Applied Geography xxx (2014) 1–6

Contents lists available at ScienceDirect

Applied Geography

journal homepage: www.elsevier.com/locate/apgeog

Emerging customs: Small-scale fishing practices in Aceh, Indonesia

Barbara Quimby*

San Diego State University, Department of Geography, 5500 Campanile Drive, San Diego, CA 92115, USA

ARTICLE INFO

Article history:
Available online xxx

Keywords:
Situated practice
Indonesia
Common-pool resources
Marine commons
Fisheries management
Emergent institutions

ABSTRACT

Off the western coast of Sumatra among the islands of Pulau Banyak, fishing is the primary occupation for the men of Haloban. They are self-described "traditional" fishers, using low-tech gear and small boats to catch fish, octopus, lobster, and other sealife in the nearby coral reefs and mangroves. Women also regularly venture out into the deep mud of the mangroves to collect clams. Their efforts to extract livelihoods and subsistence from the reefs take place in an open-access commons with few formal institutions or enforcement mechanisms to regulate resource use. While explicit regulations and customary limitations on fishing in the coral reef commons are lacking, Haloban fishers improvise some common etiquette and practices that are adaptable to the shifting context.

This case study presents Haloban fishers' use of the commons as situated practices, unarticulated and embedded within a complex social–ecological system. These practices reflect fishers' understanding of, and relationship with, their environment, and may represent a nascent form of local "rules-in-use", informing behavior without direct social mechanisms for enforcement. This paper presents research collected using ethnographic methods, including participant observation at sea. As NGOs and government agencies work to craft management plans that share use of the reefs with tourism and conservation, a better understanding of actual resource use and fishing practice may inform more nuanced, adaptable, and truly "local" community-based management.

Introduction

Small-scale fishers are increasingly recognized as a critical sector of research in relation to marine resource management (Allison & Ellis, 2001; Berkes, Mahon, McConney, Pollnac, & Pomeroy, 2001). In contrast to commercial enterprises, this sector is generally recognized as those who fish primarily for subsistence and local consumption, employing small boats and low-tech gear (World Fisheries Trust, 2008). Around the world, small-scale fisheries employ over 200 million people, about 90 percent of people involved in all fishing, and are largely from indigenous cultures and marginalized communities in the developing world (FAO, 2014). Managing these diverse, often open-access fisheries remains a formidable challenge to marine resource management practitioners (Andrew et al., 2007) and centralized approaches have largely failed. The promising successes of community-based co-management has brought small-scale fishing communities into the spotlight (Berkes et al., 2001; Cinner et al., 2012; Gutierrez, Hilborn, & Defeo, 2011) and inspired more research into their adaptive approaches.

Using customary tenure and other local and traditional "rules-in-use" as the basis for the management of small-scale fisheries appears to offer the promise of effective, equitable, and culturally-relevant regulation (Berkes, Folke, & Colding, 1998; Johannes, 2002). In application, co-management approaches that seek to integrate local cultural norms into regulation do appear to support greater participation, compliance, and stronger governance in shared property commons (Agrawal, 2008; Bromley et al., 1992; Ostrom et al., 2002). However, regulative behaviors that do not fit expectations about institutions or "traditional" practices may be inadvertently overlooked (Colding & Folke, 2001; Li, 2001). Identifying relevant practices and behaviors that are not explicitly codified into rules and institutions, and understanding how they emerge, remains a challenge for researchers (McCay, 2002).

In this paper, I present a case study from a community in Aceh, Indonesia where fishers in a marine commons with little regulation or enforcement exhibit situated practices that shape their resource use. Inspired by McCay's (2002) approach emphasizing "situation" and emergent properties, I draw on common-pool resource theory to consider the factors supporting the development of local

* Tel.: +1 619 594 5437.
E-mail address: bquimby@mail.sdsu.edu.

http://dx.doi.org/10.1016/j.apgeog.2014.11.026
0143-6228/

institutions and the emergence of rules-of-use. I also use the concept of situated practice, developed from situated knowledge theory, to discuss fishers' actual use of a coral reef commons. As I will explain, their use of the commons is not guided strictly by formal and informal institutions; nor are they wholly opportunistic. Their practices are unarticulated and contextual, emerging within a dynamic, coupled social–ecological environment (Liu, Dietz, Carpenter, & Folke, 2007). With this paper, I hope to contribute a practice-centered approach to the discussion of marine resource management for small-scale fisheries, and suggest these practices and emerging norms may provide a culturally appropriate basis for regulation development. I also encourage a more nuanced examination of actual practices of fishers that avoids assumptions of opportunism in open-access commons.

Following, I will begin with the basis for my theoretical approach and methodology, including the initial research questions. Next, I present a brief description of the community of Haloban in Aceh, Indonesia, why it was chosen for study, and the social, ecological, and recent historical context. The results section includes data and analysis of the study's findings on fishing practices and local institutions, particularly the emergent, uncodified practices and behaviors of fishers. Finally, a conclusion section considers the relevance of these practices to the commons discussion and offers some brief policy implications.

Theoretical approach: emerging traditions

Pulau Banyak, Indonesia is a marine and near-shore commons with access limited by geographic features and a few, poorly-enforced regulations (described in Section 4). Such a classically-defined common-pool resource (Ostrom, 1990) is usually distinguished between open access, with no property claims or rights, or closed access: collective property claims and rules of use with mechanisms for enforcement (Agrawal, 2001; Bromley et al., 1992). The difference lies in the presence of social and political agents and institutions with enforcement power, from fines to shaming, to modify behaviors. Although institutions are usually thought of as formal governance, many "rules of the game" (North, 1990) are informal, "created, communicated, and enforced outside of officially sanctioned channels" (Helmke & Levitsky, 2004). For some scholars, informal institutions include social mores such as norms, values, and traditions (Bardhan & Ray, 2008; Glasser, Baitoningsih, Ferese, Neil, & Deswandi, 2010; McCay, 2002). Whether formal or informal, a closed commons has social mechanisms for regulating users' behavior.

Institutions for common-pool resource regulation can be challenging for researchers to recognize, and it is not well understood how and why they emerge. Regulative behaviors are sometimes obscured by expectations for formalized institutions, that they must be legible to outsiders, articulated by insiders, and "legitimized by tradition" (Colding & Folke, 2001; Knudsen, 1995). This perspective is reinforced by rational choice approaches that emphasize conscious decision-making by individuals. There is also poor understanding of how local institutions emerge, or the "key variables" that enable formal and informal institutions to form (Acheson, 2006; Agrawal, 2008; Ostrom et al., 2002). However, if social norms and traditions are the constant collective interpretation of the past to create the future (Glassie, 1995), then understanding how they "emerge" or form within a dynamic social–ecological system must require more focus on situation and context. Scholars have noted that attention to cultural complexity, power, and change are often absent from abstract definitions and expectations of institutions, and analysis benefits from a qualitative approach (Fabinyi, Knudsen, & Segi, 2010; West, 2005).

To understand institutions that may be "invisible" and how they emerge, it seems useful to observe the patterns of behavior and practice that are embedded in the commons, and which may potentially evolve into access controls and "traditions" for management. To accomplish this, I use the concept of situated practice, actions that are "intrinsically dynamic and partially improvised" (Lauer, 2012: 183) to focus on the tacit behaviors of fishers. It is based in the growing literature of situated knowledge theory (found in economic geography, sociology, and anthropology), which casts 'knowing' as an iterative process of performance and place rather than a static object (Ibert, 2007; Lave, 1993). 'Knowing' and practice are viewed as "reciprocally constitutive" within a "community of practice" (Orlikowski, 2002: 250), each changing the other through the experimentation, reflection, and sharing by actors. Situated practice similarly acknowledges that "rules in use" are not necessarily generated through rational or abstract cognition by individuals. Rather, as a facet of 'knowing', they may also emerge through the regular collective performance of actors in association with their gear, environment, and shared stories and histories, while embedded in social–ecological processes (Ingold, 2000; Lauer & Aswani, 2009). This approach encompasses the inventiveness and adaptability of a community of actors that we seek to stimulate and emulate in community-based resource management. While inspired by McCay's (2002) call for greater incorporation of context and situation in institutional analysis, use of situated practice breaks somewhat with the common focus on rational decision-making. Situated practice is especially relevant to fishers, who engage with a dynamic environment requiring contextualized skill, knowledge, and decision-making that is often co-constructed with habitat and setting (García-Quijano, 2007; Knudsen, 2008) and simultaneously social, spatial, and ecological (Ibert, 2007; Lauer & Aswani, 2009; Pálsson, 1998).

Methodology

For this research, I used common-property theory and situated practice as a framework for understanding the actual practices of small-scale fishers. My initial research questions focused on two aspects of the community's relationship with the environment: 1) how marine resources are actually used in practice, and 2) the existence and application of any regulation to resource use, including formal, informal, or customary forms of environmental management. My research objectives developed from discussions with local community members and the leadership of a conservation NGO, who were pressing the government for ecotourism development and restrictions on fishing. It was clear that they had little information about actual fishing practices, catches, use zones, or behaviors, relying on ecological assessments to develop a conservation plan. I hoped to add a social dimension to their understanding and provide a means for community members to engage in the process.

Field research was conducted between late July to early October of 2011 in Haloban using a mixed-methods approach. I conducted a pilot study in Pulau Banyak in 2010 to form the research questions and methods. Haloban was selected because local informants identified it as the "most traditional" community within the islands of Pulau Banyak, heavily reliant on small-scale fishing for livelihoods. A household survey of 92 homes (out of 294) provided quantitative data on the community's standard of living, consumption, fishing and gleaning activities, and personal perceptions of the environment. The survey employed stratified random sampling, with effort made to include all of Haloban's identified neighborhoods and outlying settlements.

In addition, I gathered qualitative data using ethnographic methods, including semi-structured interviews with fishers and

Please cite this article in press as: Quimby, B., Emerging customs: Small-scale fishing practices in Aceh, Indonesia, *Applied Geography* (2014), http://dx.doi.org/10.1016/j.apgeog.2014.11.026