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On *super fishers* and *black capture*: Images of illegal fishing in artisanal fisheries of southern Chile

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ABSTRACT

Illegal fishing (IF) is an unrelenting problem for small-scale fisheries governance worldwide, one with complex causes and solutions. This study explores stakeholders' images on IF as a way to understand its underpinnings and persistence. As an apt illustration, the king crab (*Lithodes santolla*) fishery of the Magellan region, Chile, was chosen, which operates under a semi-open-access regime. The results from two-year ethnographic research reveal four powerful images, as they literally emerge from stakeholders' narratives, comprising a series of practices that are branded in these particular terms: i) *super fishers*, which refers to owners of authorized vessels, who land the capture of unauthorized ones; ii) *whitewashing*, which involves the "whitening" of catch coming from unauthorized vessels or extracted in anticipation of the fishing season; this unreported capture can enter the export chain; iii) *cooked on board*, which involves the processing and packing, while at sea, of banned undersized or female crabs, which are later sold locally; and iv) *black capture*, that involves the landing of alive banned crabs in unauthorized ports, that are later processed in households and sold locally. These images suggest that IF is a relational phenomenon; this is to say that it is distributed on a series of relationships, practices, and actors embedded in a particular geographic and cultural context. As such, IF is difficult to dismantle, since changes do not depend on the ideal behavior of one actor -"the ethical fisher"- but on transformations of intertwined practices of all actors across the value chain.

1. Introduction

Illegal, unreported, and unregulated fishing (illegal fishing, IF, hereafter) is acknowledged as one of the largest threats to fisheries sustainability worldwide [1,2] and is not only an issue regarding industrial fleets at high seas, but it also affects small-scale fisheries [1,3].

The three IF categories become meaningful when there are formal rules and a governing system attempting to preserve fish stocks from over-exploitation. In this context, IF is considered a governance weakness in itself, along with corruption, poor stakeholder participation, and poor enforcement [4], and it falls into the category of wicked problems. Wicked problems are characterized by complexity [5], uncertainty, interdependence, and dispute [6–8] and therefore they should not be addressed through stronger regulations or technical measures alone, as proposed by the traditional deterrence-based model.

An alternative view to this model has been provided, for example, by the interactive governance theory, which recognizes that "images" held by stakeholders on IF may have a significant influence in governance outcomes [3,9].

Images are a broad term that can encompass other analogous ideas, such as mental models, worldviews, and beliefs. In this paper images are defined as specific social representations arising from practices that involve behaviors and habits, delineated by the context in which they are embedded. This definition presupposes that IF should be analyzed as a relational phenomenon. Relational approaches try to change and overcome the traditional dichotomies of social and political sciences (structure vs. agency, knowing vs. acting, human vs. non-human) by regarding everyday reality in terms of continuing events and dynamic processes produced by recursively related human and non-human elements [10]. A central feature of relational approaches to policy analysis is that they work in close interaction with the everyday world of public policy and society.

The concept of image has gained importance in the literature and in practice for several reasons [3,9]. Firstly, an erroneous picture of fisheries practices can mislead governance effort into undesirable consequences. Secondly, images can display discrepancy among different

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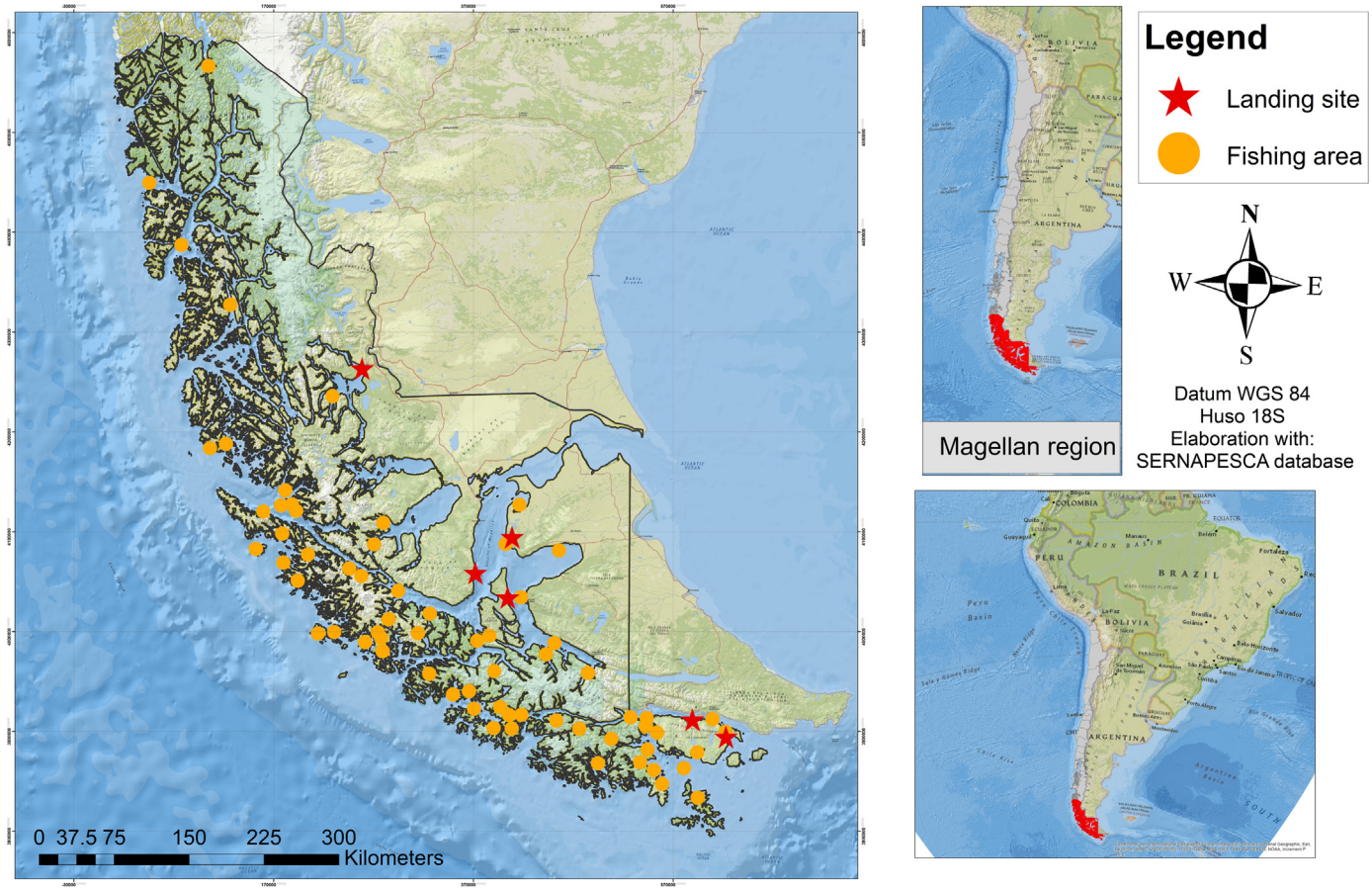

Fig. 1. Study area in the Magellan region, Chile, showing Chilean king crab fishing areas (dots) and landing sites (stars).

stakeholders, making it difficult to find a common ground and, eventually, leading to misunderstanding and confrontation [11]. Thirdly, the discursive power and hegemony of some images need to be recognized and elucidated for governance measures to succeed [3]. And lastly, images have a potential predictive value. While practices and experience shape people's images, the converse is also true because people can be driven by their ideas held in their images [9]. The Tragedy of the Commons as devised by Hardin [12] is unquestionably the most influential scientific image governing fisheries—and maybe common pool/access natural resources in general.

Being IF a sensitive topic, this first exploration for the king crab (*Lithodes santolla,* Jacquinot, 1844) fishery of the Magellan region (Chile) does not intend to quantify infringements with any degree of accuracy, less so to single out specific responsibilities. Infringements are known to take place in different forms and some transgressions are detected but others go unnoticed. Instead, the study focuses on the potential range of images on IF, their underlying causes, and the pathways to solutions, as they emerge from the narratives of stakeholders themselves. As an explorative and descriptive case study, it is intended (i) that the findings be illuminating in describing the specific functioning of IF in the Magellan region rather than generalizable to other contexts, ii) that they are informative to users, who can decide to what extent they echo with their own context, and (iii) that the findings raise issues for further examination by those involved in fisheries research and management.

Chile offers an interesting case study to explore fisheries governance in general and IF in particular. Chile is one of the countries with the largest number of fisheries regulations in Latin America [13–15]; yet in June of 2017 the Director of the National Fishing Service (SERNAPESCA) acknowledged that IF could quadruplicate legal capture in some important fisheries [16]. This recognition is supported by the evidence provided by scientific studies that report IF for several species [17,18], which nonetheless do not include Magellan fisheries.

At the same time, several Chilean artisanal fisheries are strongly market oriented as a result of 40 years of free trade and market-driven economic policies [19]. Therefore, the effect of an increasing global demand for seafood and the role of key foreign stakeholders on IF (processors, importers, retailers, and consumers) cannot be overlooked [20].

From the early 1990s Chile embraced the rights-based fishery management as the main policy option to govern fisheries [19], which relies on key instruments such as Total Allowable Catch (TAC), Individual Fishing Quotas (IFQs), Individual Transferable Quotas (ITQs) and Territorial User's Rights in Fisheries (TURFs). This rights-based orientation guided the design of the main legal body governing Chilean fisheries resources to date: the 1991 Fishing and Aquaculture General Act (FAGA) and its updates. Along with implementing the above instruments, the 1991-FAGA aimed to halt fishers' mobility and restrict the number of new artisanal fishers, through a registration system (Artisanal Fishing Record, RPA in Spanish) that legally limited fishers to one specific region. By law, the RPA can be closed by the authority when a fishery is declared assimilated to a state of full exploitation. The government can exceptionally open the RPA to new members in order to accommodate fishers' strong beliefs that marine resources belong to all [21].

As a member of the FAO Committee on Fisheries, in 2004 Chile implemented the National Action Plan within its national fisheries policy as a voluntary measure to prevent, deter and eliminate illegal, unreported and unregulated fishing. The national authorities involved in the application of the Action Plan are the Ministry of Economy, through SUBPESCA (Fishing Under Secretariat) and SERNAPESCA (National Fishing Service); the Chilean Navy, through the General