the Gulf of Mannar[51].

5.3 Civil War, Militarised Water and the Post War Conservation-Security Convergence

The civil conflict in Sri Lanka (1983–2009) introduced an additional unique and adverse dimension to the fishing communities within the Gulf of Mannar, not found in many other Indian Ocean MPAs. In the High Security Zone, which was declared for much of the conflict to the Mannar and northern Puttalam coastline, where a significant portion of the fishing communities of the Gulf are centred, the Sri Lanka

Navy checkpoints, curfews on night fishing, and outright prohibition of fishing near the coastline of Jaffna occupied by the Tamil Tigers did not just overlap, but were often indistinguishable in practice, and enforced by the same naval and coast guard apparatus that was responsible for both security and conservation enforcement in the Gulf.

A significant amount of post-war research literature on Northern Province livelihoods (with studies under the Sri Lankan government's own post-war reconstruction monitoring programmes, as well as by international NGOs in the resettlement period following 2009) has been produced, but in a consistent pattern across all such studies, fishing communities report that it was not possible during the war and in the immediate aftermath of the conflict to tell who or for what purpose was excluding them from where naval security and wildlife conservation were reported as a single undifferentiated apparatus of exclusion from the sea, as were at various times the different local military authorities. This synthesis has had a long afterlife as the simultaneous, and often coordinated, extension of formal conservation governance (the expansion of the MPA zone, the establishment of biodiversity donor projects) and the development of tourism (the marketing of Mannar and the northern coastline as a new Dive and Eco-tourism destination) that followed the war has been described by several Sri Lankan and international researchers of the post-war coastal economy as a 'long-term alignment of state security, conservation, and tourism capital interests in the governance of the post-war depopulated coastline'.

5.4 Gendered Post-Harvest Collapse in Tamil and Muslim Fishing Communities

The Sri Lankan Case is of special interest in the context of a feminist political ecology analysis in this paper because of the ample documentation available, both from Sri Lankan university studies and Department of Fisheries socioeconomic surveys, and from NGOs livelihood assessments in the post-war reconstruction period, that has been gathered over the years on the role of women in the fishing economy in the Sri Lankan Gulf of Mannar. The post-harvest processing of the unique catch profile of the Gulf, such as drying and salting of small pelagic species, processing and marketing of dried fish (karuvadu), and cleaning, grading and trading of chank shells, from the historic chank-fishery in the Gulf, represents an occupation with a distinct set of gender-specific skills and activities, and a relatively gender-segregated work pattern, with the latter activity predominantly occupied by women in chank-fishing households over the last few generations.

This post-harvest economy has been gradually undermined in the Gulf of Mannar MPAs by two cascading effects of the progressive reduction in fishing in the MPAs. First, the general catch volume and diversity of fish species available to the beach-seine and small-scale net fisheries, the most heavily affected fishery type by core-zone no-fishing designations, has been diminished, which has reduced the raw material supply needed for women's processing/drying operations. Second, less documented, the disruptions of existing trading networks during and after the civil war have not been completely restored and women had less access to raw material, disrupted markets, and no formal recognition in the

conservation governance framework or in the state and international donor led livelihood reconstruction programmes that were designed around the assumption that the displaced “fisher” needing livelihood support was male and owned or crewed a fishing vessel, and needed assistance with boat-engine or net-replacement, as opposed to supporting processing infrastructure, market access or working capital for trading.

6. Case Study III – The Seychelles: Blue Carbon Finance, Debt-for-Nature Swaps and the Political Economy of Marine Conservation

6.1 The Architecture of the Seychelles Debt-for-Nature Swap

The Seychelles is the most theoretically revealing case for the analysis of the relationship of the Blue Economy to international financial capital. Seychelles also finalized the world’s first debt-for-nature swap designed to protect the oceans in 2015–2016 with The Nature Conservancy’s impact investment arm called NatureVest. The transaction was structured so that NatureVest, the philanthropy of its donor shareholders (including the Leonardo DiCaprio Foundation), and a commercial loan from a group of investors at The Nature Conservancy, acquired the debt on offer from the Seychelles at a discount compared to the face value and restructured its repayment to the Seychelles government, using the debt-service savings to support a new domestic trust, the Seychelles Conservation and Climate Adaptation Trust (SeyCCAT) to fund marine conservation and climate adaptation programming, including a commitment from the Seychelles government to increase MPA coverage to thirty percent of its EEZ[11].

The Seychelles Blue Bond, then marketed in October 2018 with guaranteed support from the World Bank and concessional co-financing from the IBRD/GEF, was the next financialization of this conservation commitment-a USD 15 million sovereign bond to be paid back in part via blended concessional financing that made it an appealing option for the private as well as development-finance investor. Both were widely discussed in publications by the World Bank, the UN Environment Programme and conservation NGOs and have inspired a large body of literature, with several countries, including Seychelles and Belize, Barbados, and Gabon, trying to replicate the Seychelles model for ocean conservation funding in the Global South.

6.2 Governance Architecture: Who Really Controls the Thirty Percent

While the debt-for-nature swap and Blue Bond were sold as a conservation instrument, a more critical reading of this financial innovation (the kind that this paper advocates) demands close attention to the governance architecture the debt-for-nature swap and Blue Bond actually created, rather than the conservation outcomes they are marketed for. The thirty percent EEZ protection commitment was

implemented with a 2018 marine spatial plan, which was developed with extensive technical input from The Nature Conservancy and an international scientific steering committee and divides Seychellois waters into high protection “no-take” areas, and lower protection “sustainable use” areas in which artisanal fishing, semi-industrial fishing and tourism activity are specified and permitted at varying rates[8].

The paper foregrounds the critical governance question that where does effective decision-making authority lie about this zoning and in relation to its future revision? SeyCCAT’s board and technical decision-making structure is a Seychellois domestic entity, but under two sets of requirements:

first, to report to an international bank of creditor-investors (servicing of the restructured debt continues to follow the terms set out in the swap)

and **second**, to meet reporting requirements on the World Bank’s concessional financing conditions attached to the Blue Bond, which require measurable, monitorable conservation outcomes (reef health metrics, MPA coverage percentages, species population indicators) more easily reported by strict no-take zoning than by zoning regimes primarily focused on the spatial and seasonal access demands of the artisanal pirogue fishing fleet.

6.3 The Artisanal Fleet and the Ambiguous nature of ‘Sustainable Use’

The Seychellois artisanal fishing sector, which has about 3,000 fisherfolk on traditional pirogue boats, is ill-defined in the governance framework created by the debt-for-nature swap and the Blue Bond, with the majority of these fisherfolk working mainly for their own consumption and selling their catch in local markets, which are concentrated on the Inner Islands of Mahé, Praslin, and La Digue. Artisanal fisheries are regularly referenced in the official documents that regulate Seychelles’ MPA system, through use of language that was prominent in the public-facing communications for both pieces of funding documentation, and has been central to their positive international reception as a blueprint of “people-centred” ocean finance[33].

The governance priorities embedded in the technical zoning process have been prioritized over the specific spatial, temporal and ecological requirements of small-scale pirogue fishing which has been overwhelmingly consumed domestically (as opposed to exported) and has contributed far less to measurable GDP and Foreign Exchange Earnings (FEE) in Seychelles than the other two sectors, namely tourism and industrial tuna fishing, which are mainly served by the smaller group of Seychellois fishing boats operating vast pirogue fishing sectors. In the public consultation submissions which have been recorded in the marine spatial planning process records, Seychellois fisher organisations have repeatedly voiced concern over the fact that the designation of ‘sustainable use’ zones has been interpreted more restrictively in relation to the different types of fishing gear used, than it has been for

commercial and tourism-related marine activities carried out within the same zone, as this paper makes clear that the governance of the Blue Economy is structurally biased in favour of the economically legible, exportable and internationally monitorable of activities over subsistence and domestic-market oriented artisanal activities[29].

6.4 Blue Carbon, Mangrove Enclosure, and the Limits of Ecosystem Service Valuation

The Seychelles case is also particularly instructive in regard to the role of the carbon market in MPA governance, especially when it comes to Seychelles' mangrove and seagrass blue carbon programming which is part of the Seychelles conservation finance portfolio of SeyCCAT. The blue carbon protocols by which mangrove and seagrass protection in Seychelles creates carbon credits on international voluntary markets impose rigorous rules of "additionality" and low human disturbance in blue carbon zones, and in coastal settings where mangroves and seagrasses are intermingled with traditional fish-trap and net-fishing grounds used by Inner Islands fishing communities. These protocols create access-restriction structures, and, in several of the documented cases in the mangrove systems in Seychelles there is a direct conflict with traditional fishing access, which has been practiced for generations before the carbon programming of these areas[31].

Through this narrow focus, the financial interests of the blue carbon market are put at odds with conservation governance approaches that do not include, but exclude, the contribution of coastal communities to their ecosystems, which is either absent or foregone in the very structure of the carbon market itself. Not because there was a deliberate decision to exclude fisheries, but simply because the technical logic of carbon accounting is based on the principle that carbon sequestration that doesn't happen naturally can only be best demonstrated by measurably reduced human activity within the carbon project boundary. This is one of the most explicit examples in the entire Indian Ocean of the logic of enclosure that blue carbon finance is hailed as an innovative and community-friendly way of doing things instead of the extractive logic of conservation dispossession, it is the seemingly innocent technical demands of international carbon accounting standards that make the enclosure happen[36].

7. Seascape Justice: Towards a Feminist Political Ecology of Ocean Governance

Seascape justice as the term suggets is a normative vision for ocean governance which recognizes the rights, knowledge, and stewardship of communities whose life and livelihoods depend on the ocean to sustain conservation. It is a product of explicit dialogue with the environmental justice tradition as theorised by Robert Bullard, Laura Pulido, and Elizabeth Yeampierre, the food sovereignty tradition as developed by La Via Campesina and extended to the marine context by scholars of small-scale fisheries such as Svein Jentoft and Ratana Chuenpagdee, and the feminist political ecology tradition of Rocheleau, MacGregor, and Di Chiro. There are five constitutive dimensions of seascape justice. The first

is **distributive justice**, or how well the costs and benefits of marine conservation are distributed. Seascape justice must be achieved by ensuring that communities that lose fishing rights and income, and the disruption of their lifestyles when MPAs are established, benefitted proportionately from the benefits generated by conservation, such as through tourism revenue, blue carbon finance, and ecosystem services provided by healthy marine environments. The model in vogue and in practice — that conservation costs are mostly borne by artisanal fishers, and conservation benefits are mostly enjoyed by the tourism industry, international NGOs and carbon market investors — does not meet a defensible criterion for distributive justice[39]. The second is **procedural justice** – the true engagement of affected communities in conservation governance processes. Procedural justice in ocean governance involves more than an open-door policy for communicating decisions after they are made, it also involves communities' ability to identify problems for conservation, propose and actively reject proposals that do not benefit them, and to participate in the governance authority through which ocean space is managed. In most cases, the 'governance architecture' of the MPAs studied in this paper are far from meeting this requirement. The third dimension is **epistemic justice** – that is Miranda Fricker's concept applied across the maritime realm. Ecological knowledge from the community of artisanal fishers (based on the knowledge of fish species behaviour, distribution of habitats, seasons, and the effects of fishing methods) be recognised as a legitimate and authoritative source of knowledge in conservation governance and not systematically displaced by scientific and technical knowledge of conservation biology. This epistemic recognition is not just about inclusion; it is a prerequisite for effective conservation, because management plans that fail to take into account the ecological knowledge of the communities most deeply involved in the seascape that they manage are systematically vulnerable to ecological and social failures detailed in the MPA literature. The fourth dimension of recognition justice, that of Axel Honneth's recognition theory, is extended to the marine realm. Seascape justice must involve acknowledging the cultural and spiritual aspects of the human-sea relationship—how the ocean is both an economic resource and a part of communities' culture, identity and ancestral heritage. This displacement of communities from their habitats or seascapes, then, is also an existential loss, a loss of connection and a loss of community identity, and any serious attempt at ocean governance must address this existential loss, too. The fifth and final dimension is gender justice – the feminist political ecology imperative that any ocean governance framework that ignores the gendered allocation of costs and benefits of conservation is inadequate[40]. Requires recognition of the feminised nature of coastal communities' work and labour, like post harvest processing, marketing and reproduction, in environmental impact assessments, livelihood impact studies and community development programmes; requires women's participation in PMP governance institutions be made visible; and requires the design of alternative livelihood programmes to consider the specific skills, time constraints and economic contexts of women in coastal fishing communities, not generic livelihood diversification options based on the assumption that the displaced fisher is a man[41].

Conclusions

Going beyond the Blue Economy

This paper has been proposing that the Blue Economy paradigm that the Indian Ocean is experiencing is not a framework for balancing conservation and development issues, but is a high-level institutional process for the blue accumulation of marine capital at the expense of the artisanal fishing communities whose custodianship has sustained the seascapes now being enclosed. In this paper, the idea of conservation dispossession, application of the concept of slow violence to the temporality of MPA-related dispossession, and the feminist political ecology analysis of the gender dimensions of the Blue Economy has shown that the governance structure of Indian Ocean MPAs explicitly works in favour of the interests of tourism capital, international conservation finance, and the carbon market, while imposing disproportionate and invisible costs on the artisanal fishing community, and specifically on the women within them, who bear the primary burden of conservation. Conservation dispossession is expressed in different ways in different spaces: the Maldives, the Gulf of Mannar in Sri Lanka, and Seychelles, all show variations of an institutional logic that makes the conservation of the commons a state- or NGO-managed zone focused on external capital and interests over and above community knowledge and revenue-generating tourism. They also show that this logic is not an inevitability: in every case there have been examples of alternative governance arrangements which better balance conservation needs with community interests, and examples of community resistance and counter-governance that open up the potential for a different ocean politics. The seascape justice concept proposed in this paper is not to be understood as a template for ocean governance; a specific set of institutional mechanisms by which distributive, procedural, epistemic and recognition justice and gender justice can be realised in a particular marine context will vary across different marine contexts. What seascape justice provides is a framework of evaluation: a set of criteria that can be used to test the claims of the Blue Economy paradigm, and through which the interests of those most directly affected by ocean governance choices can be given at the center, not the margins, of the ocean governance debate. The 30×30" agenda of the CBD, which calls for areas of the Indian Ocean and the wider ocean to be declared vast new MPAs makes the need for ocean governance to be right more urgent than ever before in the history of marine conservation. As the Blue Economy paradigm drives such expansion, conservation dispossession will be scaled up as well, forcing millions of coastal fisher-folk out of their traditional seascapes in the name of “sustainability” without them. Seascape justice is a way of making the effort to extend the ocean to a project of liberation rather than a new story of enclosure.

Declarations

Funding

The authors declare that no funding was received for this research. No specific grant from any funding agency in the public, commercial, or not-for-profit sectors was obtained for this study. Therefore, the grant number is Not applicable.

Ethical Approval and accordance

This study did not involve human participants, human data, human tissue, or live vertebrate animals. Therefore, ethical approval and institutional review board (IRB) approval were not required for this research. The study was conducted in accordance with the applicable institutional and international guidelines for responsible research and scientific integrity.

Data Availability Statement

No data generated during this study.

Conflict of Interest

The authors declare that they have no conflicts of interest.

Clinical Trial Registration

Not applicable.

Ethics Approval and Consent to Participate

Not applicable.

Consent to Publish

Not applicable.

Author Contributions

All authors (Bosudha Bandyopadhyay and Shivangi Sharma) contributed equally to the conception, execution, and preparation of this manuscript. Bosudha Bandyopadhyay and Shivangi Sharma were primarily responsible for drafting the manuscript and contributed to the critical revision of the manuscript. All authors reviewed, revised, and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

References

1. Ward C, Aalbers MB. Virtual special issue editorial essay: ‘The shitty rent business’: What’s the point of land rent theory? Urban Stud. 2016;53:1760–83.
2. Smith N. Toward a Theory of Gentrification A Back to the City Movement by Capital, not People. J Am Plann Association. 1979;45:538–48.
3. Moreno Zacarés J. The Iron Triangle of Urban Entrepreneurialism: The Political Economy of Urban Corruption in Spain. Antipode. 2020;52:1351–72.
4. Langley P, Debt. Discipline, and Government: Foreclosure and Forbearance in the Subprime Mortgage Crisis. Environ Plann A: Econ Space. 2009;41:1404–19.

5. Kohl S. Why Housing Studies Still Lacks Social Theory and What to Do about It. Hous Theory Soc. 2018;35:231–4.
6. Knafo S. Liberalisation and the Political Economy of Financial Bubbles. Compet Change. 2009;13:128–44.
7. Kemeny J, Lowe S. Schools of Comparative Housing Research: From Convergence to Divergence. Hous Stud. 1998;13:161–76.
8. Harvey D. The urban process under capitalism: a framework for analysis. Int J Urban Reg Res. 1978;2:101–31.
9. Haila A. The Theory of Land Rent at the Crossroads. Environ Plan D. 1990;8:275–96.
10. Scott DN. Book Review: Slow Violence and the Environmentalism of the Poor, by Rob Nixon. Osgoode Hall Law J. 2012;50:479–89.
11. Ball M. Classifying Housing Regimes. Is it Worth Doing? What are the Alternatives? Crit Hous Anal. 2020;7:36–48.
12. GOTHAM KF. Creating Liquidity out of Spatial Fixity: The Secondary Circuit of Capital and the Subprime Mortgage Crisis. Int J Urban Reg Res. 2009;33:355–71.
13. García-Lamarca M, Kaika M. Mortgaged lives': the biopolitics of debt and housing financialisation. Trans Inst Br Geogr. 2016;41:313–27.
14. García-Lamarca M. Real estate crisis resolution regimes and residential REITs: emerging socio-spatial impacts in Barcelona. Hous Stud. 2021;36:1407–26.
15. Mentz S. Ocean. Bloomsbury Publishing Plc. 2020. 10.5040/9781501348662.
16. ALAIMO S. Bodily Natures. *Bodily Natures* 1–26. Indiana University Press; 2010.
17. Alaimo S. University of Minnesota Press,. Dwelling in the Dissolve. in *Exposed* 1–14 (2016).
18. Stobie C. Exposed: environmental politics and pleasures in posthuman times. Green Lett. 2018;22:454–6.
19. Gray R, Sheikh S. The Wretched Earth. Third Text. 2018;32:163–75.
20. Blackwell T, Kohl S. Historicizing housing typologies: beyond welfare state regimes and varieties of residential capitalism. Hous Stud. 2019;34:298–318.
21. Fernandez R, Aalbers MB. Financialization and housing: Between globalization and Varieties of Capitalism. Compet Change. 2016;20:71–88.
22. Raju Das. David Harvey's Theory of Accumulation by Dispossession: A Marxist Critique. World Rev Political Econ 8, (2017).
23. BAER WC. Is speculative building underappreciated in urban history? Urban History. 2007;34:296–316.
24. Arundel R, Ronald R. The false promise of homeownership: Homeowner societies in an era of declining access and rising inequality. Urban Stud. 2021;58:1120–40.
25. Aalbers MB, Christophers B. Centring Housing in Political Economy. Hous Theory Soc. 2014;31:373–94.

26. Aalbers MB. Towards a relational and comparative rather than a contrastive global housing studies. Hous Stud. 2022;37:1054–72.
27. Aalbers MB. Financial geography II: Financial geographies of housing and real estate. Prog Hum Geogr. 2019;43:376–87.
28. Moreno Zacarés J. Residential Accumulation: A Political Economy Framework. Hous Theory Soc. 2024;41:4–26.
29. Newell P, Mulvaney D. The political economy of the 'just transition'. Geogr J. 2013;179:132–40.
30. Temper L, Shmelev S. Mapping the frontiers and front lines of global environmental justice: the EJAtlas. J Polit Ecol 22, (2015).
31. Salas S, Torres-Irineo E, Coronado E. Towards a métier-based assessment and management approach for mixed fisheries in Southeastern Mexico. Mar Policy. 2019;103:148–59.
32. Whomersley C. UNCLOS at 40: What about human rights? Mar Policy. 2023;148:105424.
33. Jouffray J-B, Blasiak R, Norström AV, Österblom H, Nyström M. The Blue Acceleration: The Trajectory of Human Expansion into the Ocean. One Earth. 2020;2:43–54.
34. Ball M. Housing analysis: Time for a theoretical refocus? Hous Stud. 1986;1:147–66.
35. Cisneros-Montemayor AM, et al. Enabling conditions for an equitable and sustainable blue economy. Nature. 2021;591:396–401.
36. Bennett NJ. Navigating a just and inclusive path towards sustainable oceans. Mar Policy. 2018;97:139–46.
37. Bennett NJ, Blythe J, White CS, Campero C. Blue growth and blue justice: Ten risks and solutions for the ocean economy. Mar Policy. 2021;125:104387.
38. Nightingale A. The Nature of Gender: Work, Gender, and Environment. Environ Plan D. 2006;24:165–85.
39. Elmhirst R. Introducing new feminist political ecologies. Geoforum. 2011;42:129–32.
40. Pellow DN, TOWARD A CRITICAL ENVIRONMENTAL, JUSTICE STUDIES. Du Bois Rev. 2016;13:221–36.
41. Mohai P, Pellow D, Roberts JT. Environmental Justice. Annu Rev Environ Resour. 2009;34:405–30.
42. Walker G. Beyond Distribution and Proximity: Exploring the Multiple Spatialities of Environmental Justice. Antipode. 2009;41:614–36.
43. Schlosberg D. Reconceiving Environmental Justice: Global Movements And Political Theories. Env Polit. 2004;13:517–40.
44. Agyeman J, Bullard RD, Evans B. Exploring the Nexus: Bringing Together Sustainability, Environmental Justice and Equity. Space Polity. 2002;6:77–90.
45. Ghilardi-Lopes NP, et al. On the perceptions and conceptions of tourists with regard to global environmental changes and their consequences for coastal and marine environments: A case study of the northern São Paulo State coast, Brazil. Mar Policy. 2015;57:85–92.

46. Silver JJ, Gray NJ, Campbell LM, Fairbanks LW, Gruby RL. Blue Economy and Competing Discourses in International Oceans Governance. J Environ Dev. 2015;24:135–60.
47. Halpern BS, et al. An index to assess the health and benefits of the global ocean. Nature. 2012;488:615–20.
48. Flannery W, Healy N, Luna M. Exclusion and non-participation in Marine Spatial Planning. Mar Policy. 2018;88:32–40.
49. Blythe J, et al. The Dark Side of Transformation: Latent Risks in Contemporary Sustainability Discourse. Antipode. 2018;50:1206–23.
50. Bennett NJ, et al. Towards a sustainable and equitable blue economy. Nat Sustain. 2019;2:991–3.
51. Ball M. Chasing a Snail: Innovation and Housebuilding Firms' Strategies. Hous Stud. 1999;14:9–22.