

# St Helena Social Wellbeing Report

## Outlining the Social-Economic Benefits of the One-By-One Tuna Fishery in St Helena



## **1 INTRODUCTION**

### **1.1 Background**

One-by-one tuna fisheries (e.g. pole-and-line, handline, troll) offer the most environmentally and socially responsible ways of catching tuna. From an environmental perspective, their high selectivity means only the target species are caught 'one-by-one' and the bycatch of non-target species is minimal. One-by-one tuna fisheries are very people-centric, providing a model on which to sustain tuna fisheries and fishery dependent livelihoods into the future.

St Helena, often referred to as "the secret of the South Atlantic", is a British Overseas Territory that lies in the southern tropics of the Atlantic Ocean. The island, which has a maritime zone encompassing 172,439 square miles of open-ocean habitat, is situated within a region rich with marine fauna and has a long tradition of responsible, small-scale pole-and-line fishing where tuna are caught one-at-a-time. The St Helena tuna fishery has provided an important source of nutrition and livelihood to the island's population.

Traditionally, fishing was undertaken by an inshore fleet with the capacity to hold 0.5-2GT fish, fishing in the inshore area 10-20 miles from the coast. Currently around eight boats operate in the inshore area. More recently, through government investment an additional offshore vessel has been introduced, adding to the two pre-existing offshore vessels (in total 2 with capacity of 15GT and 1 with capacity of 4.5GT). Of the three offshore vessels, the two larger vessels have the capability of going out for longer trips to the Cardno seamounts around 170 nautical miles offshore, and the smaller vessels travels to the closer, Bonaparte seamount around 80 nautical miles offshore (Figure 1).

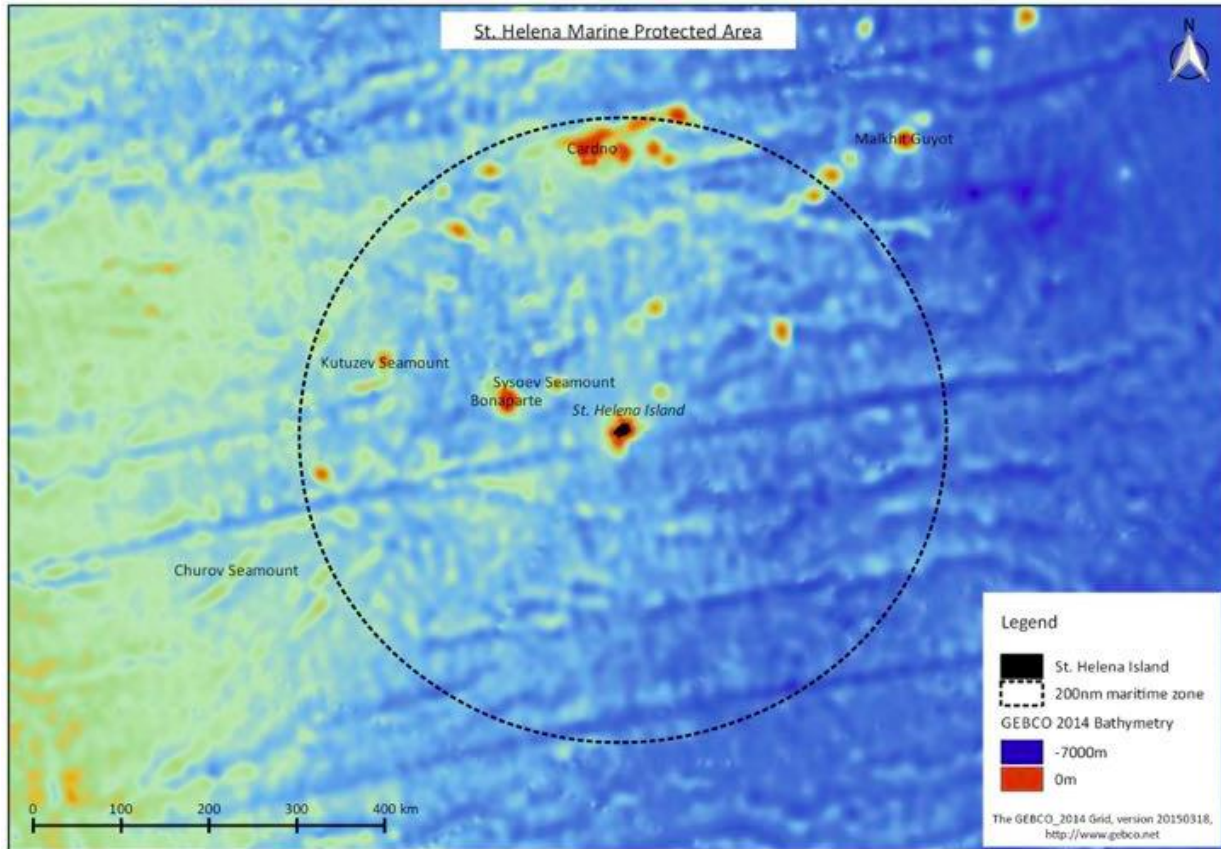


Figure 1 The St Helena Exclusive Fishing Zone, showing the locations of some of the seamounts [Source: Collins, 2016].

## 1.2 Tuna Supply Chain Overview

St Helena's dominant commercial target species are yellowfin, bigeye, and skipjack tuna. Catches vary annually and seasonally, depending on the availability of migratory tuna and fishing effort. In the last 10 years, landings have varied from 114 tonnes (2013) to 880 tonnes (2011) with an average annual landed catch of 370 tonnes (Collins 2016).

Tuna catch is landed in Rupert's Bay, where the processing plant St Helena Fisheries Corporation (SHFC) is located. This plant is an essential component of the sector and is currently subsidised by the government, until a private sector investor can be secured. The plant has never been profitable, but the recent increase in local fishing capacity, combined with efforts being undertaken by tuna supply chain stakeholders to improve the quality of tuna catches and processing could provide an opportunity to make the plant economically viable. Once the tuna is processed, it is either sold fresh to local supply chain stakeholders including retailers, hospitality and direct to consumers; or it is exported frozen via sea or fresh via air freight (Figure 2). Air freight is a new component of the St Helena supply chain, following the

construction of the St Helena airport in 2017 and presents an opportunity for expansion of higher value products into new markets.

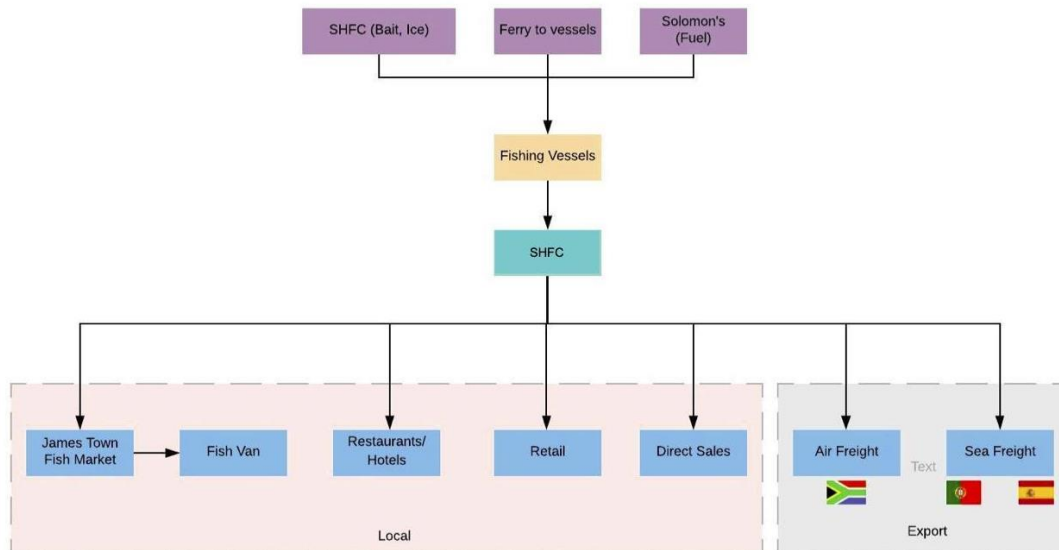


Figure 2 Tuna Supply Chain St Helena

### 1.3 Tuna Fishery Management

In the past, the St Helena Government has recognised that the natural environment of St Helena plays an important role in St Helena society and, if used sustainably, will provide the foundations for future economic growth (St Helena Government, 2015). Nationally, management of fisheries is the responsibility of the Environmental and Natural Resources Directorate, with responsibilities split between staff in the Agriculture and Natural Resources Division and the Environmental Management Division. For more information on the tuna-specific management activities the St Helena government is currently engaged with see Annex 1.

In addition to state management of the tuna fisheries, a project between the International Pole & Line Foundation (IPNLF), the St Helena government, the St Helena Fisheries Corporation and supported by local fishers, is attempting to protect the fishery and bolster the returns to this remote island community. The project aims to establish a conservation area throughout the entire St Helena maritime zone to shield a vast ocean area from harmful fishing activities; and strengthen the tuna harvest and post-harvest capacity to improve the quality of tuna being landed and sold. These efforts align with the principles of Ecologically Sustainable Development now central to many of the world’s fisheries policy and regulatory frameworks (Brundtland, 1990) and whose aims are to manage fisheries for environmental, social and economic

objectives. However, at present the social characteristics of the St Helena one-by-one tuna fishery and its contribution to the island's communities have not been captured, except anecdotally.

#### **1.4 Report Structure**

This paper will synthesise existing research and conduct semi-structured interviews with supply chain stakeholders, to lay the foundations for characterising the contributions of the one-by-one tuna fisheries to the wellbeing of the St Helena tuna fishing community. The report is structured as follows, Section 2 will provide an introduction to social wellbeing and outline the methodology applied in this paper; Section 3 will present a summary of the contributions the tuna fishery makes to St Helena's social wellbeing; and the Conclusion (Section 4) will outline the research programme that will support ongoing data collection to monitor community wellbeing.

## **2 METHODOLOGY**

The research objective is to conduct a rapid analysis of the social contributions of the St Helena commercial tuna fishery to the local community. The methodological approach includes an analysis of existing literature and a social survey incorporating in-depth interviews with a sample of St Helena stakeholders. Owing to the remote location of St Helena all interviews and the focus group were conducted remotely via Skype.

### **2.1 Theoretical Framework - a social wellbeing approach**

*Research question: How does the commercial tuna fishery contribute to community wellbeing in St Helena?*

To answer this question, the research was guided by a "social wellbeing" framework, where wellbeing is defined as "*a state of being with others, where human needs are met, when individuals can act meaningfully to pursue self- defined goals, and when they can enjoy a satisfactory quality of life*" (McGregor, 2008 in Voyer *et al.*, 2016 p32).

Broadly, those considering wellbeing in this context, now recognise the interplay of a variety of different factors in influencing community and individual wellbeing that cannot be assessed through economic - 'material' - factors alone. For instance power relations and social capital are also important factors and represent 'relational' dimension of wellbeing. Furthermore, how people feel about their situation in life is crucial. Someone who has their material needs met but feels socially alienated, or feels dissatisfied with important aspects of their life, does not

have wellbeing. This is the 'subjective' dimension of wellbeing. Considering a combination of material, relational and subjective aspects of human wellbeing provides the foundation of this research framework. It recognises that people's sense of wellbeing can differ considerably, regardless of their economic circumstances, and the relationships that people have within their communities can strongly influence their own sense of wellbeing. For example, professional fishers who are paid well but experience an element of stigmatisation for 'plundering' marine resources may have lower wellbeing than professional fishers who are respected in their community as hardworking primary producers (Voyer *et al.*, 2016).

The research applied components of the theoretical framework developed by researchers at the University of Technology Sydney (UTS) for evaluating the social and economic contributions of fishing industries to communities in New South Wales, Australia (see Voyer *et al.*, 2016 and Voyer *et al.*, 2017) and subsequently in examining social wellbeing contributions of tuna fisheries to communities in Indonesia and the Solomon Islands. While the latter research is yet to be published, direct communication with UTS researchers provided invaluable insight that was able to inform the development of the rapid appraisal framework applied in this research.

At the heart of the framework was the examination of different influences of wellbeing through seven wellbeing domains (McClean, 2019 pers com):

- **Domain #1 – Economic wellbeing:** direct and indirect contributions to the economy, the economic functions of the tuna fishery, and the basic material conditions of coastal communities.
- **Domain #2 - Food and nutrition:** the "food pathways" via which the consumption of tuna occurs.
- **Domain #3 - Cultural heritage and identity:** the extent tuna fishing influences cultures and identities
- **Domain #4 - Inclusive and connected communities:** key relationships between supply chain stakeholders that impact wellbeing.
- **Domain #5 - Education and Knowledge Transmission:** the levels of education of participants in fisheries, their opportunities to build their or their family's levels of education skills and knowledge through their roles, and contributions of fisheries actors to wider knowledge development.
- **Domain #6 - Working conditions:** employment security and work health and safety for participants along the supply chain
- **Domain #7 - Healthy environment:** the extent to which the tuna fishery contributes to healthy environmental systems.

This project used qualitative approaches to conduct a rapid assessment for valuing the contributions that the St Helena tuna fishery makes to each of these domains of wellbeing. The material and publications used for this document were identified through searches of electronic databases and library catalogues. In addition, six qualitative individual and group interviews with key supply chain stakeholders were conducted and the transcripts from these interviews provided the primary means for measuring the wellbeing contributions.

### 3 CONTRIBUTION OF THE FISHERY TO ST HELENA COMMUNITY WELLBEING

#### 3.1 Domain #1 – Economic wellbeing

The tuna fishery is one of the key economic sectors in St Helena. The economic contribution to the commercial fishery in St Helena is made at various levels and in this study was measured through examining the economic indicators of employment and local and national income.

##### 3.1.1 Employment

The fishing industry originated from subsistence fishing but is now a commercial operation; with between 30-50 people directly employed by the fishery sector either on a part-time or full-time basis (St Helena Executive Council interview). This represents a small proportion of the labour market, but because of its roots it has become part of the fabric of St Helena and a recognised economic sector of the island.

Table 1 illustrates the estimated numbers employed directly in the fishery, disaggregated by gender. Women’s direct employment remains focussed on the processing component of the supply chain. However, they feature strongly in other fisheries related sectors i.e. as onboard observers, marine scientists, and the St Helena Fisherman’s Association; and more broadly in retail, hospitality and catering.

TABLE 1: Indicative direct employment figures for St Helena Tuna in 2018

Employment Sector	Male	Female
Ferry service	3	
Inshore fleet fishers (8 vessels @2-3 pp/vessel)	24	0

Offshore fleet fishers (2 vessels @8 pp/vessel, 1 vessel @2pp/vessel)	18	0
St Helena Fisheries Corporation	18	5

The recent addition of these larger vessels means that St Helena now has greater fishing capacity than ever before, however many interviewees acknowledged the over the past 5-10 years they have seen issues in terms of recruitment in the sector. Most fishers are now over thirty years old and low rates of recruitment of the next generation of fishers is resulting in a shortage of qualified and experienced fishers. This represents an important challenge facing both the fishing community and the wider sector as a whole. Furthermore, there has been a decrease in the inshore fishing fleet; in 2013 there were 10-15 vessels and in 2018 there are 7-8 vessels. Reasons for this decline were related to a shortage of fish in 2012/13 which meant a number of fishers left the fishery in favour of shore-based employment. This was followed by the start of the airport construction two years later which saw yet more fishers transition to construction jobs which provided a more consistent source of income. Since completion of the airport some past fishers are re-entering the fishery but one interviewee explained that many have found a new life with more regular shore-based work.

### **3.1.2 Revenue Generation**

#### Direct Revenue

The St Helena tuna supply chain provides a direct source of income both individually to the fishers and nationally through the SHFC which manages both domestic and export sales of tuna (figure 2). St Helena Fisheries Corporation (SHFC) are the central stakeholder in the commercial tuna supply chain. All landed tuna must be sold through SHFC, whatever market it is destined for. According to the St Helena Government (SHG), average monthly sales are around £45,000, with 50% received from export sales (making tuna the largest export commodity on the island), 35% from domestic shop sales, 12% from fuel sales to fishers, and less than 1% from sales of bait and ice to the general public. SHFC also receives subsidies from the SHG, which will be to the value of £29,116 a month in 2019/20. However, this is unlikely to continue when SHG is not the sole shareholder of the fish processing plant (St Helena Government, 2018).



### Local Market

Local commercial fish sales are currently sold at a fixed price. This price had not risen for a number of years, until a 5% increase was instituted in April 2018. However, due to low incomes on St Helena, this increase will not see consumer prices increase significantly.

SHFC's local sales equate on average to £18,000 per month, representing approximately 5 metric tonnes of processed fish.

### Export Market

Exports fall under two categories – frozen sea freight and fresh air freight. Sea freight is used to export frozen seafood to Cape Town. Twenty foot containers are used for sea freight export of frozen seafood to Cape Town and then on to canneries in Portugal or Spain. The average income from sea freight is approximately £18 - £20K per container of either yellowfin or bigeye tuna, with 1-2 containers being exported every three weeks. According to SHG, SHFC cover all freight costs and the buyers make 100% payment for the fish once final paperwork has been completed and received.

Air freight is a new aspect of the St Helena export market, since the opening of the airport in 2017. Currently, SHFC can export a maximum gross weight of 1.8 tonnes of fresh fish on each departing flight. Efforts have been made by SHFC, SHG and IPNLF to identify new export clientele with a view to getting better returns for St Helena tuna (St Helena Government, 2018). Fishers are also working towards this goal by implementing improved handling and storage methods on their vessels to land higher quality fish. A key challenge that remains however is the ability to consistently export air-freight fresh fish. The size tuna required for fresh air-freight is >18kg, these are not always accessible to the inshore fishery and St Helena's offshore fishery is not fishing consistently enough to ensure a regular supply. This inhibits the amount of air-freight export that can occur, as well as the extent to which SHFC are able to attract interested buyers.

### Indirect Revenue

In addition to the direct contributions to the island's economy, the tuna industry also indirectly contributes through taxes paid by the supply chain members, and revenue from local and international sales. In terms of the former, there are potentially addition indirect revenues that can be accrued by accounting for direct sales of fish made by the fishermen before it passes through the processing factory. These types of sales are currently unaccounted for, and by

extension are not taxed. Furthermore, with the construction of the airport, tourism is now a growing sector in St Helena and fishing is marketed as part of the St Helena visitor experience.

### Influences on profitability

As a vital component of the fishing industry, the condition of SHFC is extremely important. Multiple interviewees commented on the challenges it was facing as a result of the current dependence on a government grant and the ongoing search for a new financial investor. One respondent explained that while the local market is relatively self-sufficient the revenue generated from this market is insufficient to sustain the fishery as a whole.

To this end, efforts are being made to introduce 'premium tuna' - higher graded tuna achieved through improvements in the post-harvest and cold chain management processes and involving both fishers and SHFC processors. The ambition of the premium tuna is to receive higher returns for the fish both in local and export markets. Regarding the latter, the introduction of air freight is recognised as a major milestone for the St Helena tuna fishery, providing an opportunity for fresh tuna to be exported for the first time. With this development both the fishing and processing sectors have been working to evolve their fish handling and processing practices to ensure high-quality tuna is available for export. This has come about through inviting external supply chain experts to St Helena to advise on onboard fish handling techniques and cold change management strategies.

Despite the potential for premium tuna to increase income derived from the fishery, respondents indicated that there is still some way to go before fishers are being paid sufficiently for their effort, as illustrated by this comment:

*"Fishers only get paid 90p per kilo for fish landed and £1.30 for the premium, it's not great when you know at the end of it in returns their getting £5-£6 pounds a kilo. They're not even getting 50% of what the income is, but because the cost of running the factory and the administration is so high the fishermen don't see the real return on the effort."* (Julie Thomas)

Furthermore, owing to the remoteness of St Helena, on-island costs are extremely high both for residents and businesses. For instance, SHFC pays £15,000-£20,000 a month for electricity alone (Interview Julie Thomas). The high costs and resulting fragility of the St Helena fishing industry (the fish processing plant in particular) presents considerable challenges for those directly deriving income from it.

Returning to the wellbeing framework, Table 2 summarises the ways in which the commercial tuna fishery has contributed to the domain of economic wellbeing in St Helena.

TABLE 2: Contributions of the St Helena tuna fishery to economic wellbeing

Domain of community wellbeing	Contributions of the St Helena commercial tuna fishery	
Economic wellbeing	Material	Primary economic impact through direct revenue and business profitability
	Relational	Interactions between the local fishing sector and other economic markets and sectors, including: <ul style="list-style-type: none"> <li>- Interactions with the SHFC</li> <li>- Interactions with the hospitality and tourism sectors</li> </ul>
	Subjective	Community support through ongoing commitment to purchase locally-caught tuna

### 3.2 Domain #2 - Food and nutrition

Tuna is an integral source of food and nutrition throughout St Helena and is consumed at least once a week, with some interviewers saying that some households would eat it up to four times a week. The primary tuna species consumed is yellowfin tuna, with bigeye and skipjack tuna providing secondary options. A common theme to emerge from the interviews was the pride placed on the freshness of St Helena tuna, with one interviewer underscoring St Helena’s affinity for fresh fish as something that has been culturally taught over the years. This description provided by one interviewee reflects this sentiment:

*“When we say fresh fish we mean fresh fish, it’s almost jumping on the plate it’s that fresh, it was literally caught an hour ago and you can have it on your plate”*. (Julie Thomas)

Interviewees described tuna as a local convenience food; always available and a staple of the St Helena national diet. For instance, one interviewee commented:

*“It is expected that you should be able to buy fish all the time and be able to eat it, and it is expected that it is a product that isn’t supposed to be expensive, because it is something that is our own natural resource”* (Elizabeth Clingham).

This dependence underscores the vital role tuna has been playing in the island’s food security. Reportedly, SHFC came into existence in 1978 as it was recognised that tuna provided the main source of protein for the local community, but there was inadequate storage facilities to hold the volume of fish that was being caught. In a community as remote as St Helena where the majority of food is imported, it is essential that tuna remains a sustainable and affordable source of nutrition for the whole of the community irrespective of their socioeconomic status. This point can be further illustrated below:

*“Fish is one of the most accessible food sources here. We tend to import a lot of products through the airport and the cost of that is much higher than fish, so fish is one of the cheaper options. In St Helena we have a very mixed economy, we have a lot of lower income households and this is especially the case for elderly people on the island, so they tend to use a lot of tuna”*. (St Helena Executive Council Member, 2018)

Despite being a mainstay, tuna as a source of food is also an evolving concept on St Helena, as efforts are being made in the wider community to increase uptake of the new, premium tuna within the local community. For example, in the past Enterprise St Helena launched a training restaurant on the island, which aimed to provide education to people about standards and the quality of tuna. The SHFC in conjunction with IPNLF and SHCFA are working on a local premium tuna marketing campaign aimed at informing the general public and local businesses in regard to premium tuna, and the different ways tuna can be prepared. The novelty of this product means it is too early to state whether or not this modernisation of the St Helena tuna will alter how tuna is consumed on St Helena in the long term and it may take some time to socialise the community to the change. On this point, many interviewees cited a general resistance to change as a challenge, illustrated by this quote:

*“I don’t think we really want to modernise it (consuming tuna) because we like it as it is. It’s part of what makes St Helena St Helena, so I don’t think we want to revolutionise it, and start processing it in other ways like it gets processed all over the rest of the world. I think that would make it lose its flavour”*. (St Helena Executive Council Member)

TABLE 3: Contribution of the St Helena tuna fishery to health and nutrition

Domain of community wellbeing	Contributions of the St Helena commercial tuna fishery	
Food and Nutrition	Material	Contributions to food security and the nutritional needs of local communities
	Relational	Channels through which consumers access the tuna supplied by the commercial fishery  Social connections and interactions between different stakeholder groups pursuing premium tuna, including: <ul style="list-style-type: none"> <li>- Interactions between fishers and SHFC for developing the premium tuna market</li> <li>- Interaction with Enterprise St Helena and local businesses</li> </ul>
	Subjective	Level of importance community members place on having a reliable and regular source of fresh tuna

### 3.3 Domain #3 - Cultural heritage and identity

This domain explores the historical contributions of the fishing industry to local communities. Despite employing a relatively small proportion of the population, the industry has nonetheless become part of the fabric of the community evolving from subsistence to a commercial activity. This is illustrated by the quote below which highlights the role of the tuna fishing industry in contributing to a shared sense of community identity, cultural heritage, as well as contemporary identity of the St Helena communities.

*“Tuna fishing has been happening for years and years and years, generation after generation so yes, St Helena without tuna, I don’t think it would be St Helena” (Terri Clingham)*

Today, the identity of St Helena, is in part defined by the iconic Jamestown fishing port with moored fishing boats, serving as a ‘gateway’ to the heart of the island (Figure 3). In Jamestown itself, fisherman’s bars provide a spot for fishers to come after a day’s fishing, a tradition that can be seen to have stretched back over the years with walls adorned with photographs of St Helena’s fishers (Interview Martin George). One interviewee explained how the tuna fishers are an accepted part of the local landscape, describing:

*“You can be at home, cast your eyes out to sea and actually see the fishing boats passing by while fishing” (Martin George).*



*#40 Adam Baske & Julie Thomas*  
**ONE HOOK, ONE LINE,  
ONE FISH AT A TIME**



Figure 3 Jamestown Port, St Helena (IPNLF, 2017)

There was a great deal of discussion in the interviews about the role of tuna in day-to-day life. This came out particularly strongly in discussions around the connection between culture and food. All respondents cited a strong cultural heritage connected to tuna dishes, in particular the 'St Helena Fishcake'. A number pointed out that when a 'Saint' returns to the island it can be almost guaranteed fishcakes will be on the menu for their first family meal. The role of tuna in St Helena's culture also comes out in local events like the 'Fish Fry' which are social gatherings that bring together generations of Saints and are centred around fish, tuna in particular. As a result, the tuna fishery is playing a role in sustaining intangible cultural heritage by providing opportunities to share catches and pass on important cultural knowledge, as families convene over tuna consumption. It illustrates the emotional connection between the consumption of tuna and the wider population's sense of home and identity (Table 4).

Alongside the pride demonstrated when discussing St Helena's traditional tuna dishes like fishcakes, tuna stew and tuna in batter, a lot of emphasis was also placed on the importance of tuna in the modernisation of St Helena. For instance, reference was made to St Helena's reputation for overcooking their tuna, with one respondent stating:

*"When we cook our fish for example, it's like you cook the fish to the point where it looks like the sole of your shoe in the frying pan – it's hard, it's curled up"* (Martin George).

The reference to this tradition being described as 'overcooking' was used to illustrate the interest emerging (particularly from younger generations) in the innovations centred around premium tuna products. For example, in the past the Improvement Plan Working Group worked with chefs to introduce more creative ways to cook tuna. This marked a movement away from the traditional dishes to include dishes like sushi and sashimi onto their menus. Moreover, the working group marketed the 'boat to plate' message for the first time on the island in order to amplify awareness around the role of tuna fishers in bringing premium tuna to the island.

Beyond an interest in a more modern diet, respondents also underscored the importance of the premium tuna market for sustaining the unique character and identity of the one-by-one tuna fishery. It was widely acknowledged that the fishery is facing challenging times and that the supply chain needs to modernise the way in which tuna is stored, processed and consumed. On this point, there was also a general consensus that this will not only help to ensure a viable return can be received for the fish being caught, but this may also prevent further reductions in the number of fishers in the traditional one-by-one fishery.

TABLE 4: Contribution of the St Helena tuna fishery to cultural heritage and community identity

Domain of community wellbeing	Contributions of the St Helena commercial tuna fishery	
Cultural Heritage and Community Identity	Material	Contribution to the history of St Helena
	Relational	Contributions to cultural and community identity  Social connections through sharing and consuming tuna
	Subjective	Importance to the community of the contributions of the fishery to a shared sense of community identity and to local cultural heritage

### 3.4 Domain #4 - Inclusive and connected communities

This domain pertains to the structure of the St Helena fishing community, the key relationships between supply chain stakeholders and their involvement in decision-making processes that affect their livelihoods and the fishery as a whole.

In terms of community structure, while there has been some migration to St Helena into sectors like construction and healthcare, the fishery has remained almost exclusively local. The sense from some respondents was that effort should rather be placed on recruiting more locals to the fishery through making it an attractive profession to join and a viable business opportunity. Efforts should be made to address this imbalance between effort and the price paid for tuna (currently £0.90 per kilo for standard tuna and £1.65 - £1.70 for premium tuna; less than 50% of the final sale value). Others held the view that recruiting expert foreigners to the fishery could



be important for building capacity and to help fishers adapt to new fishing and handling practices for the premium market.

Beyond the prospects of recruitment, the tight-knit nature of the St Helena island community is reflected in the close relationships that exist along the tuna supply chain. This can be exemplified by the work being undertaken by multiple stakeholder groups to socialise St Helena's supply chain stakeholders and the local in the community to the new premium tuna market.

At the production end, efforts are being made by the SHFC, and the St Helena Commercial Fishermen's Association to address reticence that supply chain stakeholders are showing toward the introduction of premium tuna. While theoretically, the benefits associated with landing premium tuna seem clear, reportedly, members of the fishing community are skeptical. Firstly, some respondents stated it had been necessary to explain that premium tuna will not see a change to the traditional one-by-one fishing methods currently used, but instead changes will relate to how the fish is handled after it is caught. Currently only four vessels out of the entire St Helena inshore and offshore fishing fleet expressed interest in the premium market. According to one respondent, this shows that more education is required to socialise the fishers to the benefits they could derive from adapting their practices.

Secondly, while considerable drive for the premium tuna has come from SHFC, the plant itself requires modernisation to be able to sustain production for a premium market. At 20 years old, the infrastructure of the factory is sub-optimal, generating high overheads and limiting the potential for revenue optimisation. SHFC is currently subsidised by the Government and has been described as being in "financial crisis". Therefore, an investor is being sought by the SHG to take over the delivery of the core services SHFC currently provides (St Helena Government, 2018). The move to produce premium tuna and export it via air freight has been cited as playing a key role in the value offering for prospective investors and critical for the financial viability of the plant.

At the other end of the supply chain sit the consumers both local businesses that purchase tuna from SHFC and the individual consumers. From the interviews, the concept of premium tuna has received a mixed reception from both these groups. Some have expressed concerns that standard tuna will be phased out and all consumers will be expected to only purchase the more expensive premium tuna. Others have sought more information about the taste and health benefits of premium tuna. Responding to market caution and interest, the Improvement Plan Working Group and Enterprise St Helena have been working on education and promotion to socialise consumers with this new type of tuna.

‘By educating the people on the difference, getting them to taste the difference and getting them to know why it’s different, you can get people to want to eat this premium tuna more of the time and recognise that it’s 100% better.’ (TerriClingham)

The relationships and connections being developed through committees like the Improvement Plan Working Group, combined with the efforts being undertaken to provide information and educate all community members about this premium tuna reflects the social capital that has been generated and connectedness of the community around promoting tuna both as a livelihood but also as a modern lifestyle choice.

TABLE 5: Contribution of the St Helena tuna fishery to inclusive and connected communities

<b>Domain of community wellbeing</b>	<b>Contributions of the St Helena commercial tuna fishery</b>	
Inclusive and Connected Communities	Material	Contributions the fishing sector both maintaining the community fabric and engaging with modernisation efforts
	Relational	Role of the tuna fishery in building and maintaining social networks (formal and informal) in local communities (social capital)
	Subjective	Community awareness and beliefs in relation to the importance of the services provided by the fishery for community life

### 3.5 Domain #5 - Education and Knowledge Transmission

The capability to build one’s skill set and knowledge is considered essential to wellbeing in order for citizens to be able to participate fully in the economic and non-economic life of their community (OECD, 2013). Learning opportunities can also significantly contribute to people’s

ability to fulfil personal ambitions and goals, thus contributing to personal wellbeing (Voyer *et al.*, 2016). While research examining quality of life often focuses on formal education and knowledge acquisition, knowledge generation and transfer can also come from informal and practical -'hands on' - activities. Furthermore, this type of learning is often intergenerational, passed on through mentoring, as well as individual trial and error. This creates links across generations and contributes to the strength and cultural fabric of society. Therefore, the process of learning to be a fisher is important not just for the individuals involved in fishing. It also provides wider benefits for local communities, intersecting across all of the other identified domains of wellbeing.

In the context of fishing, education and knowledge transmission involve building familiarity with techniques and methods as well as an understanding of fish movements and habits, the influence of weather events on catches and the best fishing locations. While much more difficult to quantify than as training courses attended or offered, this form of knowledge transfer is central to the experience of being a fisher (Voyer *et al.*, 2016). The knowledge held by fishers is a vital resource and passing it on through generations is critical for the sustainability of the fishery and its culture of practice.

However, in St Helena, a frequently cited issue was the current low level of recruitment of new fishers to the tuna fishery. Without new entrants, the opportunity to benefit from the current fishers' knowledge could be eroded and the tricks of the trade will have to be learnt through trial and error alone. Historically schools had Maritime Studies on the curriculum, providing students with the opportunity to learn the basics of fishing and its potential as a career opportunity. Some respondents described how this course provided was a source of encouragement for school leavers to join the fishery. However, this is no longer available and some believe it has reduced the community's understanding of or interest in joining the fishing industry. On this point, one respondent also lamented that apprenticeships were no longer available to school students, whereas in the past In previous years, apprenticeships were run and attracted many young people to the industry. However, the perception of fishing as a dangerous activity has meant that these are no longer covered by insurance and cannot be supported.

Numerous interviews outlined how efforts were being made to address this through work being undertaken to raise awareness within schools. For example, steps are being taken to reintroduce Maritime Studies as a core subject and informally, the government's Marine Division and IPNLF are visiting schools to raise awareness about the marine environment and the role fishers are playing in marine stewardship.

Beyond learning the practical side of fishing, St Helena fishers have also built considerable local ecological knowledge about fish habitats, biology and behaviour, local waterways, weather patterns and climate variability. This not only has the potential to improve the success and adaptability of fishing practices but also provides a range of 'flow on' benefits that are important for overall community wellbeing. These include providing monitoring and surveillance of environmental health over time, benefits that are explored in greater detail in Section 3.7.

Other learning opportunities along the tuna supply chain are being supported by the government, Enterprise St Helena and IPNLF. For example, they have supported bringing trainers in and facilitating training for the harvest and post-harvest sectors; culinary training through Bertram's college; and leading the first business road-trip to Cape Town to learn about potential markets.

Table 6 considers both the formal and informal learning opportunities to have arisen out of the tuna fishery and the benefits they provide the wider community

TABLE 6: Contribution of the St Helena tuna fishery to education and knowledge transmission

<b>Domain of community wellbeing</b>	<b>Contributions of the St Helena commercial tuna fishery</b>	
Education and Knowledge Transmission	Material	Formal training and learning opportunities provided by Enterprise St Helena
	Relational	Social learning and informal knowledge transfer  Contributions to community knowledge, especially environmental knowledge
	Subjective	Levels of trust and respect for the knowledge and skills of the fishing industry

### 3.6 Domain #6 - Working conditions

Workplace wellbeing relates to all aspects of working life, from the quality and safety of the physical environment, to how workers feel about their work, their working environment, the climate at work and work organisation (ILO, 2019). The physical and mental demands of fishing make it an unsuitable or undesirable profession for many within the wider community.

Interview participants described the mental and physical 'toughness' that is required to endure the unpredictable and often unsociable working hours, the low return on effort, and the physical challenges of working in unstable work environments in highly changeable weather conditions.

These challenges make it difficult to attract and keep new entrants to the industry. Especially in the absence of opportunities to introduce and get younger generations interested in fishing from an early age to fishing. The low recruitment levels places additional pressures on boat owners and skippers as there is a shortage of crew for them to select. One respondent explained:

*"It's hard to find a really good crewmate now, and for the few good crewmates that are around, the other Skippers just grab them up and hang on to them."* (Duffy)

When it comes to vessel level safety, there are stipulations in place for the equipment it is mandatory to hold. The inshore fleet must hold flares, a first aid kit, life jackets and life rings. The offshore vessels must also hold a life raft, an Emergency Position Indicating Radio Beacon or EPIRB and a satellite phone. Furthermore, crew of offshore vessels are also required to have undergone at-sea safety training. This is not mandatory for the inshore fleet but training options are available to those that are interested. Alongside the formal training, one interviewee described that basic health and safety of what to do or not do on fishing vessels is also passed down informally through generations.

Indirectly, onboard health and safety standards are being introduced. For instance, SHFC has a legal obligation to purchase from reputable sources, as defined by the Competent Authority, who conduct their inspections and highlight if any issues are present that need to be addressed before SHFC can purchase fish from that vessel. In another example, in order for Enterprise St Helena to support a funding application, one of the requirements is that applicants meet relevant health and safety criteria. For example, when applying for support purchasing fishing equipment - fish finder, sonar - Enterprise St Helena requires their application to be supported by the local public health authority.

Outside vessel-level conditions, standards for working health and safety are required in SHFC. While it is not mandatory to obtain internationally recognised health and safety standards within SHFC, SHFC management have instituted their own systems, working with new staff members, going through a basic hygiene induction and the entire factory’s HACCP plan. The HACCP plan and the factory are audited annually by the Competent Authority, to ensure it meets European standards and the tuna can continue to be exported to the EU.

TABLE 7: Contribution of the St Helena tuna fishery to working conditions

Domain of community wellbeing	Contributions of the St Helena commercial tuna fishery	
Working conditions	Material	Formal requirements for health and safety
	Relational	Fisher network and experience sharing
	Subjective	Level of importance fishers place on at-sea health and safety

**3.7 Domain #7 - Healthy environment**

As a small, remote island, the St Helena community is strongly connected to the environment. They are dependent on ecosystem services such as clean air, water, and food, as well as economic resources like tuna that rely on the natural environment to exist. Beyond tangible services, the community also places value on recreational, cultural and spiritual opportunities provided by the natural environment in St Helena and the protection of these values is considered to be of high importance (Rees *et. al.*, 2016).

A healthy environment is therefore a key component of overall health and viability of the St Helena tuna fishery. Not only is it necessary to maintain the quality and quantity of catches, it is also a key factor in determining the nature of the fishers relationships with the general public and with regulators. In terms of fisheries management, in addition to measures controlling

impacts on the target species as laid out in the Fisheries Licensing Policy, the St Helena government has also committed to International Union for the Conservation of Nature (IUCN) Category VI “protected area with sustainable use of natural resources”. Although the necessary legislation is still pending finalisation, this would involve designating the St Helena EEZ a one-by-one only fishing zone. Moreover, St Helena’s tuna fishery has representation on the International Commission for the Conservation of Atlantic Tunas (ICCAT), through the UK delegation representing its overseas territories. ICCAT is responsible for setting catch quotas or effort controls for Tunas and tuna like species in the Atlantic Ocean (Rees *et al.*, 2016).

Environmental stewardship is not only something promoted and valued at the governmental level. The interviews revealed that those directly engaged in the industry also place considerable emphasis and pride on the sustainability of their industry and their practices.

*“As you know we fish a sustainable way, one fish at a time, we don’t have any purse seining or longlining or anything. The fishing community we have are honest, responsible and are aware of all the consequences of overfishing. They know it’s also their responsibility to keep records of catch data, as well as the senior fisheries officer. I think if we were to say to the fishing community as a whole you need to reduce effort on skipjack or whatever else, the fishing community would be responsible enough to say we understand, thanks for letting us know”*  
(Terri Clingham)

Many of the interviews made mention of voluntary measures undertaken within the industry to improve local environmental health. Interviewees noted the voluntary involvement of fishers in monitoring environmental conditions through engaging with the tuna tagging programme. This programme was described as serving a dual benefit, where information from the tagging programme and satellite data have been used to indicate where tuna aggregate and their movement patterns which in turn can help fishers decide where and when to go fishing.

One key way that environmental knowledge is shared in St Helena is through involvement in research projects and environmental committees. Respondents discussed having been actively involved in the St Helena fisheries management committees. One respondent who was involved in the design of the marine protected area (MPA) explained that almost every fisher was involved and contributed to the development of the Marine Management Plan; and through this process, an understanding has developed within the fishing community that conservation is about the balance rather than restriction:

*“You can still catch fish but don’t catch the small ones and don’t catch more than you need.”*  
(Elizabeth Clingham).

Therefore, although a healthy environment can be assessed in ecological terms, the extent to which the community is involved in stewardship and management of the marine environment also has a bearing on social wellbeing (Voyer *et. al* 2017).

TABLE 8: Contribution of the St Helena tuna fishery to a healthy environment

<b>Domain of community wellbeing</b>	<b>Contributions of the St Helena commercial tuna fishery</b>	
Working conditions	Material	Practicing low-impact one-by-one tuna fishing  Involvement of fishers in stewardship activities
	Relational	The role of the tuna supply chain stakeholders in wider environmental management networks
	Subjective	The level of trust in the fishing industry to act in a sustainable manner

#### 4 DISCUSSION

Reviewing the St Helena commercial tuna fishery through the wellbeing lens makes it clear that the fishery provides a range of contributions and benefits to community wellbeing but there are also potential threats to these contributions. The incorporation of qualitative data allowed for a richer appreciation of the suite of contributions that the sector makes to coastal communities, which are valued by local communities but are not necessarily easily quantified or measured in economic - pounds and pence - terms.



At present, SHG oversees the management of the tuna fishery and the IUCN Category VI MPA designation. However, decision making has predominantly focussed on environmental parameters and management of the natural environment, without explicit consideration of the importance of taking community wellbeing into account. Not having sufficient awareness or processes to measure community wellbeing leaves the fisheries management process deficient in firstly understanding what role the fishery is playing in community welfare. This research has illustrated that the fishery sector not only benefits those working directly in the fishery, but that the many facets of the fishery elicit numerous benefits wider benefits to the community in St Helena. Secondly, in taking into account how management measures will impact those dependent upon the fishery as a source of livelihood and wellbeing. The challenge and opportunity is therefore to monitor and evaluate how the societal flows exemplified in each of the wellbeing domains in this report will be impacted by management decisions. As such, to ensure fisheries management is sustainable and viable from a social perspective, it is important that decision-making not only focus on the environmental sustainability of the fishery but also take the wellbeing contributions into account. Failing to recognise and incorporate these wellbeing contributions risks serious damage to societal welfare (Voyer *et. al.*, 2016).

Beyond the government, efforts being undertaken by a variety of stakeholders e.g. SHFC, Enterprise St Helena, the Commercial Fisherman's Association and IPNLF to optimise and modernise the tuna supply chain, illustrates an acknowledgement among community members of the critical role the fishery is playing in contributing to societal wellbeing. This particularly the case in terms of the efforts around developing international markets and premium tuna products.

#### **4.1 Supporting the transfer and growth of fishing knowledge**

The decline in fisher numbers is perhaps the most critical issue the St Helena commercial tuna fishery faces. However, with a declining fishing sector and low prices being paid to fishers, one of the most fundamental challenges lies in the loss of knowledge and experience currently held within an ageing fisher population. A fundamental challenge of the industry therefore lies in attracting and retaining new entrants, capturing the knowledge of existing and past fishers, and supporting the relationships that allow for this knowledge to be shared and passed on between generations of fishers.

There is value in continuation of the school-level awareness raising activities that are currently underway and further consideration given to reintroducing a dedicated Maritime Studies curriculum to build interest in younger generations. However, as fishing largely operates on a system of informal and on-the-job training, in-situ teaching and mentoring opportunities also

need to be introduced as a priority. On the part of government, it is important that there is continuation and amplification of programmes aimed at facilitating key relationships and capacity development within the industry, for example, through the fisher apprenticeships.

#### **4.2 Considering Culture**

The introduction of the premium tuna market raises significant opportunities for the fishers and the role of tuna in the island community. Fishing is not always thought of as a culturally important activity, but the research indicates that it has strongly supported cultural expression and continues to do so throughout St Helena. The cultural importance of tuna to all Saints was highlighted through the consensus surrounding the culinary value tuna is given by everyone on St Helena. Efforts to develop and enhance the new premium tuna market, therefore holds significant potential to build upon the existing strong cultural heritage that surrounds the consumption of tuna throughout the community.

#### **4.3 Applying the method going forward**

This research provided a rapid appraisal of the contributions of the St Helena commercial tuna fishery to the community. The research indicates the diverse contributions being made to the community by the tuna fishery but also that this is a dynamic and evolving space as both the marine environment and the market are changing. Going forward, this framework could serve as a useful tool to continue monitoring the health of the fishery's contributions to wellbeing and the broader impacts of change over time.

For example, annually or biannually a qualitative assessment of the strength and importance of industry contributions could be conducted using interviews, or if feasible, a workshop with representatives from industry, government and the wider community. To ensure the results can be measured against the baseline data provided in this report, specific questions to include in future questionnaires are in Annex 2.

### **5 CONCLUSION**

The research results have a range of implications relevant to industry, local community, policy makers and other sectoral interest groups, including tourism bodies. Primarily, the results indicate that these key stakeholders need to think differently about assessing the 'value' of the commercial tuna fishery to include wider community wellbeing objectives. We find that the industry does contribute a wide range of wellbeing values to the community which are not sufficiently recognised when considering management options. Fisheries management

information processes and policy initiatives should explicitly consider and discuss impacts on community wellbeing. The research suggests that for the industry to reach its full potential, greater effort is required to boost activities that would promote development and integration of the premium tuna market and in turn, address concerns around the loss of knowledge from an ageing industry as the highest priority areas for action in this regard.

## **ANNEX 1 GOVERNANCE AND FISHERIES MANAGEMENT**

Nationally, management of fisheries is the responsibility of the Environmental and Natural Resources Directorate (ENRD), with responsibilities split between staff in the Agriculture and Natural Resources Division (ANRD) and the Environmental Management Division (EMD).

The recently developed draft Fisheries Licensing Policy (2016) sets out the key principles of fisheries licensing and the proposed Fisheries Ordinance will be consistent with this policy and with the Marine Management Plan (MMP). The ordinance will do the following:

- (i) Prohibit bottom trawling, purse seining, gill netting, tangle netting and dynamite fishing;
- (ii) With the exception of traditional rock fishing prohibit all fishing in the maritime zone, unless under a license issued under the ordinance
- (iii) Create four categories of license: commercial, sports, recreational and exploratory
- (iv) Provide for the appointment of a Chief Fishery Officer and Fishery Officers
- (v) Establish a Fishery Advisory Board
- (vi) Regulate the use of fish aggregating devices
- (vii) Regulate the use of spear guns and lances.

St Helena have committed to an International Union for the Conservation of Nature (IUCN) Category VI “protected area with sustainable use of natural resources”, which provisionally includes designating the EEZ as a one-by-one fishing zone. Fishers can operate within the whole EEZ though a number of restrictions on fishing activity, outlined in the St Helena Marine Management Plan which apply within the MPA. Those pertaining to the island’s tuna fisheries include:

- Tangle/gill nets, drift nets, purse seines and dynamite fishing are banned within the entire EEZ. Pelagic and semi pelagic fishing only (Revised legislation linked to Fishery Limits Ordinance 2011);
- No dolphin, or spiny or slipper lobster in berry, to be taken within the entire EEZ (linked to Environmental Protection Ordinance);
- No fishing is permitted without a licence from St Helena Government and fishing activities are regulated via the licensing criteria (Linked to Fishery Limits Ordinance 2011);
- Targeted fishing for all species of shark (including shark finning) is banned throughout the entire EEZ (Linked to Environmental Protection Ordinance 2014);
- All recreational (on boats) and commercial (tourism and fisheries) fishers must adhere to catch limits and size restrictions as per their fishing licence.

Regionally, St Helena’s tuna fisheries are governed under the International Commission for the Conservation of Atlantic Tunas (ICCAT), of which the UK Overseas Territories (UKOTs), as a group, are a member. Four panels have responsibility for different species groups. The panels of particular relevance to St Helena are:

Panel 1: Tropical tunas (yellowfin, bigeye and skipjack)

Panel 3: Southern temperate tunas (albacore and southern bluefin).

The panels are responsible for reviewing the species group, group of species or geographical area under its purview and based on advising the Commission on recommendations. As of 2017, the UK joined Panel 1 as an independent member (independent from the European Commission delegation) and will therefore directly be representing the needs of St Helena in discussions around management and setting quotas.

The UKOTs receive ICCAT quotas, which St Helena utilises, and St Helena is required to implement all regulations and recommendations from ICCAT. St Helena needs to engage fully with ICCAT at a science and policy level to ensure stocks are properly managed and to protect St Helena's share of the resources. However, capacity within ENRD for at sea surveillance and monitoring of the commercial fishing fleet is currently limited. ENRD rely on the locally owned fishing fleet, other locally operated vessels along with regular and visiting shipping traffic to report illegal, unregulated and unreported fishing (IUU). There is also capacity to receive Automated Identification System (AIS) data which enables the identification and tracking of vessels with gross tonnage (GT) of 300 or more. There is a planned programme of spot checks, observer monitoring, and inspection of data and catch records to support surveillance and enforcement.

## References

Collins, M., 2016 St Helena Fisheries Sector: Review & Strategy. (2016 - 2025). St Helena Government.

ILO, 2019. Workplace well-being.

[https://www.ilo.org/safework/areasofwork/workplace-health-promotion-and-well-being/WCMS\\_118396/lang--en/index.htm](https://www.ilo.org/safework/areasofwork/workplace-health-promotion-and-well-being/WCMS_118396/lang--en/index.htm) Accessed August 2019

OECD (2013). How's life? 2013: Measuring well-being. Paris: OECD Publishing.

Rees S., Clingham E, Rodwell L., Glegg G., and Collins M. 2016. Marine Ecosystem Services of St Helena. Part 2: Ecosystem Service Valuations, Future Development Thresholds and Management. A report for the Environment and Natural Resources Directorate, St Helena Government by Marine Institute Plymouth University. pp 70

St Helena Government (2015) *State of the Island 2015*. Corporate Policy and Planning Unit. 19.

<https://sainthelena.gov.sh/shgstateoftheisland2015.pdf> Accessed August 2019

St Helena Government, 2018. St Helena Government Fisheries Investment Prospectus.

<http://www.sainthelena.gov.sh/wp-content/uploads/2018/07/St-Helena-Fisheries-Prospectus.pdf>

Accessed August 2019

Voyer, M., K. Barclay, A. McIlgorm and N. Mazur (2016). Social and Economic Evaluation of NSW Coastal Professional Wild-Catch Fisheries: Valuing Coastal Fisheries (FRDC 2014-301). Canberra, Australia, Fisheries Research and Development Corporation (FRDC). July

Voyer, M., K. Barclay, A., McIlgorm and N. Mazur (2017) Using a well- being approach to develop a framework for an integrated socio- economic evaluation of professional fishing. *Fish and Fisheries*; 18:1134–1149.