Bluefin Tuna Fishery Policy in Malta: The plight of artisanal fishermen caught in the capitalist net

Abstract

The bluefin tuna fishery has undergone a major shift in Malta, moving from an open access artisanal nature to a privatised and industrialized activity dominated by the purse seining fleet and the BFT ranching industry. The shift has been exacerbated by the national implementation of an individual transferable quota system, which has enabled the concertation of quotas into fewer hands. The main objective of this article is to understand how privatisation has evolved within the sector and the way the Maltese artisanal fishermen are experiencing the shift. This study takes an exploratory mixed-method approach to quantitatively and qualitatively understand how policy underpinnings interplay with the sustainability dimension of the small-scale fishing sector. Results show that the transition of the bluefin tuna fishery from artisanal to industrial has generated a legitimacy crisis over fishing rights, decreased profitability amongst most of the artisanal fleet, and led to a series of socio-ecological impacts on the artisanal fisheries system at large. It is concluded that the neo-liberal trajectories of industrialization have directly undermined the continued sustainability of artisanal fishing communities.

1. Introduction and Background

Artisanal fishing communities represent a long-standing tradition of fishermen engaged in low-capital enterprises that have persisted through various cycles of economic and social change through the recent decades[1]. However, artisanal sectors are generally known to exhibit high vulnerability from unpredictable ecological, social, political and economic fluctuations due to their low-capital base [2]. Furthermore when changes or disturbances arise from exogenous forces, such as policy frameworks that are developed and imposed upon traditional systems of governance and knowledge, this can quickly erode the stability and resilience of small-scale fishing communities , especially if the changes are not synchronized to the realities of the context in which they are implemented [3]. The dismantling of small-scale fishing communities has been registered in various countries worldwide e.g. North America [3], Iceland [4], Australia[5] and Canada [6], and despite their geographical differences, these cases appear to share a similar economic and political backdrop of neo-liberalism that catalysed the communities' demise.

Generally, these studies show how the push towards the neo-liberal privatisation of fisheries resources has triggered the enclosure of the commons with the consequence that small-scale fishing operations become outcompeted by large-scale fishing industries. Through privatisation, the latter become empowered to over-accumulate resources and profits, and simultaneously dispossess indigenous rights' holders from their livelihoods [7]. This process of 'accumulation by dispossession', as conceptualized by Harvey, is a transition underpinned by the capitalistic ideology and buttressed by State and/or equivalent authoritative power which play a significant role 'in both backing and promoting' the trajectory of resource aggregation through the crafting of neo-liberal policies [7]. By drawing on the theoretical underpinnings of neoliberalism in fisheries management, this article provides an in-depth understanding of how shifts in the fisheries' policy fundamentals in Malta have triggered a major change that has made it more difficult for the Maltese artisanal fishing sector to survive. The special focus of this research falls on the management of the BFT fishery, one of the most lucrative fishing activities but also the most regulated in the Mediterranean region.

The BFT fishery in Malta has existed since the 1700s [8] and official landing records of catches have been compiled since the 1920s [9]. Initially BFT was fished by an artisanal trap system (tunnara) and successively, from the 1960s, by artisanal-long-lines which are hook-and-line methods baited with mackerel suited to target pelagic species. Some artisanal fishers use specific long-line gear to target BFT, and others harvest tuna as by-catch from swordfish long-lines [10]. Overall, their individual catches differed on the basis of skill and effort applied to the fishery. The cumulative Maltese artisanal BFT catch fluctuated across the decades but there was a drastic increase in the 1990s (Figure 1) as a response to new export opportunities in lucrative foreign markets, such as Japan, that enticed greater participation by artisanal fishermen [9].

As of 2001, fishermen started experiencing decreasing catches, possibly due to the overexploitation of the species across the Mediterranean waters [11]. Due to its scarcity, the competition for the species became intense, and many Maltese fishermen became involved in *'tuna wars'* with foreign companies that used purse seine industrial methods, which not only caught large numbers of fish, but also allegedly disturbed the artisanal long-line activities [12]. Following this prolonged period of conflict the national Minister for Fisheries in 2001 had publicly urged the Maltese fishermen to "equip themselves like their [foreign] competitors" [13]. Later, around 2005, the government issued permits for the start-up of the purse seine fleet which is an industrial type of fishing that uses large nets to catch large numbers of BFT species. This gear, which was first introduced with the emerging expansion of the tuna ranching sector, is considered the most suitable technology for capturing, corralling, and growing out large stocks of wild tuna [11].

(Figure 1 here)

This industry, which supplies tuna to the global sushi and sashimi markets has been growing since it began in 2001 and currently there is a total fattening capacity of 12,300 tonnes [14], generating about €500 million in sales over the past 6 years [15]. The Maltese tuna ranching ranks second after Italy in terms of EU tuna production capacity [16], and as a profitable business across the Mediterranean, the expansion of tuna ranching has been supported by several governments across the basin [17,18]. However, this growth, which led to a higher fishing effort on wild tuna, has been a main driver that led to an alarming rate of BFT overfishing over the past decades [19]. The co-existence of industrial and artisanal fleets in the Mediterranean had contributed to the decline of the bluefin tuna species [20], and international efforts have been ongoing to reverse this situation in the Mediterranean and elsewhere [21].

A global plan to improve the health of the stock by 2022 was introduced in 2007 by the International Commission for the Conservation of Atlantic Tunas (ICCAT) [22]. As part of this plan, a system of total allowable catches (TACs) across countries was enacted to regulate the fishing activity of Atlantic and Mediterranean BFT. TACs allocations have been decreasing every year until 2013 in an attempt to control catches, reduce overfishing, and eventually limit capacity. These regional efforts have improved the recovery rate of the BFT, and without undermining the stability of the stocks, it was agreed at the ICCAT meeting in 2014 that TACs were to be increased by 20% each year, until the new stock assessment in 2016 [23].

Malta as an EU Member State is signatory to the BFT conservation efforts and subject to the policies including quota restrictions and increments that are annually recommended at the ICCAT level and successively transposed as EU Council Regulation(s) that bind EU member states. As part of the agreement, Malta is requested to annually devise a national management plan to align the fishing capacity to the BFT fishing opportunities agreed and assigned during the European Council meetings. This obligation and the local measures that have accompanied it, have brought a drastic change in the Maltese fishing management portfolio of the BFT fishery. For example, the Maltese Government with the consent of the fishermen's co-operatives agreed to: a) reduce the BFT fleet capacity by 25%; b) introduce a national system of Individual Transferable Quotas (ITQs) based on historical records; and c) create the BFT recreational segment as a new category of fishing activity that is allocated approximately 1-2% of the national TAC.

These regulatory changes, which are embedded in neoliberal ideology, have synergistically reshaped the fundamental organisation of both the BFT fishery and the artisanal sector as a whole. The Government's management plan frames these changes as the 'backbone of the *Maltese Fisheries conservation actions'* which are aimed to 'facilitate the recovery of BFT stocks to create sustainable economic conditions for the continued operation of the BFT fishing fleet.'[24]. This article draws on this statement as the point of departure for a critical assessment of the impacts of the policy measures enacted under the BFT management plan, with a special focus on the traditional artisanal fishing community.

The impacts that the Maltese artisanal fleet has experienced through the changes in the BFT fishery have not been studied to date. While much work has been done on the politics of the bluefin tuna ranching sector in Malta and the Mediterranean e.g. [17,25,26], the position of the artisanal fishermen of Malta within the fast moving policy infrastructure for bluefin tuna in the EU remains somewhat obscure. Bluefin tuna has always been considered as one of the main profitable fisheries for the Maltese fishermen [27], hence understanding the impact of the changes brought onto the fishing communities by the BFT management framework is extremely important to a broader assessment of the sustainability of this sector as a whole. In this regard, the research aims to answer these following questions:

1. Understand how the implementation of policy and market drivers have altered the dynamic of the artisanal fishery
2. How these changes have been experienced by the artisanal fishermen themselves

2. Methods

This section presents a methodological approach that allows us to explain a complex story using a synchronised interpretation of policy changes, fisheries data and qualitative interview-based data with fishermen themselves. Important themes or issues are identified and described before giving way to a general discussion and conclusions. This case study is based on extensive fieldwork carried out between May 2014 and August 2015 in two main fishing villages, namely Marsaxlokk and Mgarr (Gozo). These villages host two long-established Maltese fishing communities that in many ways are representative of the social, economic and cultural fabric of the Maltese artisanal fishing sector [27], and thus provide the appropriate context for the exploration of the research questions.

The exploratory nature of the study calls for data collection methods that enable an in-depth understanding of the artisanal fishermen's perspectives and experiences. The main data collection system used for this research involved participant observation in the main fishing villages. A series of in-depth interviews were conducted with fishermen, their family members, and other individuals within the community. The use of gatekeepers was essential to access different networks of fishermen through purposeful snowballing. As has been reported in similar research [e.g. 21], 'happenstance encounters' in informal settings also provided very rich and wide-ranging data from various informants. Ethical considerations, in line with the guidelines of the American Anthropological Association (AAA), were taken into account throughout the data collection process.

The primary data was complemented with other sources including online forums, media articles, and formal national statements such as BFT management plans, Ministry's public statements and other statistical information. The open-ended comparative techniques used to triangulate the data assured that the findings were consistent, valid and reliable. After each successive collection, the data sets were qualitatively analysed and coded to elicit the major issues that were then categorized into relevant themes, upon which the narrative was ultimately based. Direct excerpts gauged through interviews and participatory observations are incorporated within the narrative to illustrate major factors that have been provoked by the fishermen themselves.

3) Results

3.1) BFT Conservation through Privatisation: The legitimization of the purse seiner

In this section, the article presents the role of government policy in establishing and supporting the industrialization of the bluefin tuna sector by empowering the operations of the PS fleet at the expense of the artisanal fleet. The beginning of the industrialization process can be traced to the licensing of the first purse seine in 2005 which overhauled long-established national legislation (L.N. 205/34) that had restricted the licensing of such vessels on the basis of sustainability and to prevent monopolization of fishing effort. Since then its operations have been legitimized through a purse-seine-pilot-study in 2007, and subsequently accelerated through the major leasing framework that followed the introduction of the Individual Transferable Quotas (ITQs) in 2009. Since the purse seine did not have a historical record of catch due to its relatively late entry to the BFT fleet, it was not assigned a specific ITQ, hence, its participation could only be institutionally legitimized through the transferability of ITQs from artisanal fishermen (with catch records) to purse seine operators.

The ITQ scheme, enacted in 2009, recognized and authorized only around 20% of the full-time fleet (82 vessels) and 0.6% of the part-time fleet (4 vessels) as BFT rights' holders (see [29]). The rest of the vessel owners were thus excluded from quota on the basis that they did not have official records of BFT catches declared at the central fish market. Although some of these fishermen used other lawful markets to sell their tuna, the government's data collection exercise to establish the ITQs allocation system did not fully account for these catches[1]. According to one fisherman "before we used to sell a lot of tuna through hands [fisherman-to-consumer] and did *not take it to the fish market"*, while another fisherman stated that the problem of non-BFT-declaration was also linked to tax evasion "and so when it came to the *actual figures, their quotas was relatively low."* As illustrated in Figure 2, the allocation system of the BFT categorized the fleet into large-ITQ-holders, medium-ITQ holders, small-ITQ-holders and non-quota holders. In 2010 over 50% of quota was held by 16% of fishermen and over the past 5 years, the ownership of ITQs ownership has become even more concentrated (Figure 2).

Most of this concentration reflects the investment made by the purse seine industry which has been purchasing ITQs of the smaller and least wealthy ITQ holders. These companies now possess the quota and the fishing permits of very many artisanal fishermen, and since 2014 have enjoyed the annual TAC increments that have been assigned on each artisanal permit by

[1] This could potentially mean that the baseline used to establish Malta's TAC has not been calculated accurately.

the government. The accumulation of fishing rights and windfall gains of TAC increments is favouring those few enterprises that own multiple permits, whereas fishermen with no permits or with small/medium quotas are unable to acquire quota since the prices of fishing permits and quota are escalating to unaffordable ranges.

(Figure 2 here)

This approach of accumulation is enhanced by other pro-industrial policies that have reduced the number of active artisanal vessels. These include the permanent de-commissioning of 18 artisanal vessels from the BFT fleet register that were demolished under the European Fisheries Fund scheme, and the fishing authorization scheme that has, in the past 5 years, prioritized artisanal long-liners with large quotas and the purse seining fleet to operate as active fishing vessels. In its management plan for BFT fishing capacity over the period 2010-2013 the government reported that *"Malta will not allow those vessels that have a quota less than 200kg* to actively fish for BFT- however they may transfer their quota to another vessel which already *has quota."* [30,31].This scheme, which is embedded in the neo-liberal ideology of allocating TAC in the most efficient manner, has derailed the ability of small-quota holders to actively engage in the fishery and catch their quotas.

Since 2010, the average number of artisanal vessels that were authorized to operate was less than half of the permit-holders (n≈28). Unlike the active counterpart who are authorized to catch their quotas and sell them to through the lucrative export market, the small-ITQ holders have been compelled to lease out their fishing rights to the larger, more 'efficient', predominantly purse seine, lessees. This policy left small ITQ holders considerably worse off. A fisherman explained that between 2010 and 2014, the prices attached to the leased-ITQs i.e. €5 to €6 were less than the reported export price of between €9 and €10, and for this reason many small-ITQ holders would have preferred to catch rather than lease their ITQs.

Although these 'non-operational' tuna fishermen could have caught their shares as by-catch with other fisheries, this option is less financially rewarding as by-caught tuna is not destined for the more lucrative export market. Also there are conditions on declaring tuna as by-catch which essentially rule out this option for many fishermen as explained by one fisherman, "quota can only be caught as by-catch, and to declare a tuna, you ought to catch 20 heads of swordfish. Now, for a fisherman to catch 20 heads of swordfish he has to be very lucky, so the policy is there to dishearten the fishermen from catching his small quota as by-catch and instead *lease it to the fish farm."*

3.2) Tuna ranching is transforming the fishing economy of Malta: Accumulation by dispossession

The tuna ranching industry is owned by only 5 companies [32], 2 of which are foreign investors. Between 2009 and 2013 one of the companies, as reported in the Malta's Aquaculture Strategy [32], was registered in the name of an ex-representative of a fishery co-operative. This company, which also owned a purse seine license, was the first to engage in the purse seining of the national TAC through the pilot study and successively started leasing ITQs from the fishermen through the leasing framework. This in turn initiated the process of 'accumulation by dispossession' of the artisanal sector quota, and now most of the national TAC is the property of the tuna ranching industry (Figure 1).

The fattening of the national TAC was only possible through the increase in ITQ ownership through the permanent purchase of artisanal permits, and by policy developments surrounding the fishing capacity clauses of the national management plan that forces small-quota owners into becoming leasers. Also, by offering the opportunity to some of the larger ITQ holders (who own larger iron vessels) to earn income from towing tuna cages equivalent to approximately €1200 daily for 2 months a year, tuna ranchers were able to secure the lease of these fishermen's ITQs as well. This shows that the tuna ranching sector has become the real owner of the national BFT and as illustrated in Figure 3, its controls are predominant in most of the transactions of the BFT fishery.

(Figure 3 here)

Along with being the main owner and lessee of the national TAC, the tuna ranching sector also controls access to the lucrative foreign BFT markets. These connections are allowing the tuna ranchers to exploit prices to their advantage with for example, active long-liners who must export their BFT via the tuna ranchers. For this reason, the ranching industry has a monopoly over the price of both the lease and the export market, and it is therefore in a powerful position to maximise profits and/or act strategically at the expense of the artisanal fishing fleet. For example, by reducing the difference between the leased-ITQ price (€6 to €8 in 2015) and the export price of ITQ caught tuna (at around €9 to €10 in 2015), the tuna ranchers have been able to attract the majority of independent Maltese ITQ holders to lease their ITQ directly to them. Consequently the number of active long-liners fishing their ITQs decreased by 71% between 2014 and 2015.

Maltese long-liners have also been discouraged from retaining their rights to fish for tuna ITQ because of what they perceive as *'intimidating'* control procedures that are enforced by the government as part of the EU recovery plan. For example, they get regular at-sea-inspections and are requested to fill-in a number of documentation, which they perceive as a heavy bureaucratic burden on their fishing operations, which has made them anxious and under pressure. After narrating a bitter experience that he encountered with enforcement procedures at sea, an active long-liner said "…these days I am always afraid – and my fear only ends when I get back home – not when I tie up the boat but when I am in my house".

While the surveillance on the active long-liners is implemented as an explicit measure to ensure that the quota limits are observed, it is safe to assume that these procedures are an 'implicit' way of disheartening them from actively engaging in the fishery, and to encourage them to instead lease their ITQs to tuna ranching operators. Taken together all these measures have synergistically caused a major reduction in the number of operational fishermen amongst the artisanal fleet and the recruitment of locals who were, prior to privatisation, employed as extra deckhands for the BFT season between April and July. As a result of the neo-liberal processes that has given a new shape to the BFT fishery and restricted most of the fleet from fishing this resource, one can notice a spill-over of the artisanal sector onto other fishing systems which are of an open access nature.

3.3) Artisanal Livelihood Struggles: Spill-over effects onto other fishing systems

The reforms of the bluefin tuna fishery and the concomitant marginalization of non-permit holders, and the domination of the tuna ranching industry, also has major repercussions for other fisheries systems which lack the same monitoring and management of the bluefin tuna system. As fishermen explained, fishing activity during what was before the BFT season, has now transferred to other fisheries, mainly trammel netting and gill netting, targeting demersal and small pelagic species respectively. For example, official statistics show that between 2007 and 2012 the days at sea (fishing effort) on trammel nets has increased by 4,500% while gillnets have increased by 870% (Figure 4). Fishermen have described this as a spill-over directly related to decreased profitability endured by non-permit BFT holders who had to diversify into other fishing systems, and by fishermen who have chosen to lease out their ITQs rather than fish them.

(Figure 4 here)

For the most deprived, this displacement is a way of compensating for the loss of tuna fishing and other livelihood pressures, but for a smaller number of fishers with large ITQs, leasing has been lucrative, and allowed them to gain income from leasing their quota, and maximise their profits by deploying their vessels in the trammel net and gill net fisheries. Whereas non-permit holders and small-ITQ holders deploy a maximum of 12-15 trammel nets per day, the large ITQ holders who have become economically empowered through ITQ-acquisition are engaging in very intensive fishing, deploying between 50-70 nets per day by employing extra hands who are often immigrant labourers. As explained by a fisherman, “the bigger boats [are] carrying 50 to 70 pieces of nets and working round the clock, thanks to imported cheap *labour.”* (Fisherman in Malta Today newspaper [33]).

These open access fish populations, which are also fished by other fleet segments including industrial trawling and recreational fishing, may now be in a state of overexploitation. A fisherman, who has been experiencing decreased yields stated that “… before 2010, we used to catch 20, 30 kilos of fish in one trip. This year (2015), we went three times with the trammel nets and we caught around 6-*7 kilos in all the three trips. It is not worth it.”* Hence those who have already experienced falling incomes due to the BFT industrialization process are now also having to confront the results of intensified fishing on the stocks remaining open to them. As one fisherman highlighted “the past was more viable in terms of catches and now the expenses *have increased, so the future isn’t welcoming.”* These fishermen perceive of their future as bleak and some have resorted to the recreational bluefin tuna fishing segment to make ends meet.

3.4) The Rise of the Recreational Bluefin Tuna Sector

Recreational bluefin tuna fishing was introduced in 2011 and has been implemented in line with the EU regulations[2] after intensive pressure by the recreational lobby (Interview with Malta Fish Forum). The recreational fishery is open to those who own a recreational vessel and authorises the catch of BFT that is annually assigned from the national TAC. A seasonal permit is issued for each vessel. Participants are requested to present it during patrols and catches' registrations. Since the fishery is a recreational one, the catches cannot be commercialised [34], however, they can be given to charity. Artisanal fishermen who have been excluded or marginalized from the commercial segment of the bluefin tuna fishery perceive themselves as the ones in charity and have opted to benefit from this scheme.

For many fishermen disadvantaged by the policy shifts and pro-efficiency drift of the Maltese government to favour tuna ranching, their only choice has been to register as a recreational fishermen and engage in BFT fishing activities permitted under this category. The ability to benefit from a recreational permit and informally sell recreational TAC BFT at the meagre prize of €1- €2/kilo was a strategy that fishermen have been forced to adopt. The fishermen, however are not benefitting much as commercial sales are not allowed and they are easily exploited by middle men who can take advantage of the system. As a fisherman explained *"…the fishermen end up with the cheapest price for this tuna, when and if, they find potential* buyers. The middle man tells you that he has the same level of risk as you do and so he wants *the cheapest price. We sell a tuna of 50 kilos for €100 and then they sell it for around €10/kilo – making around €1000."*

The risk fishermen undertake to engage in this activity is significant and they are becoming more vulnerable since they are now subject to enforcement which is accompanied by financial penalties and criminalization procedures. In the past years, a number of fishermen have been taken to court as they have exceeded the one-tuna-per-trip catch, and their case was presented as a 'criminal practice' (e.g. [35,36]). This demonstrates that fishermen are not only becoming disempowered by a system that creates financial vulnerabilities, but are also running the risk of criminal punishment for relatively small misdemeanours.

[2] (EC 302/2009 (Art. 12 & 13)).

3.5) Divide and Conquer - The role of the Fishermen's Cooperatives in the demise of the Artisanal Sector

The crisis that the majority of the artisanal fleet is undergoing has not resulted from a series of unintended miscalculations, but from decision-making that has enjoyed the support of fishermen's representatives back in 2010. The transition into privatisation and industrialization was only possible because it had the official approval of politically-connected representatives within the Fisheries Co-operative who allegedly used their legitimate power to benefit from the investment opportunities of tuna ranching. Many fishermen highlighted that they were unaware of the decisions that were being agreed on their behalf behind closed doors and perceive the institutional process to be high-handed and lacking transparency. A retired fisherman stated that "…when the company which belonged to the co-operative representatives had been awarded the pilot project for the purse seiner in 2007, we [the fishermen] *weren't* informed, let alon*e consulted"*. Co-operative representatives also fully supported the establishment of the new BFT ranching facilities back in 2005, stating that "…the proposed project would be of benefit to fishermen*"*, and that, *"if approved, it would be "the best Christmas present for fishermen"* [37]. However, this research suggests this has not been the case and the share of economic benefits that have accrued through the industrialization of the national TAC have been very unequal and arguably not consistent with the operating principles of a 'co-operative' structure. Tuna ranching, which was presented by the Cooperatives as a new niche for Maltese fishermen, benefits only around 5% of the full-time artisanal fishing fleet. These include co-operative members who accrued profits through the ranch ownership and 15% of the ITQ holders who have diversified into cage towage during the purse seine season. Although there are opportunities to work as labourers at the tuna ranching installations for those fishermen excluded from the BFT fishery directly, this has not been an attractive option for most as *"low*-paid jobs do not provide the same income and job satisfaction as much as the *BFT fishing activity."*

It seems clear that the new arrangements of the BFT fishery have created new power relations, with most of the artisanal fishermen becoming disempowered by a tokenistic co-operative system that has facilitated their demise in the name of economic efficiency. Most fishermen criticize the system as capitalistic, and argue that they (the authorities) are rude, since they insinuate that there needs to be protection of the fish stocks – when the reality is that the tuna fishing has become commercialized, and [most] Maltese fishermen, due to their artisanal *nature, have remained out of the loop".* Although fishermen seem to be conscious of their situation, they perceive themselves as the 'small fish' who are unable to change their destiny. In a fisherman's words: *"I understand that the small fish never ate the big fish, and thus we are not going to be able to overturn the situation of the purse seiner."*

Attempts to reverse this trajectory have so far proved to be futile since fishermen are too fragmented and feel impotent to challenge the industry which determines their livelihood pathways. As explained by a fisherman: *"…we tried to raise a*wareness amongst the fishermen *but those without quotas don't like us because we have quota and they don't. So we could do nothing together….. I ended up trying to challenge the* situation with another 4 fishermen but with time I realized it is useless. In fact I realized that I have to shut my mouth because these large companies have become the commanding regime in Malta. I depend on them whether I *like it or not because they export my fish"*.

The economic power of the tuna ranching industry and the concomitant individualistic pursuits of the co-operative representatives, which have been invisibly taking place within the ambit of the liberal market transactions, are suffocating the artisanal segment and deteriorating the political capital of the Fishermen's Co-operative as a united force. Fishermen, who now identify one another as a 'large-ITQ, 'small-ITQ' or 'non-ITQ' holder are no longer the cohesive group that has stood up for the Maltese fishermen's rights. The same fishermen that in 2001 battled against foreign companies who affected their fishing rights [12], are now (in 2015), more prone to struggle amongst each other, for example on who ought to benefit from the TAC increment, rather than to regain their power within a system of capitalistic monopoly.

Fishermen have basically succumbed to the powerful forces of industrialists who allegedly have the inside track to senior politicians[3]. Through these processes, artisanal fishermen have become sufficiently fragmented and disempowered to an extent that they are unable to engage in collective and political action to bring about the much yearned change to revert the decline of the artisanal sector. Although promises for a better future in the bluefin tuna fishery have been assured by the Labour party during the election campaign election a couple of years ago, the fishermen has publicly claimed in a local newspaper that the government *'broke pre-electoral promise'*, and 'at the end of the line we *are no better off…"*[38].

[3] Paul Watson, the Sea Shepherd spokesperson, has instigated that the tuna industry is bribing Maltese politicians. See more: http://www.maltatoday.com.mt/news/national/16289/tuna-industry-bribing-maltese-politicians-says-sea-shepherd-founder-20120223#.VOyk3vnF9V0

4) Discussion

The implementation of ITQs has been used in many countries e.g. New Zealand [39]; Iceland [40]; and Spain [41], however their benefit as fisheries management tools is highly debated. They are praised by biologists for deterring the race to fish and by economists for improving the aggregate economic performance through profit generation [42], and simultaneously criticized by social scientists for perpetrating social inequity, injustice and deprivation [43,6]. This research show how the majority of the artisanal sector in Malta is enduring symptoms of dispossession, fragmentation, disempowerment and marginalization which have resulted directly from the BFT policy trajectories. It seems that the Government's BFT management plan has been a signficant driver of change which is perpetrating the vulnerability of the artisanal fishermen and simultaneously enabling the expansion of the tuna ranching sector through the industrialization of the fishery.

Like other Mediterranean countries, the BFT fishery in Malta has moved from a localised artisanal livelihood into *'a massive gold rush inspired by global capitalism*' [44] led by powerful ranching investors [20]. In such policy-supported transitions, the knowledge, skills and hard work of fishermen have been replaced with a limited set of entrepreneurial opportunities available only to those with access to significant capital [43]. Without specific and local provisions specifically for the artisanal fleet, decline and ultimate extinction of unique socio-ecological systems are almost inevitable. In Spain the Government has established an alternative course for the artisanal fleet by implementing measures that ensure equitable ITQ distribution by accounting for historical activity and socio-economic dependency on the fishery, and restricting the concentration of rights by companies [45]. In stark contrast the policy of Malta has enabled the unhindered shift toward a highly capitalist system based around and entirely dependent on the hegemony of the international tuna ranching industry.

It can be argued that the development of the ITQ framework which has marginalized non-record-keepers and triggered systemic socio-ecological problems, demonstrate that the main aim of ITQs was in essence to serve the agenda of the industrial elites rather than to improve the BFT stocks for the long-term benefit or indeed survival of the artisanal fleet. In other words, ITQs , as a privatisation mechanism, was e used as a tool to legitimize the 'accumulation by dispossession' [7] process that empowered the industrial fleet at the expense of the artisanal sector.

The embedded nature of the ITQ system within the paradigm of economic efficiency concomitant with the industrialised world, which enables the consolidation of property rights by the powerful few, seems to obscure the major predicaments that are related to social equity and sustainable livelihoods [46,47]. The fact that the BFT stock has recovered, but most of the Maltese artisanal fishermen are still experiencing an overall decreased profitability confirms that the political urge to cater for the sustainability of resources has only been to support the tuna ranching sector which brings 'good foreign currency to Malta' [48] and attain a BFT compliance certificate from the EU [see 42]. The resilience of the artisanal fishing communities does not classify in either of these priorities, and the needs of the sector remains only a concern highlighted in rhetorical government's public displays such as Ministerial speeches calling for the protection and sustainability of small-scale fishermen [50].

The pledge of the government to safeguard the small-scale fisheries and coastal communities in the adoption of the new EU common fisheries policy [51] seems to have been contradicted by neoliberal policy mechanisms of ITQs that suffocate the upward mobility of the artisanal fleet. In reality, fishermen are not equipped to protect themselves against the policy shocks and market forces brought about by industrialization. Instead, they have become oppressed by a system that has dispossessed them and disempowered them by creating policy instruments that discriminate, fragment and disunite. The 'divide-to-rule' [52] strategy is inhibiting them from speaking with a common voice against the national and local structures that are gradually facilitating their disappearance. In Spain artisanal fishermen have been empowered in a local decision-making frameworks and by the adoption of co-management agencies such as inshore fisheries groups which uphold and protect collective decision-making in the distribution of BFT quotas [45]. In Malta, in contrast, fishers have become 'powerless spectators' [53] with no hope of changing their situation within the BFT fishery.

5) Conclusion

In the past decade the artisanal BFT fishery in Malta has become intermeshed with the globalizing effects of policy-making and subject to the exogenous forces of the transnational BFT market. The evolving nature of the BFT sector illustrates a shift from what was once an artisanal fishery to what has become an agro-food industry of BFT ranching shaped by market forces in the name of economic efficiency. The introduction of the ITQs and fishing capacity restrictions, as conservation tools to protect BFT, have synergistically created new power relations that dispossessed most of the artisanal sector and orchestrated the expansion of the tuna ranching industry. Through a descriptive analysis of these systemic developments, this study presents a showcase of how capitalistic processes of privatisation lead to resource appropriation that trigger major social inequities, and as a consequence, indigenous people face 'a forceful expulsion' from the resources upon which they depend. [7].

The policy changes that have facilitated the industrialization of the fishery were the beginning of the end for the artisanal fishermen, since consecutive BFT decision-making has been consistently focused on the principles of economic efficiency that have suffocated the regeneration of the artisanal sector. The rationalization of the sector has triggered a legitimacy crisis over BFT fishing rights, and implicitly forced most of the artisanal fishermen to diversify their fishing activity onto other unmanaged, possibly overexploited, fishing systems. Cumulatively, these processes are generating a deep socio-ecological crisis which would appear to be beneath the radar of the Maltese government. As a result, the prospects in fishing have become bleak at multiple levels, and artisanal fishers are gradually abandoning the commercial fishing sector for they sense that the tide has turned against them.

The artisanal sector is likely to keep diminishing if it does not get sufficient and imminent political attention. The duty to safeguard the needs of fishers through proper governance principles currently exists only as rhetoric in institutional texts such as Ministerial speeches and the Co-operative Act which stipulates that the *'co*-operatives work for the sustainable *development of their communities through policies approved by their members'*[54]. Some of the fisher's representatives, who have been elected in power by the artisanal fishers themselves, have been subjugating the voice of the artisanal sector and suppressing their resilience.

Simultaneously, the close-knit arrangements between the fishing elites and the government have abandoned the needs of the smaller fishermen since their priorities, which they claim are aligned to the sustainable recovery of the BFT species, lie in the expanding BFT ranching sector and not on the continuity of the artisanal fishing communities. The transition into ranching has been highly welcomed and incentivised by the national government and although this transition is lauded as a tool of 'diversification' for fishers, in reality, it is a policy that is serving the elitists' interests, and simultaneously obliterating the artisanal sector.

Finally, this study recommends that fisheries management needs to be re-examined by recognising and adopting the social and cultural pillars of sustainable development as well as the environmental and economic pillars. The current top-down protection of resources is too reductionist and narrowly set on capitalistic rationality, and is likely to create socio-ecological misfits that will in turn create problems of a wider nature. One obvious and tangible measure would be to allocate ITQs more equitably to allow the artisanal sector to regain a more healthy position and limit the transferability of the ITQs to avoid the concentration of rights into the hands of the powerful few.

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