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Access to fisheries in the maritime frontier of Palawan Province, Philippines

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Globally, capital investments are intensifying extraction and contestation over resources in frontier spaces, yet most discussion has focused on terrestrial frontiers. This paper shifts this focus to bring a scaled political ecology approach to examine the access dynamics of fisheries trade in the maritime frontier of Palawan province, the Philippines. We adapt the linked concepts of access and exclusion to highlight how access dynamics unfold at multiple scales. At the local scale, social relations of class and ethnicity serve as important markers of difference that inform control over access to fisheries resources. At the regional scale, we show how engagement in fisheries trade is also shaped by broader historical and geographical contexts of migration and land use change. Access dynamics unfold at multiple inter-related scales to heavily influence the differentiated social outcomes of expanded fisheries trade.

Keywords: fisheries, access, Philippines, Palawan, class

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Introduction

Globally, state and private sector investments are intensifying the control, extraction and contestation over natural resources in ‘frontiers’. Frequently, frontiers are conceived of as discursively and materially produced spaces experiencing intense transitions, where

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seemingly remote regions are empty, yet full and ripe for the production and expansion of capital (Barney, 2009; Moore, 2015). Control and authority over resources in these spaces is redefined by those with power, with significant impacts and consequences for poor resource users and their environments (Rasmussen & Lund, 2018). Yet much discussion concerning such frontiers has been about surplus land, the conversion of forest for timber, or landscapes being opened for minerals or sown for boom crops (Borras *et al.*, 2011; Peluso & Lund, 2011; Fairhead *et al.*, 2012). In effect, frontiers are often portrayed as quintessential land-based territories, where agrarian smallholders serve as symbolic markers of settler expansion, control, and productivity in the national interest. Much research in critical political ecology has followed suit, examining the political and economic factors of the production, contestation and transformation of frontiers (Peluso & Lund, 2011; Fairhead *et al.*, 2012). However, much less research emphasis has been placed on how politically, economically and ecologically connected coastal regions are also undergoing intense and rapid transformations (Campling *et al.*, 2012; Crona *et al.*, 2016). In many respects, marine enclosures, extractive zones and commodities production are part of frontier transitions as much as boom crops are in the interior. Yet compared to the agrarian smallholder cousin, the poor coastal fisher is the less visible ‘surplus migrant’ arguably left out of the popular frontier imaginary. In the Asia-Pacific, in particular, new economic powers such as China have increased demand for imported seafood from across the region, including prawns, live reef food fish, tuna, shark fin and sea cucumber (Fougères, 2008; ADB, 2014; Eriksson *et al.*, 2015). Aquaculture is growing rapidly (Belton & Thilsted, 2014) and regional trade agreements drive further seafood trade (Gephart & Pace, 2015). At the same time, governance trends such as certification and enclosures are intensifying (Segi, 2014a; Foley & Havice, 2016), frequently under the theme of ‘blue growth’ (Barbesgaard, 2018).

In the context of commodity frontier analysis, however, further research into the social dynamics of fisheries trade is needed. While there is a considerable literature documenting the rapid expansion of seafood trade, the vast majority of this comes from the environmental or economic sciences. Much environmentally orientated literature tends to focus on measuring the impacts of fisheries trade on stocks (e.g. Cinner *et al.*, 2013; Pauly &

Zeller, 2016), highlighting the negative consequences for fishing livelihoods and sometimes subsequently calling for restricted fishing access rights (e.g. Vincent & Harris, 2014). Other studies have used aggregated trade data to assess the range of costs and benefits of seafood trade for the coastal poor (e.g. Kurien, 2005; Béné *et al.*, 2010; Gephart & Pace, 2015). Such macro-scale approaches have inherent limitations when addressing the highly differentiated outcomes for the coastal poor associated with expanding seafood trade. And although there is a large literature in maritime anthropology that examines access at a micro-scale in particular cases (e.g. Haller & Merten, 2008; Coulthard, 2011; Jentoft & Eide, 2011; Knudsen, 2016), these studies are rarely connected to the broader context of expanding commodities in coastal frontiers (Campling, 2012). Political-economy orientated literature highlights the structural conditions underlying expanded seafood trade (e.g. Mansfield, 2011; Campling, 2012; Longo *et al.*, 2015; Saguin, 2015), but understandings of the socio-political substance of access dynamics in specific contexts and how these relate to expanding seafood trade remain limited (Crona *et al.*, 2016). This paper thus further contributes to such understandings by asking how social relations of ethnicity and class at the micro-scale affect access to the production of seafood, and how these social relations link with political-economic processes of migration and land-use change occurring at wider historical and geographical scales.

We take a scaled political ecology approach (Perreault *et al.*, 2015) to examine how access unfolds at the ‘extractive ends’ of seafood trade in the coastal frontiers of Palawan province, the Philippines. We focus on the interrelations of two scales: ethnicity and class relations at the local scale, and geographic and historical contexts at the regional scale. As an archipelagic nation, the Philippines has high economic reliance on marine resources and high involvement in transnational seafood commodity chains. From the 1950s, Philippine fisheries underwent a massive expansion (Butcher, 2004). Large numbers of people also moved to the coasts to fish for their livelihood in commercial and small-scale sectors, fuelling the country’s major fish export market (Seki, 2004; Eder, 2009; ADB, 2014). Capture fisheries alone provide direct employment for at least 1.5 million people in the Philippines, and are worth at least USD 2.5 billion annually (ADB, 2014: 23–4). At the same time, fish stocks are declining, and the country’s fisheries are now considered to be in crisis (Muallil *et al.*, 2014),

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putting significant stress on fishing livelihoods. As we show, other recent societal changes such as land-use intensification, further pressure fishers in coastal areas. Access analysis is thus particularly important to understand the intersectional nature of these scales.

We focus on the province of Palawan as a fast-filling maritime frontier space. While seafood commodities have long been internationally traded from Palawan, these connections have been magnified with the intensifying nature of globalization. Since the 1950s, Palawan has been a prime target for migration, upland resource extraction and major expansion of commercial fishing enterprises (Butcher, 2004; Eder & Evangelista 2014). Recently, it has also undergone growing investments in land and tourism. Migrant fisher populations from other provinces and indigenous peoples co-exist in these rapidly changing areas, and now experience tourism expansion and palm oil production that claim peri-coastal lands, squeezing resident access to marine-based livelihoods. As multiple actors scramble to control and obtain value from both marine and terrestrial resources in this frontier zone (Rasmussen & Lund 2018), competition over progressively more scarce resources intensifies with strongly differentiated outcomes. In making the notion of access via social relations set in time and space explicit, the case of Palawan province and San Vicente municipality highlights how access to fisheries trade is influenced by a complex set of challenges and opportunities situated at multiple scales. We illustrate how the value produced along these commodity chains is accessed and used according to rural actors' ethnicity and class positioning over time and space.

Access dynamics in coastal frontiers

Similar to land-based frontiers, coastal frontiers are discursive and material spaces undergoing rapid 'maritime transitions' (Fougères, 2008; Belton & Thilsted, 2014; Bavinck *et al.*, 2017), exemplified by intensifying contestations over access to the production, exchange and use of highly-valued marine resource commodities. As emergent, highly politicized spaces, capitalist expansion and resource production run in parallel to, and are interconnected with, similar political and economic processes of change in hinterland areas, where coastal land areas, near-shore and far-shore spaces are appropriated as enclosures for

resource control and expansion (Pinkerton & Davis 2015; Saguin, 2015). Yet the political ecology of such maritime transitions in coastal frontiers remains understudied, particularly concerning how coastal institutions, micro-politics, and economic change influence marine resource access and use over time and space.

Central to such analysis of how the institutions that govern marine resource access and use are re-defined, is a scaled, critical understanding of how rural actors mediate the costs and benefits of rapidly growing seafood commodity chains in such frontiers. Our aim is to shift the focus from economic and environmental perspectives to a more critical social analysis on the access and use dynamics in seafood value chains in coastal frontiers undergoing rapid change. We draw explicitly on the concept of ‘access analysis’ to focus on how individuals or groups gain, control or maintain ‘the ability to benefit from things’ in coastal environments (Ribot, 1998; Ribot & Peluso, 2003). Ribot and Peluso (2003) defined nine ‘mechanisms’ of access to natural resources: rights-based, technology, capital, markets, labour, knowledge, authority, identities, and social relations. Rather than drawing on Ribot and Peluso’s (2003) entire framework, we specifically engage how class and ethnic relations influence access dynamics at local and regional scales of analysis. We choose these aspects because they are most salient and consequential for the coastal poor on Palawan Island.

Our emphasis on multiple scales aims to move beyond the existing methodological emphasis in the literature on seafood trade to focus either at the national or local level (Crona *et al.*, 2016: 1). In recognizing that the concept of scale itself is not a pre-given, fixed entity, we align with others in highlighting the socially produced and politically contested nature of ‘scale’ (Swyngedouw & Heynen, 2003; Neumann, 2009). Long-standing work in political ecology has shown, for example, how political economic structures and influences vary across scale and shape resource access and use, as well as ecological change (Paulson & Gezon, 2005; Perreault *et al.*, 2015). We emphasise how access dynamics are constituted by way of ethnicity and class through historical and contemporary processes interacting at multiple scales. At the local scale – roughly equivalent to a local village or community – social relations of class and ethnicity serve as important markers of difference that inform control over access to fisheries resources. Here we emphasize how poor fishers with

contrasting ethnicities, social histories and livelihoods actively work social relations to gain access to marine resources once out of reach. In this respect, how much a poor fisher invests in social relations matters as much as how much they invest in their livelihood portfolio and other natural resources (Berry 1989). At a regional scale—roughly equivalent to the province—societal changes include patterns of land use change that shape the broader geographical context in coastal areas, and patterns of migration from across the country that form the historical context and ultimately, the contemporary dynamics in coastal Palawan.

By extension, our analysis engages with recent accounts of ‘exclusion’ in the context of commodity expansion in Southeast Asia (Hall *et al.*, 2011). Hall *et al.* develop four ‘powers of exclusion’ that affect access dynamics in rural contexts: regulation, force, the market, and legitimation. All four drive exclusion to affect access dynamics in varying degrees: the rules regarding access, threats to enforce those rules, costs steering access, and the socio-political basis of controlling access. Our use of the term ‘access dynamics’ thus encompasses both ‘access mechanisms’ and ‘exclusion’. While not deterministic, these access dynamics heavily influence the extent to which fishers succeed in fisheries trade. Our argument is that an investigation of these access dynamics operating at multiple scales is crucial to understand the differentiated outcomes of fisheries trade for coastal residents.

We examine how local social relations and broader societal changes affect access not in terms of formal correlations (see Kurien, 2005; Béné *et al.*, 2010; Hicks & Cinner, 2014) but in terms of direct and indirect influences from near and afar. Rather than looking for universal links between increased trade and livelihoods, we instead consider how different social groups engage in fisheries trade over time. This means examining how the poor engage in small-scale fishing practices at the nexus of local and regional processes, to encompass those distal pressures that are seemingly less relevant and visible (Coe *et al.*, 2008). At the local scale, we focus on how fishers differentiated by class and ethnicity are able to engage in fisheries trade over time. At the regional scale, we show how these engagements are shaped by broader historical and geographical contexts.

Methods

This paper draws on fieldwork from 2014–5 in the municipality of San Vicente, Palawan (Figure 1). As a municipality with multiple ethnic groups formed over a long history of migration, with multiple frontier processes (e.g. fisheries investments and trade, new fisheries regulations, tourism and coastal developments) currently unfolding, San Vicente represented an ideal location for our research. In August 2014, we conducted 15 interviews in two communities, and three focus group discussions. The two communities were chosen as, taken together, they represented a socially and economically diverse set of coastal households in San Vicente. Because ethnicity was a focus of our analysis, focus groups were conducted with the major different (self-identified) ethnic groups resident in the area (Agutaynen and Cuyonon, Tagbanua, Visayan). These focus groups were held in public locations such as the basketball court and village hall, and discussion centred around community-scale histories of land-use change, migration, the historical development of the fishing economy, and ethnic patterns of resource use. In 2015, we conducted a further 34 interviews and 28 interviews with households in June and November, respectively. The topics for the interviews in 2015 focused on life histories of fishers and fishing households, possession of assets and livelihood strategies, and social differentiation within coastal communities. Income class was not explicitly considered in these interviews as a discrete variable; instead, class was described and observed through descriptions of experiences, household assets and fish catches. Interviews were conducted in Filipino, the *lingua franca* of each community. Informed consent was obtained from all interviewees, and interviews were conducted in the home of the interviewee. Interviewees were selected through stratified sampling to include households of different ethnicity, class, and livelihood strategy (e.g. different types of fishing gears). Our main focus in using these methods is how access and use differentiates in terms of ethnicity and class relations.

In addition to household interviews where we discussed the specific experiences and views of households, we also interviewed key informants such as older residents and government officials to obtain information on historical and other general trends occurring in each community and the municipality. Detailed fieldnotes were taken each day during fieldwork, and these fieldnotes were subsequently manually qualitatively analysed for key

themes that emerged (Bernard, 2006). We use other published historical and ethnographic material from Palawan province (and around the country) to complement our analysis, reinforcing that the trends we discuss are becoming increasingly common. And while this analysis is primarily based on a discrete set of interviews in one municipality, it also builds on each author's long-term field experience in other parts of Palawan province (see, e.g. Pido, 1995; Dressler, 2009; Fabinyi, 2012).

Regional scale

Geography, history, and social context all converge to condition access to fisheries trade among the coastal poor on Palawan. This section outlines how migration, agrarian change and social relations have unfolded and changed over time at a regional scale in coastal Palawan, with reference to access to fisheries.

Geographical and historical context

Coastal Palawan has witnessed progressive settlement by different groups during the 20th century. Originally inhabited by Tagbanua (in the northern and central parts of the province), Batak (central), Pala'wan (central-southern parts), and Molbog (southern), other ethno-linguistic groups settled along the coasts for economic opportunities (Eder, 2009). The first 'wave' of migration came during the late nineteenth and early twentieth centuries from Cuyo and Agutaya, islands lying to the northeast of Palawan Island (Eder, 2004). Since the 1950s and 1960s, migrants have increasingly settled from diverse locations around the country, particularly the central island group known as the Visayas, which includes major islands such as Cebu, Negros, Bohol, Leyte and Samar. This migration to Palawan coincided with a rapid expansion of fisheries production in both the small-scale and commercial fishing sectors in Palawan, which rapidly became one of the leading sources of fish in the country (Butcher, 2004).

Recently, the coastal regions of the province have experienced a further intensification of different types of fisheries trade. For example, investments from East Asia beginning in the late 1980s and increasing rapidly from the 2000s have led to Palawan being the national

centre for the lucrative trade in live reef food fish, exported to China to meet growing middle class demand (Fabinyi, 2012). Other important international seafood exports from Palawan include chilled groupers, sea cucumbers, squids and crustaceans. Major commercial fisheries operating in Palawan waters include purse seines for tuna and other pelagic fish, liftnet boats for scads and anchovies, and large-scale net fishing and spearfishing boats for mixed reef fish. Flanking and penetrating the coastal areas now is the spread of mining and boom crop expansion (Eder & Evangelista, 2014). At the same time, public and private actors are heavily promoting coastal tourism, with significant public and private investments in airports, hotels and other tourism infrastructure. And tourism expansion is closely linked to the expansion of environmental conservation in both marine and terrestrial spaces (Fabinyi, 2010; Dressler 2011). In all of these sectors, control over natural resources is heavily contested by multiple actors with different visions of the frontier. Palawan's coastal frontier is thus rapidly filling in with diverse actors who live in the same spaces and compete over access to new lucrative forms of marine resource use.

Social relations

In the coastal areas of Palawan, social relations of class¹ and ethnicity² have played a vital role in coastal peoples' capacity to negotiate access and use marine resources. Settlement patterns in Palawan intersected with long-established ethnic categories and the social relations that influenced claims over access to and use of land and coastal resources.

Spanish and American colonial regimes helped construct the social binaries of lowlanders and uplanders that affected social ties, networks and trade dynamics. As the Spaniards first began proselytization among lowland peoples, they faced difficulty converting others who upheld their own custom by living in, or retreating to, the uplands. Social discrimination and divisions reinforced subsequent social divisions and hierarchies between 'advanced' Christian lowlanders and 'primitive' tribal uplanders along socio-spatial lines (see Abinales, 2000; Dressler, 2009). Along the coastal plains, lowlanders were cast as productive farmers in line with the state, and Church, whereas uplanders were cast as pagan and backward. The coastal poor often tended to be Christian, but there were also those 'in the

middle’, whose ethnicity and class position were varied and constituted from different social groups who progressively filled in the coastal zone. Indeed, since their colonial inception, these broader categories tended to belie significant ethno-linguistic diversity across the islands. Yet while the blurring of ethnic categories continues to unfold, constructed categories harden and take on greater socio-political significance through contested claims over access to natural resources.

Our main focus is on coastal residents that come from a wide variety of locations across the Philippines. Access to productive resources is relatively unfettered for longer-term residents of the same group, where group membership is defined by ethnolinguistic traits, common (blood) lineage, and length of residency. Outsider access to and use of resources claimed by another group are weakest among new arrivals with different ethnolinguistic backgrounds (Dressler, 2009; Knudsen, 2012). However, access and use rights—and the institutions influencing them—are seldom ‘closed’ definitively. Those outsiders who form social relations with neighbouring groups, through marriage or labour relations, eventually secure new social and economic opportunities (Dressler & Fabinyi, 2011).

In many coastal and upland areas, livelihood dynamics overlap, unsettling older social divisions between upland farmer and coastal fisher (Pido, 1995; Eder, 2003). Many households living along the coastal-upland gradient will turn to clear plots near or on the coast, where proximity generates new access opportunities in fisheries. In Palawan, many farmers who face declining crop yields work social networks to adopt fishing as a supplemental activity and then perhaps fulltime, stating it produces money more quickly than the low yields of upland areas (Dressler & Fabinyi, 2011). However, the potential for competition over scarce resources increases between contrasting ethnic groups as more (indigenous or otherwise) upland farmers move to the coast amidst Visayan fishers. The following section explores in detail the different ways in which households in San Vicente have been able to access fisheries trade in terms of class and ethnicity, and then discusses examples of fisheries exclusions.

Local scale

Class relations, ethnicity and access to fisheries

In San Vicente, there are a range of small pelagic and demersal fish species (e.g. scads, ponyfish, mackerels) that are caught and traded within the Philippines. Squid and live groupers are two export fisheries that have expanded with significant investments from East Asian traders since the late 1990s (Table 1).

[Insert Table 1 here].

Access to and use of capital for fishing is differentiated in terms of class and ethnicity. We discuss lesser to greater degrees of differentiation and show how migrant and indigenous fisher families work social relations to access and use capital for fishing. Table 2 provides a sketch of the three different classes we discuss. The terms ‘more recent migrants’ and ‘settled migrants’ are overlapping categories but refer broadly to periods marking the first period of intense migration to San Vicente from the 1950s through to the 1970s, and those that came afterwards. More important than the specific date of arrival, however, is whether they have been able to establish over time, assets such as land, housing, fishing vessels and gears, and productive social relations.

[Insert Table 2 here]

Lower class. The poorest, lower income households are fishers with few or no capital assets (see Table 1). Typically residing in beach or foreshore areas with no formal tenure, these fishers will use hook and line or other simple gears on small, simple boats without engine, fishing for hours at a time in calmer inshore waters. Start-up costs are minimal, ranging from USD 21–42, and average trips will cost only USD 2–4. On these trips, they will likely only catch between 5–10 kg of lower-value fish such as threadfin bream (*Nemipterus* spp.) that are sold at USD 0.50–1.60/kg. Others in a similar situation will work as crewmembers for other larger boats, and will obtain a much smaller share of the profits compared to boat-owners. Such poorer households will however occasionally retain swidden plots (.25–.5 ha) further in the uplands, often far removed from flatter, more productive paddy rice lands (claimed by tenured migrants) already occupying most if not all arable lowland areas.

These households will either be very recent poor arrivals co-residing with other poor Visayan fishers, or indigenous Tagbanua. In time, a shared sense of poverty and experiences of hardship among Tagbanua and Visayan fishers may develop and centre on collective self-identification as *katutubo*—or being indigenous, innate—particularly in the context of intermarriage. Living with degrees of reciprocity, sharing experiences and learning from one another, these families place less emphasis on difference than commonality, though social differences are often still articulated through contrasting material culture and social behaviour (Dressler & Turner, 2008). They own few significant material assets and so rely heavily on their own labour and social networks to secure marine products. In both communities we studied, their households cluster together in the same hamlets. As elsewhere in Palawan, Tagbanua especially are significantly marginalized, with considerable levels of poverty in each community we worked in. While initial livelihoods have lower levels of diversification, particularly for younger or older-aged households, the suite of diversification expands as a risk spreading and coping strategy.

A key means by which people in this notional class position begin to access the fisheries trade is by way of networked social relations: immediate family, other relatives, neighbours and friends are vitally important in acting as the means by which households can access the capital and support to enter into a fishing operation (e.g. Seki, 2004). Nathan, for example, was a maize farmer who left Quezon province due to violence with insurgent groups, and migrated to San Vicente in 1986. His cousins and uncles had already arrived some time earlier, and were a crucial socio-economic lifeline when he first arrived. His relatives provided him with employment options on a net fishing boat, where he then worked for the first several years after arrival. After some years of gradually building up savings, he was able to buy his own net, again with support from a small loan from his relatives. He now owns two boats, fishing regularly on one with his son. He hires the other out to neighbours, and receives 50 per cent of the profits. Social networks are thus a key means to access fisheries, especially for recent migrants. Yet as Nathan's experiences indicate, it takes a long time to successfully transition to a notionally higher-class position with potentially more income and assets. Crucially, those Tagbanua and poorer Visayans without strong social

networks will be excluded from these means of production and the prospect of greater wealth generation.

Middle class. Moderately poor, middle-income fisher households will own a boat with an engine: using bottom-set gillnets and driftnets for the capture of small pelagic fish, using squid jigs to capture squid, or hook and line to capture live grouper. Start-up costs for these sorts of boats will be between USD 1500–4300, and trip costs will range from less than USD 5 to more than USD 60 (Table 1). The returns from fishing with these more technologically advanced boats are also greater — fishers are able to capture greater numbers of pelagic fish, in the case of nets, or higher-value products, in the case of boats with engines fishing for live grouper and squid.

Households with these boats will often rent them out, and may gradually capitalize their enterprise with new technology and boat crew. Such households have a broader repertoire of livelihood activities that tend to be more capital dependent, and are more likely to hold formal land title that is under intensified commercial agriculture (e.g. paddy rice). They are predominantly settled migrants, and tend to co-mingle more with other migrants and less so with indigenous peoples.

Fishers may transition from a notionally lower to middle class position over the course of a working life, as with Nathan, or they may obtain credit from local traders. In particular, this is common in fishing for live grouper, because many of the traders in San Vicente are agents of fish exporters based in Manila (who receive funding from companies in Hong Kong or China), and thus have the capital to extend credit. The extent of financing can include capital to go on a fishing trip (USD 60 for fuel and supplies for several days at sea), or even the entire boat and engine (USD 1500–4300). Traders will sometimes provide fishers not only with the capital required to go fishing, but also with financial support for personal expenses, especially during periods of financial difficulty or bad weather.

Garnering close social ties amongst wealthier fishers and financiers facilitates such access opportunities (Ribot & Peluso, 2003). Fishers have to invest in these relationships and build up trust with traders before they qualify for loans, as one trader noted: ‘we have to

know the fisher well before we give them money for expenses, especially if we give them capital for a boat and engine. Too many fishers just don't pay the money back or give their fish to other traders, so we have to be careful' (Nelson, trader, pers. comm., San Vicente, August 2014). Rodrigo, for example, was a fisher who owned his own boat and engine, but lacked the capital to go on fishing trips for live grouper. Through financing from a live grouper trader based in town—introduced to him by a neighbour who was already being financed by this trader—he was able to use his boat for regular live grouper fishing trips from 2003, and subsequently gain more income. Without this financing, he claimed, he would be forced to do fishing activities with a much lower return: as he did not have the capital to buy a net, he would otherwise be using hook and line for small quantities of lower-valued fish such as threadfin bream. There is no formal interest on these loans by traders to fishers, but fishers who are financed receive a lower price for their fish than those who are not. Successful fishers use these loans to establish themselves as independent fishers and are able to move out of financing, but other, less successful fishers end up burdened by mounting debts.

Upper class. Wealthier, upper income fishers—the notional 'upper class'—are those who own several or many smaller boats, or one or more larger ring-net fishing boats, and may either be long term residents or more recent arrivals with existing wealth. Start-up costs for the boats and equipment required to do ring-net fishing are from USD 21 000–43 000 and such vessels will catch between several hundred kilograms and two tonnes of small pelagic fish on a single fishing trip of several hours. Owners of these boats obtain very high returns from such fishing, which has the highest catch-per-unit-effort of all the fisheries in San Vicente (Palawan State University [PSU], 2011). Crews for these boats will usually be chosen from relatives, neighbours and friends of the owner, which means that poorer Tagbanua and Visayan fishers can struggle to negotiate the more distal social relations necessary to participate in this more lucrative fishery.

Upper income households include long-term settled households that have built up significant assets over time, including various land-based assets (multiple hectares of cash crops, livestock, variety stores etc.). Many are descendants of early migrants who were able

to claim private title over land. Evelyn, for example, was a live fish trader whose parents were among the first settlers to her village in 1955, arriving from Cuyo. They acquired land at this time, while also selling anchovies to itinerant traders from Manila. Using the profits from this trading practice they were able to ensure Evelyn received an education, and by the early 2000s she was working with a large fish trading company in the provincial capital Puerto Princesa. She used the savings from this work to start her own live fish trading enterprise with her husband in San Vicente in 2006. Their profitable enterprise now employs eight employees and finances the operations of 30 boats. Other upper income households may be more recent migrants that have migrated with existing wealth. Marivel, for example, grew up in Bohol in the Visayas, and found work assisting in the management of a fishing company. She married a Taiwanese fishing captain, and together with capital from her husband's buyers in Taiwan, they set up a squid trading operation in San Vicente in 1993. They currently finance about 200 boats and ship tens of tonnes of squid each year. Few, if any, very poor Tagbanua or Visayan fishers will influence how better off fishing households use their capital and overall returns on catches in these areas. And none will have any clear rights over such capital.

Fisheries exclusions

In this section we work with the counter-point of access, exclusion, to provide illustrative examples of how access is differentiated in practice among the different classes of fishers described in the previous section. We adapt Hall *et al.*'s (2011) notion of 'four powers of exclusion' (regulation, the market, force³ and legitimation) to highlight how they provide windows into the forms of societal changes and social relations described in earlier sections of the paper.

Regulation. Regulation of fisheries has a direct effect on influencing access dynamics in the coastal zone of San Vicente, with differentiated outcomes. In the late 1990s and early 2000s, for example, Eder (2009: 113–4) describes how the introduction of marine protected areas in San Vicente negatively impacted poorer fishers more than they impacted richer ones.

Because many MPAs were created close to shore, the fishing grounds of asset poor fishers—

those at the margins of subsistence—were most heavily affected. Without an engine, fishers in smaller paddle boats had to stay nearer to shore and a larger proportion of their fishing grounds were impacted by MPA enclosures.

More recently in 2014, the municipal government has banned beach seining. Beach seining involved laying out a large seine net in the shallow waters and then hauling it in to catch various small fish. While the net owners were heavily impacted by the ban, the ban had a disproportionate effect on the poorest fishers and members of the community because of the distinctive fishing method of beach seining. Many poorer members of the community—those without regular fishing income, the elderly, women and children—would gather whenever a beach seine was being laid and help to haul it in. As the haul was brought in, these extra workers would take fish away for their efforts. Although these workers were uninvited, the taking of fish was tolerated and seen as benefitting the wider community (see also Segi, 2014b). Poorer residents who gained access to fish in this way would then use these fish for their own consumption, or sell them locally. Banning beach seining, therefore, has meant excluding access to fisheries for the poorest and most marginalized fishers in the community.

A second piece of regulation introduced is licence fees and registrations for municipal fishers. Executive Order No. 305 (2004) devolved to municipal governments the registration of fishing boats that are three gross tons below, but this was only implemented in San Vicente recently. The goals of this regulation included ensuring that residents of San Vicente are the only ones who can fish in municipal waters, and to generate wider revenue for the local government. Permit fees for gears, fishing vessels and the use of marine waters for seaweed farms were introduced, ranging from two USD upwards to tens of dollars depending on the gear and vessel type. Penalties for breaking these regulations were introduced in the form of fines (USD 32 for a first offence). Other regulations recently introduced since late 2014 include tightening the rules surrounding the live reef food fishery, specifically: new minimum and maximum fish size limits, a closed season and a ban on the ‘grow-out’ of juvenile fish. These regulations have had highly socially differentiated outcomes on fishing effort and incomes: poorer fishers with fewer savings have been affected the most. For example, some poorer fishers reported being unable to pay the license fees. The new restrictions on live fish

fishing meant that boat owners and crews who rely on fishing for live fish during the period of the closed season would be forced to shift to other, less lucrative fisheries such as threadfin bream. In particular, crewmembers in the live fish fishery tend to already be among the poorest members of the community, and any reduction in income would intensify their poverty. From this perspective, the impacts of fisheries regulations have reinforced existing inequalities.

The market. The high growth in seafood prices, especially for squid and live reef food fish, has been for many fishers a type of maritime ‘boom crop’ (Hall *et al.*, 2011) that has in the short term benefitted them greatly. The primary direct barrier to access these forms of seafood is simply one of capital: those fishers with higher levels of capital and who own their boat are able to obtain a far greater share of the profits than those who simply serve as crew on the boat. Importantly, as fisheries become more capital-intensive (e.g. ring-net fishing), the profit-sharing systems change to favour owners over crewmembers (Fabinyi *et al.* 2016). Those without capital are effectively excluded from the highest levels of profit from these lucrative fisheries.

More indirect, however, are exclusions related to the high increase in value of another market: land. In recent years, local, provincial and national governments in the Philippines have invested heavily in coastal tourism, seeing it as an opportunity to generate economic growth and employ fishers and farmers. However, as documented in central and northern Palawan (Fabinyi, 2010; Dressler, 2011), the potential of incorporating the poor into tourism production is diminished when property values (and other commodity costs) nearest to the coast increase to constrain local access. In particular, speculation can cause the value of coastal lands to increase dramatically to such a level that those poor, lower income Visayan and Tagbanua fishers without formal land rights (and other assets) are easily evicted to make way for new, exclusive tourism infrastructure. As a consequence, poorer Visayan and Tagbanua fishers may retreat inland or relocate to another less productive coastal area that make fishing livelihoods far more difficult. In contrast, those wealthier fishers with larger boats and private land holdings have greater potential to use these assets to benefit from the development of tourism (e.g., taking tourists out on tours, changing homes into hostels, etc.).

Along the 14.7 km 'Long Beach' in San Vicente, property speculation has seen powerful local politicians and others investing considerable sums of money to purchase lands for anticipated tourism arrivals—according to the municipal tourism plan, annual arrivals will increase to 50 000 by 2021, 500 000 by 2029 and 1 million by 2044. The official website (www.sanvicente.com.ph) notes that Long Beach is 'eyed by many tourists, investors and analysts to be the next Boracay of the Philippines, the next Bali of Asia [...].' Cleared lands along the main beach and nearby have already been purchased by major property development companies such as Robinsons for the anticipated development of hotels, resorts and shopping malls. New infrastructure investment also includes the development of an international airport, developed to facilitate tourism. Many of these lands have been literally fenced off, advertising exclusion, partly denying poor fishers access to marine resources. Among the Tagbanua, Visayan and Agutaynen, coastal occupants and users have either sold their lands for marginal sums (compared to current property values) of money or have been marginalized due to direct land sales for future tourism developments, reinforcing their social position. Although widespread evictions are not yet present, those without secure tenure are vulnerable.

Legitimation. Legitimation works through each of the other exclusionary powers to justify their symbolic and moral appeal (Hall *et al.*, 2011: 18). The push for tourism in the coastal Philippines, for example, relies on state, municipal and private sector rhetoric that it will bring economic benefits and prosperity for local residents. Tourism is depicted in policy documents of local, provincial and national governments of the Philippines—as well as by environmental non-governmental organizations (NGOs), and in much of the marine conservation literature—as a positive economic activity that can generate income, employment and sustainable livelihoods for coastal residents (e.g. Alcala & Russ, 2006). In many ways, the major push behind coastal tourism development is to effectively expedite the modernization of rural areas and fishers. Indeed, in the Philippines, small-scale fisheries are frequently represented as a low-status occupation, characterized by poverty, hardship and over-exploitation of the resource base (Fabinyi, 2012). By extension, fishers are often represented as ignorant, destructive and in need of regulation (Segi, 2014a).

Moreover, the discourse and truth value of fisheries science is a key means by which fisheries regulations are legitimized. Appeals to the sustainability of fisheries stocks were cited as key reasons for the newer regulations introduced since 2014. The new regulations on the live reef fish trade, for example, cite the need ‘to save, protect and conserve the degrading marine resources’ in order to ‘save the industry and its stakeholders from collapse and displacement’ (Palawan Council for Sustainable Development, 2014). Similarly, the earlier MPA initiatives of the late 1990s were largely driven by environmental science (Arquiza, 1999). More broadly, Palawan has long promoted an image as being the ‘last ecological frontier’ and as pro-environment (Dressler, 2011). While these legitimations do not imply that interventions are not needed from an environmental sustainability perspective, it does mean that social and political impacts of new environmental regulations can be downplayed. The technical, expert knowledge deployed by local, provincial and governing organizations typically reflects the ‘will to improve’ (Li, 2007), eliding questions of politics and power.

Legitimations are always contested, however (Hall *et al.*, 2011: 18–9), and such contestations are also seen in San Vicente. After the ban on beach seining came into effect, for example, owners and fishers of beach seines sent a petition to local and provincial political representatives. Similarly, live fish traders organized to protest the imposition of the closed season. While the beach seining petition was unsuccessful, live fish traders succeeded in delaying the implementation of the closed season.

Discussion and conclusion

While much recent scholarly attention has focused on land-based frontier change—with significant focus on land grabs and boom crop production (see Borrás *et al.*, 2011; Peluso & Lund, 2011; Fairhead *et al.*, 2012)—our paper has examined similar manifestations in coastal frontiers. These changes are increasingly linked to the production of marine commodities and the claiming of capital and seascapes that are associated with increasing demand for imported seafood from across the region (Fougères, 2008; Fabinyi, 2012; ADB, 2014; Eriksson *et al.*, 2015). The intersection of the intensifying fisheries trade and local social relations in context

strongly informs the political economy of who gets what, how much they get, and what they do with things (Bernstein, 2010); effectively, the essence of access (Ribot & Peluso, 2003).

Palawan is a notional 'frontier' where many recent migrants move to the coast for livelihood opportunities. Investments in land and infrastructure for much anticipated tourism developments are unfolding, as migration continues and fisheries trade expands. Yet, the ability of fishers to access the wealth generated by this fisheries trade varies considerably. Those with existing wealth can use it to successfully access new fisheries opportunities such as the live fish trade. In contrast, relying on their own labour and limited capital, poorer Visayan fishers work on boats without engines or as crew members, experiencing low returns on their investments, which keeps them in a vulnerable position. Indigenous Tagbanua fishers with greater access to their own and kin-held usufruct land in upland areas, but equally poor, also try their luck to access more lucrative fishing opportunities but often have more distal social relations to negotiate. These social relations often secure the access to and use of capital and technology that is needed to ensure successful seafood commodity production.

More broadly, then, this paper has contributed a scaled political ecology approach to the often highly normative discussion surrounding the costs and benefits of expanding fisheries trade. Our contribution emphasizes how the micro-social dynamics of both access to and exclusion from the fisheries trade among indigenous and migrant coastal dwellers relates to the regional political economy of maritime frontiers. We argue that transformations taking place at a regional scale, such as increased tourism, migration and investments in fisheries, intersect with local-scale relations of class and ethnicity to generate specific access dynamics that heavily influence the social outcomes of expanding seafood trade. While access dynamics will vary depending on context, this scaled political ecology approach builds on existing accounts of fisheries trade to highlight the processes unfolding at multiple scales. From a policy perspective, such an approach highlights that the question is less about whether seafood trade is 'positive' or 'negative' for coastal communities, and more about how such expanding trade interacts with particular social dynamics. It emphasises viewing the role and perspective of fishers not only in terms of formal 'rights' in relation to managing expanding

fisheries trade—whether fishing rights or human rights (Allison *et al.*, 2012)—but also more subtle notions of access and exclusion.

Furthermore, there are various factors that increase the importance of a conceptual focus on access and exclusion. While San Vicente fisheries so far have avoided the large-scale depletions characterizing much of the coastal Philippines, some fisheries are in decline (PSU, 2011), and this is a phenomenon widespread globally (Pauly & Zeller 2016). As the broader supply of marine resources become depleted and the ‘frontier closes’ (Butcher, 2004), competition for control over these marine resources will likely intensify (Pomeroy, *et al.* 2007). As in terrestrial spaces, different land uses are intensifying near and within coastal spaces, particularly tourism infrastructure, squeezing out poorer residents of the coastal zone. Governance is also tightening, becoming a major driver of access dynamics in itself, and migration to the coastal zone continues. In the face of these growing constraints at the broader scale, social relations become key markers of difference that can harden and inform levels of authority over access to resources. As the pace of these changes increase with globalization, such access dynamics will become more salient to understand social outcomes.

Endnotes

- 1 While noting that ‘class’ is complex with myriad influences (Kerkvliet, 1990; Eder, 2009), we adopt a definition of class as socio-economically constituted through relations of production and exchange, based on access to and use of natural resources (fish), assets (fishing gear, land, etc.) and income (from fisheries, farming, wage labour, remittances) (Wright, 2005).
- 2 Although significant ethnic diversity exists among migrant groups (Eder, 2004), our use of ethnicity is meant to highlight the broader socio-political and cultural differences between indigenous (Tagbanua) and migrant groups. We argue that ethnicity rests in the experiences of social life and differential access to opportunities that groups in power control and exploit (Wilmsen, 1989). The process by which groups identify as indigenous reflects a ‘positioning’ (Li, 2000: 151), which draws upon the meanings and context of struggles against the ‘positions’ of others in power.
- 3 While violence is not uncommon in many other parts of the rural Philippines, force is not a major feature in everyday life of San Vicente, so we have not included it here.

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Figures

Figure 1. Palawan Province, Philippines.

Source: CartoGIS, The Australian National University.

Tables

Table 1. Major fishing activities and patterns of trade in San Vicente, Philippines.

| Fishery name | Start-up costs (USD) | Cost of average trip (USD) | Targeted species | Simplified commodity chain | Range of catch and price |
|---------------------------------------|-----------------------------|-------------------------------------|---|---|---------------------------------|
| Hook and line (<i>Kawil</i>) | 20–40 | 2–4 for a day trip. | Threadfin bream (<i>Nemipterus</i>) | Fisher' Middleman' Roxas, Taytay and/or Puerto Princesa. When dried, they will reach Manila. | 5–10 kg, USD 0.50–1.60/kg |
| Squid (<i>Pusit</i>) | 1490–2130 | 2–4 expenses for an overnight trip. | Bigfin Reef Squid (<i>Sepioteuthis lessoniana</i>) | Fisher' Middleman' Agent of exporter in San Vicente' Puerto Princesa' Manila' Japan and Taiwan. | 7–200 kg, USD 2.30–3/kg |
| Bottom set gillnet (<i>Palubog</i>) | 2130–3190 | 4 expenses for an overnight trip. | Small pelagic and demersal fish | Fisher' Middleman' Roxas, Taytay and/or Puerto Princesa. When dried, they will reach Manila. | 10–100 kg, USD 0.50–1.60/kg |
| Live fish (<i>Suno</i>) | 1490–2130 | 64 expenses for a 3 day trip. | Leopard coral grouper (<i>Plectropomus leopardus</i>) | Fisher' Agent of exporter or local trader in San Vicente' Roxas' Manila' Hong Kong. | 2–4 kg, USD 32–53/kg |
| Driftnet (<i>Palutang</i>) | 4260 | 6.4 per trip for an overnight | Small pelagic and demersal fish | Fisher' Middleman' Roxas, Taytay and/or Puerto Princesa. When dried, they will reach Manila. | 20–300 kg, USD 0.5–1.60/kg |

| | | | | | |
|---------------------------------------|---------------------|---|------------------------------------|--|--|
| | | trip. | | | |
| <i>Ring net</i> (<i>Talakop</i>) | 21 280–42 530 | 28 per trip for a trip of several hours. | Small pelagic and demersal fish | Fisher' Middleman' Roxas, Taytay and/or Puerto Princesa. When dried, they will reach Manila. | 200 kg–2 tonnes, USD 0.5– 1.60/kg |

Note: Costs were converted from Philippine Pesos (PHP) to US Dollars (USD). At the time of the last period of fieldwork in November 2015, USD 1 = PHP 47.

Source: Authors' fieldwork 2014–5. Adapted from Fabinyi *et al.* (2016).

Table 2. Class and ethnic differentiation in San Vicente, Palawan.

| Class | Assets | Ethnicity |
|--------|--|--|
| Lower | Few household assets: minimal livestock, pales, buckets, machete; no formal land tenure. May own small dug-out, paddle-driven boat without an engine. Simple fishing gear: hook and line, squid jig. Start-up costs of USD 21–42. | More recent migrants (occasionally intermarried with Tagbanua) Tagbanua. |
| Middle | Some household assets: more livestock (some raised), de facto land tenure (tax declaration). Will own a small boat with an engine. In addition to hook and line, they will have more gear: bottom-set gillnet; driftnet. | Settled migrants. |

| | | |
|-------|--|---|
| | Start-up costs of USD 1489–4255 | |
| Upper | <p>Significant household assets: household appliances (e.g. television, concrete house). Usually will hold formal land title over their household land.</p> <p>Those also involved in farming will own more livestock including water buffalo; de jure land holding in lowland and uplands.</p> <p>May own a commercial size boat and expensive gear (e.g. ring-net) that employs crew of 10–20 (startup costs of USD 20 000–40 000), or will own multiple smaller boats that fish for live fish, squid.</p> | Usually settled migrants, but also migrants with existing wealth. |

Source: Authors' fieldwork 2014–5. Adapted from Fabinyi *et al.* (2017).