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Managing sino-ghanaian fishery relations: A political ecology approach

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ABSTRACT

A global recurring challenge for marine managers and policy makers is the effective management of fisheries conflicts. This study demonstrates the usefulness of a political ecology approach in understanding the complexity of conflict in increasingly internationalized national fisheries. By doing so it aims to provide an alternative approach to the environmental security perspectives, predicated on scarcity narratives, that often underpin policy on fishery conflicts. Using a localised example of industrial Chinese and local artisanal fishermen conflict in Ghana, this paper reveals a complex account of contesting 'access' to resources, in material and nonmaterial terms, that moves beyond an 'absolute scarcity' driven narrative. The conflict is shown to be one, in part, focussed around spatially fixed areas as well as moral claims of correct ways of fishing that reflect social tensions within the local fishing community. Both aspects show long term motivations to keep resource access, rather than being concerned with in the moment struggles over scarce resources. This work also highlights the existence of cooperation between groups of artisanal fishermen involved in transhipment with Chinese fishermen, revealing the complex nexus of winners and losers produced by environmental, social and political factors. In sum, policy must acknowledge that conflict is rarely produced purely by scarcity, and that broader social and political factors often combine in a variety of forms to produce localised conflict. If these complexities are ignored, fisheries policy runs the risk of unintentionally exacerbating conflicts and disadvantaging those who it aims to help.

1. Introduction

Globally, marine managers and policy makers face the challenge of effectively managing conflicts between fishers within and across fishing sectors [11]. This study explores the potential role of political ecology (PE) in helping to understand the complex interactions in increasingly internationalized national fisheries, focusing on the conflict produced between industrial and artisanal fisheries. Political ecology (PE) has been popularly described as "combine[ing] together the concerns of ecology and a broadly defined political economy"([14]:17). Within this diverse field, one persistent area of focus has been on 'resource conflict' [37,44,49,6,8], critiquing neo-Malthusian explanations built on over-population induced 'resource scarcity' narratives [12]. This work deviates from such narratives that continue to persist, in two main forms, within the literature on resource conflict, particularly within fisheries. The first form relates to environmental security perspectives that put resource scarcity, produced physically and socially, as the leading cause of conflict [23,24]. In this way, the origin of conflict lies in the reduction of resources, or increase in demand, that propels competition and in turn leads to strife between peoples who have been forced to move or change their behaviour accordingly [51]. The second more elaborate form relates to common property approaches [40] that identify socially-produced resource scarcity, resulting from the failure of institutions to constrain individuals who compete in the overuse of resources, as the principal source of conflict. Similarly, both see the roots of conflict in purely supply and demand terms. In contrast, political ecology views peoples general 'access' to resources as a historically produced and contested object, informed by material (social and environmental) and nonmaterial (meanings) changes. The term 'access' is defined here as having the *ability* to obtain benefits from things [48], consisting of a bundle of powers which allow resource access to be obtained, controlled and maintained by certain actors [18]. The PE analysis, then, concerns itself with the broader processes of change, rather than the in-the-moment responses to resource scarcity which both other perspectives are premised on.

The primary aim of this research, then, is to show how conflicts within fisheries can be over-simplified by resource scarcity narratives and, by consequence, to demonstrate how PE is well positioned to reveal the deeper complexities that are crucial for successful policy on such issues. By focussing specifically on the local case of industrial Chinese distant water (DW) fishing companies and their interactions with artisanal fishers, it reveals the intricacies that can inhabit fishery

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conflicts more widely, even in areas experiencing ecological pressure like Ghana. Prior to a brief contextual summary of the Ghanaian fishery, the paper establishes a theoretical framework that builds on the 'material and nonmaterial' approach to resource access used by Turner [51], by examining aspects of cooperation that exist alongside conflict. In doing so, this study not only makes an important theoretical contribution to the analysis of fisheries conflict that will, as it is argued here, prove critical for policy makers, but it also sheds light on the relatively unknown interactions of Chinese DWF within host countries.

1.1. Theoretical framework

Environmental security narratives have come to play a dominant role in the analysis of fisheries conflicts in academic literature and the mainstream media [22,30,36,46]. The copious literature on globally declining fish stocks has provided a widely adopted backdrop for causal statements of conflict that are often phrased in a such a way as; 'with increasing amounts of boats looking for decreasing amounts of fish, fish stocks are becoming scarce and conflicts amongst local and international fleets are increasing' [15]. This is hardly surprising considering historical examples of "fish wars", here one can think back to the 'cod wars' in Newfoundland. Specifically, China's distant water fishing activities, particularly in West Africa, have been linked with causing environmental degradation and resource scarcity that could directly promote conflict in coastal communities [19]. Whilst there is an acknowledgement of other causes acting in tandem with scarcity in the current academic literature on environmental security and conflict [45,5], work on these less straightforward aspects has been missing and is often only mentioned in passing. It is not the intention of this author to dismiss accounts of scarce resource related conflict, but rather to show the existence of other, often more complex and multi-dimensional causes alongside.

The framework used here begins by dealing with the political economy of both fishing groups as well as outlining the ecology of the fishery. After this it takes a line of enquiry similar to that outlined by Turner [51] in addressing a series of questions; Firstly, is the conflict in this study driven by resource scarcity or, rather, the availability of resources? This point has profound implications for fisheries policy and links in with the specific ecology of the fishery (discussed in detail further on). If absolute scarcity drives conflict, as proposed in the environment security literature, then different policy will be required as opposed to conflict driven by relative scarcities. Secondly, if conflict is in part due to struggles over 'access', to what extent do they represent an attempt at maintaining access through moral claims, historical precedent and community norms, rather than 'in-the-moment scrambles'? Lastly, to what degree does the interdependence on successful fish stocks produce a measure of cooperation? If it does, between who does this cooperation exist and to what consequence? This framework, by systematically looking into the material and moral dimensions of this conflict, as well as the coexistence of conflict and cooperation, allows for a much more nuanced account of this local conflict that will seek to highlight the broader themes within.

1.2. Ecology of the Ghanaian fishery

Located inside the Gulf of Guinea, Ghana's fisheries are primarily influenced by two major oceanic currents, the Guinea current and the South Equatorial Current that, through seasonal upwellings, enrich the coastal waters and enhance productivity [28]. Beyond the seasonal scale, environmental variability also occurs at the inter-annual and decadal scale, influenced by the El-Nino Southern Oscillation. Through the period from 1970 to 1990, environmental variability coincided with variability in fish landings, with declines and increases of fish populations [43]. It is further noted that some small pelagic fish populations fluctuate so variably from year to year that it is impossible to predict abundances [21]. Such variability is projected to increase with the onset of climate change effects, leading also to shifts in the distribution [10]. Regarding resources, the small pelagic fisheries, consisting of species such as Clupeidae, Carangidae, and Scombridae, are among the most important for commercial fishery supporting the artisanal and industrial sector in Ghana [43]. Large pelagic resources, including tuna, are also fished out beyond the continental shelf as well as demersal resources that are fished by the trawlers.

Yet, on top of the previously mentioned environmental variability, studies have shown the deleterious effects of fishing pressure that are causing declining stocks [38,4]. Studies have shown how the demersal fishery is being fished at its very limit [33] whilst the small pelagic resources, particularly Sardinella down to 17,000 T from 120,000 T a dozens years before, are in rapid decline due in part to overfishing [3].

1.3. A brief history of fishing in Ghanaian fisheries

The colonial period was a defining time for the management of marine resources in Ghana and, whilst perhaps not as influential as it was in other resource sectors (e.g. mining [2]), it still provided a strong influence on the shape of fisheries management and conflict today. Unlike the move to privatisation that took place in Ghanaian land management, British colonial authorities governed marine affairs in a "freedom of the seas" manner, advocating unrestricted, open-access and rejecting the private and communal marine tenure that had existed before [52]. This became significant when, by 1851, local authority structures became increasingly rejected in favour of colonial judicial courts who governed under a 'maximal exploitation' model. Both of these changes transformed the way in which resource access and conflict was managed, particularly as fishing gear became more 'advanced'. This was exemplified by the introduction of the 'Ali' net at the turn of the 19th century [27] (and still used by many artisanal fishermen now [1]. Its application generated conflict that took a form similar to that between industrial DWF and artisanal fishers in this study. The 'Ali' net, described as being able to capture almost anything due to its small mesh size, became widely used within fishing communities causing divisions between groups who used it, and those who opposed it linking it to decreasing fish populations. These disputes spread further to territorial claims over waters, when certain groups tried to outlaw 'Ali' net fishing in their claimed waters. However, when these conflicts were taken to the courts, the colonial judiciaries repeatedly ruled against, saying 'boundaries could not be fixed at sea which was common property' and that `the best fishing net is the net which catches the most fish' [52]. Taking advantage of this notion, the way was paved for substantial attempts at modernising the fishing industry in the 1950s, in a bid to capitalise on inexhaustible stocks. A large state led plan for an industrial fishery was created in 1966, which led to the purchasing of trawlers, cold storage facilities being constructed and the formation of the State Fishing Corporation (SFC) [41]. However, a lack of finance and resources, as well as political instability and the independence of neighbouring countries [4], led to its ultimate collapse and sell out in 1988. As such, this collapse provided the foundation for foreign investment in joint-venture arrangements in a bid to revive it [41].

1.4. Brief introduction of Chinese DWF

From 1985 China began a concerted turn towards DWF activities to help meet its growing demand for fish [42]. This seemingly ubiquitous