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Poverty and Beyond: Small-Scale Fishing in Overexploited Marine Environments

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Abstract Small-scale fishers in tropical regions of Asia are known to respond to uncertain resource fluctuations in diverse ways. Less is known of their adaptations to and motivations for fishing in severely overexploited fishing grounds. A common explanation emphasises poverty and a lack of access to alternative skills and sources of livelihood. Based on a study of small-scale fishing among coastal dwellers on Negros Island in the Philippine, I show that fishers' reasons for continuing to fish in overfished waters are more complicated than this explanation allows. To explain why better-off households remain committed to fishing when fish catch levels are generally very low, and why very poor and marginalized households drop out of fishing under such conditions, I combine a diverse livelihoods approach with literatures that focus on issues of power, politics and social exclusion. I differentiate among different kinds of small-scale fishing and track changes in these over time. I pay close attention to fishermen's own conception of their work and the status distinctions made among them, and examine the socio-institutional arrangements of coastal livelihoods more broadly.

Keywords Small-scale fishing · Poverty · Environmental decline · Livelihood diversification · Social exclusion · Philippines

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Introduction

Poverty and a lack of access to alternative skills and sources of livelihood are the commonly cited reasons for small-scale fishers continuing to fish in overexploited environments (Panayotou 1982: 30; Bailey 1994: 27; Pauly 1997). With high levels of dependency on fisheries resources and low-barriers of entry to the small-scale fisheries sector, further resource degradation and marginalization seem inevitable outcomes. Small-scale fishing persists as a livelihood or 'occupation of last resort' usually for the 'poorest of the poor' (Smith 1979, 1981; Wright 1990; World Bank 1992). The association between fishing and poverty has, however, been questioned on empirical and theoretical grounds (Béné 2003). Studies from across the developing world demonstrate that fishers are located in a wide range of socioeconomic groups (Garaway 2005; Béné 2009; Martin *et al.* 2013).

A key explanation for why fishers who fish in overfished waters are not all poor highlights the crucial role of flexibility and livelihood diversification (Allison and Ellis 2001). Fishers and their families make seasonal and other kinds of adjustments within the small-scale fisheries, as well as in other livelihood niches within the, often complex, ecosystems of tropical coastal zones (Bailey and Pomeroy 1996). To counteract declining economic return from fishing, many also diversify into other livelihood activities, with varying success. To better understand the unequal outcome of household livelihood strategies, scholars have called for closer attention to how relations of power regulate access to and benefits from natural resources and other livelihood opportunities (Béné 2003: 959; Allison and Horemans 2006: 757; Eder 2011: 157).

Based on long-term fieldwork among peri-urban coastal dwellers on the Philippine island of Negros, this article shows that across the neighbourhoods included in the study there were both very poor, marginalized, 'occupation of last resort'

fishers and better off and highly committed fishers, some 'full-time' and many 'part-time'. While many were poor, a substantial number were not from low-status, marginalized households, which over the last decade have left the fishery in greater numbers than less poor and better off households with several of the most active fishermen.

I combine insights from a diverse livelihoods framework (Chambers and Conway 1992; Allison and Ellis 2001) with research focussing on issues of power, politics and social exclusion (Lowe 2000; Béné 2003; Gaynor 2005; Eder 2011; Fabinyi 2012). Livelihood activities (and the discourses surrounding them) are in this perspective "not neutral, but engender processes of inclusion and exclusion" (de Haan and Zoomers 2005: 34). To address diversity, complexity and power in the small-scale fisheries of Sibulan in the broader context of the socio-institutional arrangements of coastal livelihoods, I examine different kinds of small-scale fishing and track changes in them over time, paying close attention to fishers' own conceptions of their work and the status distinctions among them.

Field Site and Methods

In 2005 and 2006, I conducted 12 months of ethnographic fieldwork in three coastal villages in the municipality of Sibulan, located a few kilometres north of the provincial capital of Negros Oriental, Dumaguete City (Fig. 1). My focus of was on changes in livelihoods and social relations among coastal dwellers in *barangay*[1] Amio, Minaba and Talak (pseudonyms). There were approximately 360 households in the study area, 131 of which were included in a more detailed survey of livelihoods. Slightly fewer than half these households (43.5 %) had one or more members who were small-scale fishermen. Since the initial fieldwork period, I have made several revisits, the last one in 2014, lasting from about a week to a few months, to discuss with fishermen and other members of their families their views on and experiences of fishing, as well as other livelihood activities. I also collected additional quantitative data on fish catch and incomes, accompanied fishermen on their fishing trips and observed changes in their practices.

Small-Scale Fishing and Poverty

In the Asian tropics, intimately linked to broader processes of agrarian transition and political-economic change across the region, it was primarily landless and land poor groups who settled close to the sea to fish as a main source of livelihood during the twentieth century (Firth 1966: 65–67; Alexander 1995: 180; Eder 2008: 33). Growth in small-scale fisheries was particularly strong during the latter part of the century (FAO 2007: 2; Eide *et al.* 2011: 18). In the Philippines, many who took up fishing at this time were from poor and marginalized households, and many of them remain poor. Survey data show that compared to the average Filipino household, those involved in small-scale fishing have a much higher poverty incidence ratio, lower educational levels and less access to safe water (BFAR 2005). They are also more likely to live in makeshift houses and squat on land they do not formally own (Knudsen 2012). While barriers of entry into the fisheries sector have been quite low, many fishers and their families appear to be struggling to move from fishing in overexploited fishing grounds into higher-return activities. The publication of the 'Bruntland report' (WCED 1987) reinforced the popularity of this characterisation of how natural-resource dependent peoples are caught in a vicious circle of increasing poverty and environmental decline. In literature on small-scale fishing communities in less-developed countries this same line of argument became entrenched, developing into a 'paradigm' (Béné 2003) that took for granted a deteriorating marine environment leads to rising poverty levels among small-scale fishers.

A key weakness with this 'paradigm' is the inadequate attention given to the voices and diversity of coping strategies of the poor themselves. The "sustainable livelihoods framework" (Chambers and Conway 1992), developed to overcome some of these weaknesses, convincingly argues for greater attention to the micro-processes unfolding at the level of households and communities. In this actor-oriented approach, individuals and households combine a diverse set of resources or 'capitals' (natural, social, human, financial) into particular livelihood strategies (extensification, intensification, diversification and migration) (Scoones 1998). When applied to small-scale fisheries, the approach encourages recognition of small-scale fishing itself as a diverse phenomenon (Bailey 1994). A number of more recent studies show that small-scale fishing can support different livelihood strategies and play a variety of roles in the lives of fishers and their families (Allison and Ellis 2001: 380; Islam and Chuenpagdee 2013; Martin *et al.* 2013: 745). For many households, small-scale fishing functions as a kind of safety net, providing at least some income and food on a near daily basis (Jentoft and Eide 2011). With important interdependencies and interrelationships between fishing and land-based livelihoods (Eder 2003), small-scale fishing may also strengthen diversified livelihoods (Allison *et al.* 2004, cited in Martin *et al.* 2013: 746). In addition, as in island Southeast Asia, small-scale fishing has in numerous instances served as an establishment strategy (Eder 2008), enabling landless and land poor groups to 'become local' in a new place.

However, while fishing can potentially enhance people's ability to diversify and improve their livelihoods, it does not do so for all fishers. A key insight in the literature is that the

[1] The smallest political administrative unit in the Philippines.

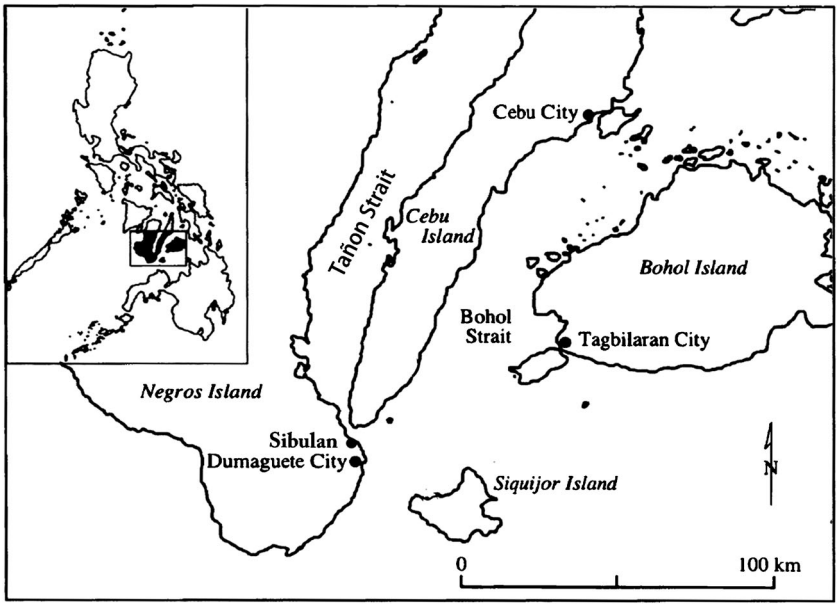

Fig. 1 Location of the research site. Map modified from the original in Shio Segi (2013: 338), with permission of author

diversification strategy of more prosperous fishing and farming households tends to entail individual level occupational specialization combined with household level diversity (Ellis 2000: 5; Eder 2011: 153). In poorer households, individual level diversification is more common. This is reflected in the material I present here, which shows that the majority of 'full-time' fishers in Sibulan are from less-poor and somewhat better-off households, while fishers from very poor and marginalized households more often work as day labourers. A diverse livelihoods approach that focuses narrowly on capitals and activities will likely fail to fully reveal why this is the case by overlooking how historical, institutional and structural factors mediate the ability of people to pursue livelihoods and ensure outcomes (Scoones 1998; de Haan and Zoomers 2005). A key aim of researchers should therefore be to examine the 'socio-institutional mechanisms'[2] that govern access to and benefits from fisheries resources and other livelihood opportunities (Béné 2003: 950). This is important because even when fishing conditions are generally good fishing families may remain poor due to lack of access to and ownership of productive assets, indebtedness, unequal trading relationships, and discrimination based on class, ethnicity, religious affiliation or settler status.

Some studies find a significant intergenerational shift in attitudes towards fishing, in part linked to environmental decline, but also because young men who grow up in coastal communities look to become increasingly oriented to a wider 'cosmopolitan' world through media, migration and modern education (Fabinyi 2012: 163–169). In a fishing community in the Palawan region of the Philippines, Fabinyi (2012) observed that young men associated fishing with instability of income, hard work and low status. I observed similar tendencies in Sibulan. Young, single men from fishing-oriented families would at times entertain ideas about a different lifestyle with higher-paying and more comfortable jobs. With the support of parents or older siblings, some took steps to invest in education and try out jobs outside of fishing. However, some have since returned to their villages and taken up fishing again, especially after marriage, citing their preference to stay close to family and friends, which small-scale fishing allows. This desire for family and community is in part a consequence of the precarious nature of much work outside of fishing and coastal-resource livelihoods. As elsewhere in Asia (Breman 2013), despite high economic growth rates, casual, short-term jobs proliferate in almost all sectors of the Philippine economy.[3] Thus, better-off households who remain in fishing could be seen as being caught in a "middle income trap" (Rigg *et al.* 2014).

In contrast to studies that conclude fishing is a low-status and difficult occupation that mostly poor people (and others who fail to access higher return activities) engage with, other studies show fishing to be a preferred occupation for many households (Pollnac *et al.* 2001: 534; Onyango 2011). Pollnac *et al.* (2001) argue that the majority of small-scale fishermen in the Philippines, Vietnam and Indonesia are not particularly willing to leave fishing for other occupations, but remain committed to fishing even when incomes decline and other jobs with equal or better pay are available. In addition to income

[2] 'Socio-institutional mechanisms' are the formal and informal rules and regulations governing access to resources and the potential benefits extracted from them (Béné 2003).

[3] 'Informalization of formality' is rampant even in the government sector. In the Municipality of Sibulan, more than half of all workers – including sea wardens – were in 2006 'job order employees.' Such contracts provided no social security and other benefits and could end on short notice, depending on the outcome of elections and the availability of patronage funds.

and food, fishing provides considerable non-economic satisfactions: fishing is regarded as personally and socially more rewarding than other kinds of work. Although this may be a too sweeping a conclusion (based on limited survey data) about job satisfaction (Fabinyi 2012: 109), I found a somewhat similar positive view of fishing expressed by some fishers in Sibulan.

The aim of this article is twofold. Firstly, to document patterns of diversity within the small-scale fisheries and examine factors that differentially shape peoples' ability to earn a living catching fish. Secondly, to examine in more detail the motivations and commitment of fishermen to continue fishing when catch levels are generally very low. These two themes are, of course, intimately linked, as structure and agency always are. By locating fishing within a wider set of household livelihood activities and neighbourhood relations, and embedding these in relations of power at various scales, relevant contextual space is opened for interrogating fishermen's diverse and complex reasons for continuing to fish in overexploited, less remunerative fishing grounds.

Categories of Fishers and Households

The small-scale fishers who fish in the overexploited coastal waters near Dumaguete City differ markedly in terms of ownership of productive resources, household income and standard of living. In addition to wealth and class-based differences, it is useful to elaborate the categories 'fishers' and 'coastal dwellers' in terms of 'full-time' and 'part-time' fishers on the one hand, and 'original people of the place' and 'migrants' on the other (Fig. 2).

These concepts are heuristic devices constructed for the purpose of analysis, introduced to highlight key differences, distinctions and power-dynamics in the small-scale fisheries of Sibulan. All of those I classify as 'full-time' fishers (C and A) did other work from time to time. During the 'lean' months, from November to February, more fishers found other jobs. Many did construction work, drove tricycles (motorcycle with a sidecar used for public transportation) or found temporary service sector jobs. Some of these I classify as 'full-timers,' especially those who seldom did other work and showed a strong commitment to fishing. Most of these men were highly skilled fishers who mastered a wide repertoire of techniques. Fishing constituted more than half of their total annual income. The 'part-timers' (D and B) were a diverse group. Some were almost as dedicated to fishing as the 'full-timers,' but since they had more income from other jobs at the time of my surveys, I classify them as 'part-timers'. Several moved between the 'full-time' and 'part-time' categories as their circumstances changed. The less skillful 'part-timers' tended to have a stronger preference for jobs outside fishing when they were available. They also held a lower status as '*mananagat*' (fisherman) within the fishing communities of Sibulan. Some of the 'full-timers' referred to them as 'only part-timers' — amateurs with little knowledge of and commitment to fishing.

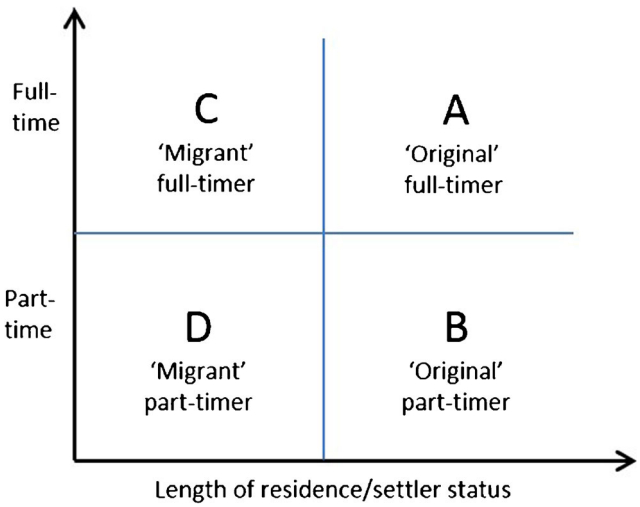

Fig. 2 Categories of fishers

In coastal Sibulan, the 'original people of the place' versus 'migrant' distinction was at times an important status marker. It was both a sensitive and contested theme to discuss and a highly context-dependent issue. Someone said to be 'not really from here' in one context would in another context be spoken of as having 'lived here a long time now'. Nonetheless, while there was a large contested grey area in terms of who held what status, some held undisputed 'original people of the place' settler status and others clearly held much lower status as 'locals.' The distinction is, however, not necessarily antagonistic (Zayas 1994). Migrants are in some contexts welcomed by local residents. They bring with them skills and social networks, can be a source of labour and potential marriage partners, or become the supporters of a local leader who seeks a following. In other contexts, such as conflicts over land, definitions over legal and illegal fishing practices, and distribution of patronage funds from government officials, settler status distinctions frequently come into play and affect dynamics of inclusion and exclusion (Knudsen 2012, 2013).

Small-Scale Fishing in Sibulan

In May 2006 208 boats were used by 174 fishers in the three coastal villages of Amio, Minaba and Talak (Table 1). Of these boats, 164 (79 %) were small and non-motorised, usually used by a single fisher. The cost of a new non-motorized double-outrigger was around US$35 (1800 pesos).[4] The larger non-motorized outriggers (costing about US$250) were used

[4] Dollar value calculated with an exchange rate of 51,3 pesos per US$ for 2006.

Table 1 Boats and fishermen in three coastal villages of Sibulan

Survey May 2006	Amio	Minaba	Talak	Sum boats and fishermen
Small non-motorized boats	40	35	89	164
Large non-motorized boats	0	2	6	8
Motorized boats	13	4	19	36
Sum boats	53	41	114	208
% Motorized	24.5 %	9.8 %	16.7 %	17.3 %
# Fishermen	48	36	90	174
Full-time	17	7	32	56
% Full-time	35 %	19 %	36 %	32 %

mainly for trap fishing by five or six men together. The remaining boats were motorized outriggers, most of them small boats equipped with a 5.5 horse powered engine and operated by one fisherman. Full-timers who owned motorized boats tended also to own non-motorized boats.

In 2005/2006, the average catch per trip of the 24 fishermen who took part in the more detailed survey was 2.23 kg. Informants' responses suggest that this figure is more than 80 % lower than in the 1960s and early 1970s. Most of these fishermen were hook-and-liners, but many also used traps, pots or nets from time to time. The fishermen went on an average of 23 fishing trips per month, most lasting from 2 to 5 h. Almost all of the catch was sold (82.9 %), but better-off households consumed a higher share of the catch than poorer ones. In 2006, the average price of the catch sold was 70 pesos per kg (US$1.36). Monthly income from fish sold amounted to about 3000 pesos (US$58) per fisherman, comparable to the monthly wage of a 'full-time' construction worker.

Although the small-scale fisheries sector is no longer drawing the same high number of people from other sectors of the rural economy as it once did, the number of small-scale fishermen has continued to increase in recent times (Municipal Government of Sibulan 2001: 11; Green *et al.* 2003: 131, Table A3-2). According to my key informants, the number of fishermen in Sibulan was higher in 2006 than in 2000. This increase can in part be explained with a 'poverty-trap' and 'employment of last resort' type of argument, but the aim here is to show that other factors are also relevant. I want to stress that while the overall catch levels are much lower today than they were some decades ago, there is still considerable variation in fishermen's success at sea and in what they are able to get out of fishing.

Are Fishermen Mostly Among 'the Poorest of the Poor?'

Analysis of income, settler status and fishing among households in Amio Beach, where I lived during the main period of fieldwork, shows that many fishermen were not the 'poorest of the poor'. Based on histories of settlement and genealogical data, the 70 Amio Beach households are divided into two equally sized 'migrant' and 'original people of the place' categories (Table 2).

In 2006, more than half of the 'migrant' households in Amio Beach had an income below the official poverty line[5] of about 70,000 pesos (US$1365) (Table 2). In contrast, only about one in five 'original people of the place' households were income poor in that year. Of the 48 fishers in Amio Beach in 2006, from 38 households, 28 belonged to families with some kind of 'original people of the place' settler status. There were five 'full-timers' in the 'migrant' household category (C) and 12 in the 'original people of the place' category (A). Only two 'full-timers' belonged to income poor households.

These figures suggest an alternative perspective on fishing and poverty. Leo, a 'full-time' fisherman, told me: 'The opinion of others about us fishers is *pobre ra*'. Leo did not see himself as poor. Poor people cannot afford rice, have to skip meals or live in urban slums in Manila, he believed. If by *mananagat* Leo meant dedicated 'full-timers,' his assessment ('fishermen are not poor') was quite accurate. In the next sections I present examples of different kinds of small-scale fishing and provide a fuller context for understanding motivation and commitment whether or not to continue fishing.

Skillful Hook-and-Liners

This example focuses on one particular group of hook-and-line fishermen in Amio Beach and how they and their families have responded to altered conditions. During the 1960s, many Amio Beach fishers expanded their fishing area and increased the length of their trips to 2 or 3 days or even several months. During the period of north-easterly monsoon winds (*amihan*, between November and February), they went to a community in south-western Negros, about 60 km from Sibulan. Most of their catch was sent with buses, cargo trucks or motorbikes to the provincial capital. By establishing and maintaining wider social networks of kin, affines, friends and partners through migrant fishing, they were able to access new fishing grounds as closer older ones began to show signs of decline, and continue successful hook-and-line fishing independent of seasonal monsoon winds. As with geographically mobile fishers elsewhere in the Visayas region (Zayas 1994), they entered these communities as 'migrants' (*langyaw*) and had to nurture good relations with the locals to get permission to sleep on a beach or build a temporary house. In some cases, such strategies have resulted in impressive inter-island networks (Seki 2000, 2004; see also Eder 2003, 2008). Among Amio fishermen, a circular pattern of migration was most common and

[5] In 2006, the official poverty line for the Central Visayas Region was 13, 963 pesos per person (NSCB 2014) and the average household consisted of five persons.

Table 2 Household income, Amio beach

Annual household income 2006 (in pesos), Amio Beach	'Migrant' households	'Original people of the place' households
Poor (<70,000)	54 %	20 %
Less poor (70,000–139,999)	43 %	55 %
Better off (140,000–299,000)	3 %	25 %

there was an important sense of reciprocity in the relationship between migrants and locals. When the south-westerly monsoon season started (*habagat*), Sibulan fishermen acted as hosts to fishermen from other areas.

Coinciding with a strong push by external donors and development agencies to protect fisheries resources in the tropics through Coastal Resource Management (CRM) in the late 1980s and 1990s, the hook-and-line fishermen in Sibulan began to fish in a much smaller area closer to home, resulting in a large drop in their catch. National laws and municipal ordinances were passed to regulate small-scale fisheries, protect biodiversity and encourage ecotourism (Alcala 2001). With declining fish catch levels and new regulations long-distance trips were becoming difficult, both economically and politically.

In response to these developments, several Amio Beach fishermen took up low-cost forms of fishing 'full time,' mostly hook-and-line. For the skillful fisherman, the non-motorized outrigger with paddle and sail proved efficient and practical under the new circumstances. For example, George, an informant in his fifties, mastered ten different hook-and-line techniques for a catch per trip ratio of 2,62 kg in 2006. While this figure was only about 15 % higher than the average of all fishermen surveyed, George went on almost twice as many fishing trips per month as the average fisher and was known to go fishing in all kinds of weather when conditions were far from ideal. I estimate the value of George's total fish catch to have been about 97,500 pesos (US$1900) in 2006, or more than 7600 pesos per month after expenses, which compared favourably with a range of other occupations, including some office jobs.

Another response of these households to declining fish catch levels was to diversify their livelihood base. As with several other Category A fishers in Sibulan, George's household and extended family had been able to diversify in important ways locally, on their own land and in the wider neighbourhood. He and his wife owned five 'cottages' or resting sheds that they rented out to picnickers who came to the beach mostly on public holidays and on Sundays. They also rented out a small house to a family who worked in the city. In addition, they owned a few coconut trees, chickens, pigs and goats. Fishing, however, remained their main source of income. There were many potential buyers of seafood in Amio Beach, including picnickers and rich beach house owners. By selling the fish directly to the consumer, they obtained a higher price than by using an intermediary.

Since 2006, the catch-per-trip figures of small-scale fishermen in Sibulan have continued to decline, including the highly skilled ones. Although George's fishing effort remained the same, his average catch per trip in 2012 dropped to 1.79 kg. Adjusted for inflation, the economic value of his catch dropped by 27 %. Nevertheless, the value of his catch was still about 20 % higher than the wages of a 'full-time' construction worker. George continued to try alternative fishing methods. In late 2012, he bought small eel traps from a relative on the neighbouring island of Siquijor. Smoked eel became a popular snack among the picnickers on Amio Beach. From time to time, he caught a good-sized tuna, grouper or snapper, which typically sell for US$ 10-20 locally. In addition to its economic value, fishing remained important to George for other reasons: he appreciated the autonomy, the satisfactions of mastering fishing skills, the thrills of catching a big fish, and the relationship he maintained with the marine environment and with other fishermen in Sibulan.

Approximately one in three sons of skilled hook-and-line fishers looked to become committed 'full-timers' during the first decades of the 20-first century. Others took up part-time fishing, and some moved out of fishing. George's three sons expressed ambivalence towards taking up fishing as a livelihood. They looked upon fishing as challenging work that offered limited opportunities for an improved standard of living. At the same time, they were proud of their father's status as one of the best hook-and-line fishermen in Amio and depended in part on the income and food he provided.

Trap Fishers in Talak

In 2006 in the study area there were three extended family groups with male members engaged in mostly trap fishing. Several members of the Polido family in *barangay* Talak were known as skillful trap fishermen. When fish catch levels started to show stronger signs of decline in the 1970s, in contrast to the hook-and-line fishermen, most of the Polido men did not enter migrant fishing. Instead, they forged relationships with town-based elites and other people with money to scale up their fishing activities in Sibulan. With capital from their partners, they began building slightly larger and more solid fish traps, which were placed in deeper waters at depths down to 70 m. The financiers of the traps were entitled to half of the catch.

In 2006, five Polido brothers and several of their sons operated about 50 larger fish traps and 100 smaller traps and pots. While they also utilized hook-and-line techniques, smaller gill nets and beach seine from time to time, trap fishing was their main activity. They used large non-motorized outriggers to put out and retrieve the traps. Trap fishing requires highly specialized skills, given the strong currents that form at

the southern entry and exit point of the Tañon Strait. The larger traps that are placed in deeper waters can only be put out and retrieved during *lakad* (a 4-day period twice a month when the moon is 'half'). Strong winds and high waves prohibit this kind of trap fishing, and during such weather the Polido fishermen repaired and built traps, and did other kinds of fishing or other kinds of work.

Despite their in-depth knowledge of local fishing grounds and superior trap fishing skills, the Polido fishermen's catch per trap figure has declined markedly over the years (from around 10–15 kg in a large trap in the 1970s to about 2.5 kg in 2012). These declining catch levels have reduced the importance of forging links with financiers. At the same time, the relatively small catch in the traps has made investment in trap fishing less interesting for external financiers. In response, the Polidos have begun to use their own capital and sell their catch directly to consumers. In 2011/2012, they had increased the number of large traps to more than 80. They had also increased their large outriggers from two to three. Some of them, in particular the younger men with less access to capital, had begun to build cheaper, 'traditional' bamboo traps, which in 2012 could be made for about one-third of the cost of a plastic trap. The drawbacks are that bamboo traps last for a maximum of 7 months fishing and they take 5 days to build. On the positive side, they tend to attract more fish. As one informant explained: "The fish like the smell of the bamboo, and algae and clams grow on it. Some fish eat the clams, and these attract more fish".

Although the amount of fish caught in each trap was much lower in 2012 than earlier decades, much of the catch in the traps placed in deeper waters was high quality fish of relatively good size. Local demand for such fish was high. The price of 'plate-sized' groupers, jacks, wrasses and other premium quality fish has increased at a faster rate than the overall price level. My estimate for 2012 suggests that the catch of Polido fishermen in Talak from trap fishing was worth about 6000 pesos (US$146) each per month. The distribution of income from trap fishing was unequal, however, since older and more established fishermen owned more traps, and the owners of the large outrigger canoes were entitled to one-third of the catch in the traps of the other fishermen.

Trap fishing combines easily with other occupations, but most of these men preferred to fish and do other kinds of work in the neighborhood rather than go elsewhere for work. With generally good land tenure security, members of this family group accessed a broader set of livelihood resources locally, including coconut trees, *nipa* palms and milkfish fry. Chickens and goats were raised primarily for household consumption. Some of the women ran small mixed-goods stores (*sari-sari*) in their houses. In addition, some received regular remittances from two family members who lived abroad, one in North America and one in Europe. For the Polido fishing families in Talak, the income from trap fishing constituted about 30–40 % of household income, and the income from all their fishing activities amounted to about half of their total income.

As with the skilled hook-and-line fishermen, fishing had great importance for many of the Polido fishermen in Talak. In addition to the peso value of the fish they caught, the fishers appreciated being able to rely on their own knowledge (*kaugalingon kahibalo*) to make a living. Much of this knowledge was transmitted from older members of the family to younger ones, including ritual knowledge. Some of the sons of skilled Polido fishers said they liked to "follow the path of my papa and the people before." Several of these category A fishers also said they liked fishing because of the satisfaction in overcoming its challenges, such as fishing at night, or in strong wind and big waves, constantly modifying and trying out new methods and locations. The fishermen sometimes described this challenge as a fight against the elements. Bravery, a sign of masculinity, is part of a skilful fisherman's identity.

Compared with the hook-and-line fishermen, more of the sons of skilled trap fishers had become committed 'full-timers' in recent years (one of two). Other Polido fishermen were part-timers (category B), but in social and economic terms they were much like category A fishermen. They had taken up more construction, caretaker and other kinds of work locally, typically jobs that allowed them to continue fishing. With good knowledge of fishing, access to different types of gears, and fishing only when conditions were favorable, their catch per trip was higher than the average fisher in Sibulan. Fishing and locally oriented occupational flexibility allowed many of them to achieve a non-poor standard of living. Moreover, it enabled them to construct meaningful place-based forms of family and neighbourhood living in an increasingly contested, natural resource constrained peri-urban coastal location.

Yet compared with governing elites on Negros Island, and upper-middle class and rich beachfront property buyers in Sibulan, even the better-off households in the Polido family had substantially lower income and wealth. Some of the rich newcomers owned large beach houses with swimming pools and employed security guards, drivers and caretakers. The brick houses of the Polidos were sufficiently inferior that they could speak of themselves as poor. Better-off villagers and local leaders invoked a poverty discourse for a variety of reasons: to make particular social claims, to mobilize support, or to downplay inequality within a community. When local leaders of fishermen's associations sought support from the government, or objected to a particular policy, they could speak in a very generalized way about the hardship and poverty of all fisherfolk. Nonetheless, the view that small-scale fishing is only or mainly an occupation for the poor has significant limitations. Compared with several other fishing families in Sibulan, and many who do not fish, the households that constituted the extended Polido family in Talak were much better off in terms of income, wealth and social status.

Other Part-Timers

In line with fishermen's own assessments, my rough estimate is that in 2006 about two-thirds of the fishermen in Sibulan were part-timers (Table 1). Many were not as skillful and well-off as the Polido part-timers.

Several low-income and more recent settler groups in coastal Sibulan came to Negros from upland areas of the neighbouring island of Cebu to work on sugarcane plantations. When the sugarcane industry went into a deep recession in the late 1970s and early 1980s, many settled along the shoreline closer to Dumaguete City. Their parents or grandparents had limited knowledge of marine capture fisheries when they settled along the coast. Although several male members of these families subsequently took up fishing, most of them have not been able to exploit coastal and marine resources to the same extent as the long-term settled fishing-oriented families. These fishers typically relied on a few hook-and-line techniques. Some also used smaller gill nets, fish pots or spear guns. Only a few of these part-timers had taken on a strong identity as *mananagat*. Many were part-timers who fished when they had no other work. They took jobs as masons, welders, carpenters and other types of construction work. Some did casual work in the agricultural fields. Fishing was for them an important activity given the short-term and unstable character of most of the jobs they were able to obtain.

Some of the part-timers were members of very poor households who in periods of unemployment eked out a living from marginal, low-catch fishing. More of their children tended to drop out of school at an early age. Their wives said their children had dropped out of school because of poverty - they did not have money for transportation, school uniforms and school supplies; boys as young as ten would sometimes go fishing with their fathers instead of going to school. On several occasions, I observed them going to the local reefs to catch a few juvenile fish to get cash to pay debt collectors who came to their houses on daily collection trips. Instead of eating fish, they bought cheaper, less nutritious food. While these young boys may find fishing more exciting than going to school, their 'choice' of livelihood is intimately linked to their families' poverty.

Over the last few years, the total number of fishermen in Sibulan has declined. In a survey conducted in May 2013,[6] there were 176 boats docked in the field site, compared to 208 boats in 2006, a drop of 15 %. The drop was almost exclusively observed in the number of small non-motorized boats. More than one-third of the fishers in *barangay* Minaba had dropped out of fishing over these 7 years, most of them sons and grandsons of former upland farmers and plantation workers. With fish catch of less than a kilo per trip, they had difficulty covering the cost of fishing, and could earn more money from other kinds of work.

While barriers to entry arguments tend to be overdrawn (Allison and Ellis 2001: 383), at the southern entry point to the Tañon Strait, the barrier to successful or economically viable small-scale fishing is significant. Certainly, most physically fit men can learn how to fish with a few hook-and-line techniques, but many struggle to learn a wider set of techniques, develop more detailed knowledge of fishing grounds and fish behavior, and to feel comfortable in and master the often very strong and complex sea currents in this area. Yet knowledge and skills are not sufficient to establish viable coastal fishing livelihoods in Sibulan.

Engagements in Resource Regulation

Key concerns of many committed fishermen in Sibulan were threats to their livelihoods (perceived or real) from other resource users and misguided state regulation. The following example illustrates how small-scale fishers differ in their ability to use family and neighbourhood relations to participate meaningfully in resource regulation. At a meeting between members of the main fishermen's association in Amio Beach and government extension workers in 2006, George, the skillful hook-and-line fisherman, drew attention to the destructive effects on corals by people who collected abalone: 'Look at our sea now, it is very white, the corals are all gone [pointing to the area where coral destruction had recently occurred]'. The majority of the abalone gleaners were young men who belonged to families with relatively weak status as 'locals.' Many had little or no background in fishing. As they gleaned during daytime when this kind of mollusc hide in the corals, they had to break off coral branches to get to them. To be more efficient, some of the men used crowbars. George and several other skilled hook-and-line fishers in Amio saw coral destruction as a direct threat to their livelihood.

While calling for stricter regulation of this particular form of gleaning, George was careful not to argue for a total ban on gleaning: 'They can catch them at night-time, when the abalone come out of their hiding places in the corals.' He knew very well that many low-income households in Amio (including members of his own extended family) depended on gleaning to help secure livelihoods. He did not want to appear a person who denied poor people "a right to survive" (Blanc-Szanton 1972).[7] His approach to regulation and

[6] The survey of boats was in the morning of Election Day, May 13, in both 2006 and 2013, at a time when very few fishers were out fishing. The survey was followed up with targeted interviews.

[7] Ethnographies from different regions of the lowland Philippines demonstrate the widespread existence of a subsistence ethic in everyday community life (Blanc-Szanton 1972; Kerkvliet 1990; Cannell 1999; Fabinyi 2012), particularly prevalent among low-income and marginalized sectors of society: "Everyone has a right to survive and provide for his [or her] family" (Blanc-Szanton 1972: 129).

"environmental subjectivity" (Agrawal 2005) was thus different from that of middle-class conservationists who fail to recognize "locally embedded values and practices" (Segi 2013: 337). In addition to the 'right to survive' ethic, variants of the 'original people of the place'/'migrant' distinction are part of that value structure in Sibulan. Long-term settled residents were of the opinion that the 'locals' should have a central role in defining legal and illegal resource use practices. 'Outsiders' should not be allowed to do as they like 'here in our place.' After physical inspection and further discussion, the government extension workers agreed to bring the issue to the mayor's office. Subsequently, the municipal council made an amendment to an existing ordinance, highlighting the illegality of coral destruction and using gleaning of abalone as an example.

What enabled George, a small-scale hook-and-line fisherman, to mobilize local and extra-local support for his view? George was a member of a long-term settled and large family group in Amio Beach. The meeting where George expressed his view on the destructive effects of abalone harvesting took place outside the house of his older brother, the leader of Amio Beach Fishermen's Association. They lived next to each other, in a kin-based house group that had taken shape over generations and formed the core of their local social network. In the eyes of political candidates, several of these fishermen belonged to 'important' families in the locality. Government officials commonly depend on support from such families to implement government policies at the local level, and to win elections, and they direct alternative livelihood programs, micro-credit schemes and employment opportunities disproportionately to them (Fabinyi *et al.* 2010: 623–625). While support from the municipal government will fluctuate with the availability of funds and election outcomes, the members of these larger, long-term settled family groups were in Sibulan well placed to defend their own resource use practices vis-à-vis neighbours, migrant fishers and government officials. They were also better able to deal with harassment, discrimination and displacement pressures exerted by external parties. Over time, they have received more support from governing elites than have 'insignificant' families.

George and his brothers, and some of his cousins and close neighbours, used the opportunity of government-community sessions such as described here to define and consolidate local understandings of 'legal' and 'illegal' activities in the coastal zone. They drew strength and confidence from their local social network, as well as from their in-depth knowledge of fishing and the local marine environment. They also drew on elements of a conservation discourse introduced to them through nearly a decade of externally funded Coastal Resource Management (CRM) projects. Category C and D fishers saw little point in participating in CRM. They did not expect to get much out of it. Some had no time to participate; others were highly skeptical of the idea of restricting fishing areas and banning fishing techniques and resource harvesting practices.

Through their involvement in CRM, George and the other category A fishermen were able to direct regulatory attention largely to the marine harvesting practices of 'outsiders,' 'migrants' and settlers with weaker status as 'locals.' While migrants, too, may have a complex and nuanced understanding of local ecology (Nygren 1999), it seems to be a nearly universal phenomenon that 'locals' blame 'migrants' or 'outsiders' for environmental degradation. Those who were blamed in this instance were part of the majority Cebuano-speaking Christian community, but such blaming of 'outsiders' may involve broader ethno-linguistic and religious categories.

Despite being skillful 'full-timers,' Sama-speaking migrant fishers referred to as '*bajau*'[8] have been forced out of the small-scale fisheries of Sibulan. During the 1970s and early 1980s, they used to establish a relatively large seasonal camp of stilt-houses for more than 100 people in a foreshore area of Sibulan,. The Sama*(bajau*) fishermen were known to be skilled spear fishers (Category C), often fishing at night. They were also labourers in compressor fishing. While both Sama*(bajau*) free diving practices and compressor fishing later became associated with illegal poison fishing, the interaction between Sama-speaking migrant fishers and the majority Cebuano-Christian residents suggests a relative openness to outsiders at this time. Since the late 1980s, coinciding with the arrival of externally-funded CRM projects and rising urban demand for 'beachfront property,' the Sama*(bajau*) were increasingly blamed for illegal fishing and house construction. Over the last decade, they have been unable to settle in Sibulan, even for shorter periods of time and in smaller groups. An important source of this exclusionary pressure stems from a long-standing bias in state regulatory practices and ideologies of property and tenure, going back to early colonial times, which privileges the access rights and other resource claims of 'settled' groups (Lowe 2000; Gaynor 2005).

Conclusion

Although many marine species and fishing grounds are now exploited to such an extent that catch levels are just a small fraction of what they were half a century ago, declining fish catch levels and deteriorating marine environments do not lead to universal decline in the livelihood situation of marine resource dependent groups. This article highlights the importance of access, networks and regulations in influencing economic and livelihood outcomes.

[8] '*Bajau*' is an exonym with negative connotations in many areas of the Philippines and the wider region. The Sama*(bajau)* comprises what may be "the most widely dispersed ethnolinguistic group indigenous to insular Southeast Asia" (Sather 1997: 2).

Through their extensive local social networks, fishing skills and status as descendants of the 'original people of the place,' some Sibulan fishermen and their families have demonstrated considerable flexibility and resourcefulness in the way they have responded to altered conditions. Fishing skills and detailed knowledge of the local marine environment have enabled several, especially those who own their own boats and fishing gears, to access more fish than less skilled and experienced fishers. They have gained access to house lots and housing, to boats, fishing gears and other productive resources, as well as to local knowledge and fishing skills, in significant ways through household and kin-based house group membership. Many members of such long-term settled, well-established families have succeeded in reasserting their status as legal residents and fishers and maintaining access to valuable resources in the coastal zone, increasingly through the exclusion of others (Hall *et al.* 2011), demonstrating the strength of some of these local social networks in neighbourhood politics, in negotiations with other coastal settlers, government officials and other parties who have an interest in the area (Knudsen 2013).

While men also move out of fishing when economic conditions allow, new generations of committed fishers have continued to emerge from many of these families. In addition to income considerations of their livelihood choice, there are additional reasons why several of these men continue fishing. Despite the challenging conditions, fishing is closely tied to their sense of identity and self-worth. They appreciate being able to use their own knowledge and skills to make a living, and to live and work in the same place. Their fishing enables them to construct rewarding family and place-based community relations in an increasingly contested peri-urban coastal location.

As members of weaker or less resourceful local social networks and not having the same kind of connections and access to governing elites as the descendant of the 'original people of the place,' fishers belonging to poorer households with stronger migrant or newcomer status have been less capable of exploiting the local resource base. In the current setting of a substantial decline in fish stocks, as well as land tenure insecurity for many of these households, fishing no longer serves as an effective 'settlement strategy' for them. Nonetheless, small-scale fishing and gleaning continue to be important for many, serving as a last-resort strategy to get by, a kind of safety net, or a supplementary source of food and income, which may contribute to poverty alleviation (Jentoft and Eide 2011), but does not strengthen the basis of diversified livelihoods.[9]

[9] There are important differences in histories of settlement, land tenure and livelihood practices within and between the hamlets in this study. It is beyond the scope of this paper to provide a detailed account of these differences, and how they affect family and settler groups' ability to broker relationships between the 'inside' and the 'outside,' secure access and strengthen diversified livelihoods in current circumstances.

The new focus on regulation of the small-scale fisheries sector has made it difficult to maintain the openness and mutually beneficial relationships previously established between 'migrants' and 'locals.' Sibulan fishermen have largely stopped hosting migrant fishers. In many contexts, also elsewhere in the Philippines and the wider region, the association between environmental degradation and migrant fishing has become strong (Fabinyi 2012: 40). Ethnic and religious categories may mix with settler status categories in struggles over access rights, amplifying distinctions, and further marginalizing already marginalized sectors of society (Moss 2010). Yet analysis of poverty and marginalization should not be limited to the level of broad ethno-linguistic or religious categories. Several Cebuano-Christian families with contested setter status in Sibulan have also moved out of fishing in recent times, not all of them as a preferred choice. They, too, have been unable to participate meaningfully in CRM and received very little government support to help strengthen their livelihoods.

The status distinctions that are made between skilled and less skilled fishermen and between 'migrants' and 'locals' are part of broader sets of claims to coastal land and marine resources. Hence, analysis has to go beyond fishing to include an examination of how class, kinship and neighbourhood relations shape the livelihood conditions of different categories of resource users. In turn, these conditions shape the experiences fishers have of fishing and the likelihood of them becoming dedicated 'full-timers' in the increasingly overexploited coastal waters of the Central Visayas.

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