

The Unacknowledged Inputs of Orkney's Fishing Industry

Hannah Fennell

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1 Executive Summary

Women and retired fishers occupy and important position within Orkney's fishing industry, but their inputs are largely unacknowledged by managers and decision-makers. Women (most commonly wives and partners of fishers but also fisher daughters and mothers) have provided vital onshore support to the industry for hundreds of years. While the nature of women's roles in the industry has changed due to advances in technology and women's ability to enter the workforce, the activities of women still remain central to the industry. Likewise, retired fishers play an important role in ensuring the continuity and sustainability of the industry, acting as knowledge gatekeepers for younger fishers.

Understanding how the activities of women and retired fishers contribute to the fishing industry may provide pathways to more sustainable and resilient management. Incorporating previously silent voices and experiences in the decision-making process has potential to improve managerial assessments and improve our understanding of legislative impacts on individuals, families, and the local community.

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2 Introduction

Women and retired fishers occupy an important position within Orkney's fishing industry, but their inputs are largely unacknowledged by managers and decision-makers. Identifying the supporting roles performed by these groups provides insight into the sustainability and resilience of the local fishing industry and has implications for future fisheries management strategies.

The majority of work carried out by these groups is uncompensated, although a conservative estimate suggests the value of women's unpaid contributions to the industry is £196,000- although it is likely much higher. A true estimate of the value of women's contribution to the industry is difficult due to the 'unacknowledged' nature of the work: many women carry out crucial tasks for their partners or husbands do not recognise the value of their activities.

This lack of acknowledgement may stem from how the foundation of women's identities have changed over time and the degradation of traditional 'fisher-wife' social networks. As a result, many of the women involved in the fishing industry are susceptible to feelings of isolation.

Feelings of isolation are also common in retired fishers, who upon leaving the industry find themselves without a large portion of their usual social network. Continuing to go out to sea with younger fishers to share their environmental knowledge helps combat these feelings of isolation and improve their sense of wellbeing.

Both women and retired fishers can be seen as knowledge gatekeepers- with women's knowledge centred upon the impact of fisheries management decisions on individual and family economics and relationships, and retired fisher's knowledge centred upon the environment and sustainable fishing practices. Providing pathways that allow this knowledge to be incorporated into decision-making processes will enhance our understanding of management impacts on the fishing industry and the wider community.

3 Methodology

Data for this study was acquired from multiple sources including literature reviews of scientific papers and public documents, direct observations, and formal and informal interviews with fishers, fisher families, processors, wholesalers, suppliers, and local decision-makers. Forty-three interviews were carried out, five of which were with the partners of active fishers. Each interview was conducted using a series of open-ended questions, designed to touch upon the core themes of the project (identity, gender, gender roles, labour), while allowing interviewees to bring up their own views and concerns organically, to ensure their unique experiences were not lost. Each interview was recorded, and transcribed and analysed using the qualitative analysis software NVivo 11 Pro. At the end of each

interview, interviewees were asked to recommend someone else who might be interested in being contacted to take part in the study. This 'snowball' method of accumulating contacts within the industry not only ensured maximum coverage of individuals who were contacted, but also gave insight into the personal connections within the industry. Unfortunately, the level of interest in being interviewed was relatively low, with many women who were contacted feeling they would be unable to provide valuable insights for the project and many retired fishers being reluctant to be formally interviewed.

All interviews were analysed using NVivo 11 Pro, the methodology of which involved a cyclical process of coding and analysis. Key themes in each interview were assigned a unique code, which could then be compared with codes and themes from other interviews. When potentially important or interesting relationships between these themes were analysed, further coding occurred. Data was subject to a cycle of transcription, analysis, exploration of the results, and further analysis.

4 Key concepts

To understand the role of women and retired fishers within Orkney's fishing industry we must understand concepts such as identity (both individual and collective), gender, social capital, and wellbeing as these underpin the activities of the industry and the individuals within it.

4.1 Identity and Gender Roles

Understanding the interactions within and between individuals and communities requires an understanding of identity (both individual and collective). Identity, whether that be the identity of an individual or a community, is complex, multi-faceted, and dynamic, re-enforced through the process of active identification of similarities and differences via interactions with other individuals or communities (Williams, 2008). The process of identification occurs through internal and external identification, with internal identification being how an individual identifies themselves, and external identification being how others identify and subsequently behave towards the individual (Williams, 2008). Thus, individual identity is strongly influenced by their wider community and social connections.

Identities and roles within the fishing industry are highly gendered, with men going out to sea and women staying home (Williams, 2008). The masculine identity of the fisher is based on the demanding physical aspect of the job, as well as the high level or risk associated with it, while the role and identity of women has traditionally been based on notions of support and caring (Reed et. al., 2011). As the number of women in the wider workforce increases the identity of fisher's wives and partners is less and less reliant on their husband's occupation with women able to pursue their own careers and base their identity around their own occupations.

4.2 Social Capital

Social capital is a multidimensional concept that can be defined as the connections that underpin social networks and allows individual actors or groups within a social network to access (or strengthen) their resources (Bakker, 2016). Social capital increases in proportion to the size of an individual's or group's social network, revealing its contextual nature in that different types of social capital are produced depending on the scales and types of interactions within and between social networks (Bakker, 2016).

There are three types of social capital: bonding, bridging, and linking. Each type is the result of networking activities that occur naturally within and between social groups, and each performs a different function for those involved (see figure 1). Bonding social capital refers to the connections within a community and promotes community cohesion and co-operation. Bridging social capital refers to horizontal connections made outside of a community with other, similar, communities. Bridging social capital allows communities to gain access to new resources (such as knowledge). Finally, linking social capital refers to the relationships created across scales (traditionally with governance actors and decision-makers). Linking social capital allows individuals and communities to access governance opportunities and become involved in decision-making processes (Bakker, 2016; Bebbington, 1999; Magis, 2010).



Figure 1:- The three different types of social capital: bonding, bridging, and linking. Bonding social capital refers to the connections made within a community, while bridging social capital refers to relationships made between similar communities. Linking social capital refers to relationships across scales and allows individuals and communities to become empowered and involved in decision-making *processes* (*Bakker, 2016; Bebbington, 1999; Magis, 2010*). *Images* from: wikimediacommons.com.

The concept of social capital assumes that resources created through social interactions exist within communities that create pathways for collaboration, action, and chance. Ultimately social capital forms the basis for the construction and maintenance of other concepts such as individual and community's identity, wellbeing, and community resilience (Bakker, 2016).

4.3 Wellbeing

Social wellbeing is similar to the concept of EBAs, in that it stems from the idea that human wellbeing and the environment are linked- the environment provides a range of ecosystem services, which influences an individual's perception of 'living well'. Social wellbeing can be viewed as a state in which human needs are met, where individuals and groups are satisfied overall with their quality of life and are able to act in a meaningful way that enables them to pursue their goals (Johnson, 2017 A; Armitage et. al., 2012; Breslow et. al., 2016). When used as a valuation system, social wellbeing is seen as something that is not only derived from ecosystem services, but is a driver for individuals, communities, and societies, to act with regard to the environment (Johnson, 2017 A).

5 Orkney's Fishing Industry

Orkney's fishing industry consists approximately 111 vessels, the majority of which are under 10m. This fleet composition means Orkney's fishing industry can be described as 'inshore', with the major fisheries centred around brown crab, velvet crab, and king scallops. Other important commercial species include queen scallops, lobsters, prawns, and whelks. The fleet is responsible for the 297.37 full-time-equivalent positions, with landings in 2015 valued at £6,264,459 (Seafish, 2017).

The GVA (Gross Value Added) for each vessel in Orkney averaged £67,600 (£333,500 for demersal vessels and £56,500 for pot and trap vessels) between 2008-2016. The average total income for an Orkney fishing vessel is £165,000 per year for the same period (£904,000 for demersal vessels and £115,000 for pot and trap vessels).

There are two crab processing factories in Orkney, one located in Stromness and one on Westray. These processors act as buyers of brown crab, velvet crab, and lobster. In addition to these processors, a number of smaller buyers operate within Orkney.

6 Women in the Fishing Industry

The activities of women -whether they be physical, mental, or emotional- have always underpinned Orkney's fishing industry. Traditional division of labour by gender saw women undertake shore-based work (in addition to more traditional gender roles such as managing households and raising families) in the form of processing catch, mending gear, and, in some instances, selling catch. The image of the

Orcadian 'gutter girls'- the migratory herring processors working out of key ports including Stromness, Sanday, Stronsay, and Westray in the 1800s- remains the most recognised role of women in the Orcadian fishing industry, despite the dramatic diversification of female roles within the industry in recent years.

Social researchers divide the work carried out by women (both historically and today) within the fishing industry into two broad categories: instrumental work and expressive work. Instrumental work is often physical (e.g. processing, mending gear), resulting in a tangible output and contribution to the industry, while expressive work encompasses emotional and domestic labour (e.g. raising a family and creating and maintaining social connections) (Williams, 2008). While expressive work is non-fisheries specific, and performed by women from multiple backgrounds, instrumental work is fisheries-specific, usually being carried out by wives and partners, but in some cases by daughters and mothers.

While the specific roles each woman in the fishing industry carries out varies, the majority of these tasks (excluding processing, management, and research) are unpaid and unrecognised, both by the wider fishing industry and those who perform them. The invisibility of the majority of women within the industry -stemming from traditional Orcadian gender roles- makes it difficult to measure the scale and impact of their activities, with potential consequences for fisheries management and social cohesion (section 8). A conservative estimate suggests that if women were to be compensated for their unpaid contributions (excluding emotional and domestic labour) the fishing industry would have to pay an additional £196,000 annually.

Understanding how women contribute -both through formal fisheries-related occupations and informal work- will provide vital insight into the organisation and resilience of the industry as a whole.

6.1 The Hidden Nature of Women's Work

The division of labour within Orkney's fishing industry is largely gendered, with men carrying out the physically laborious and high-risk work of fishing, and women traditionally confined to onshore support and emotional labour. Advancements in technology, fishing equipment, and the economics of fishing have led to diversification of the roles women perform in the fishing industry. While many of the roles performed today (such as processing and emotional support) are similar to those carried out for generations, the increased complexities of fisheries management have led to the diversification of onshore, instrumental work carried out by women. As the majority of this work occurs in or around the home, and is thus hidden from the wider community, the work of women within the fishing industry remains largely unacknowledged- even within the industry itself. This is reflected in individual attitudes towards women within the industry. While men in the industry are often quick to acknowledge the importance of the work carried out by the wives or partners, the

women themselves often struggle to identify the tasks they carry out as being vital (Williams, 2008). One skipper says of the work his -and other wives- perform for the industry:

"We couldn't do it without them. They're stronger than any of us, having to stay behind and look after everything while we're out [at sea]. They're the backbone of the industry. I couldn't... none of us could do what we do if it wasn't for them."

This opinion stands in stark contrast to the way women in the fishing industry often view themselves. Younger women have more difficulty than older women identifying their importance to the industry, relying instead on their primary occupation as a source of identity rather than their supporting roles (personal observation, 2018). Older fishermen's wives and partners (those aged 60+) were more likely to identify themselves as "fishermen's wives" and as being a vital part of the industry. One such woman describes the tasks she performed:

"I had to contact engineers, electricians, etc when repairs were needed. Also contacted crew to tell them when there would be a crew change or to organise flights to join boat..." (North Isles, Aged 73)

Younger women, whose husbands or partners are active fishers, are less likely to identify themselves through their partners occupation, instead choosing to identify themselves through their own careers or actions. However, these younger women are also more likely to downplay their importance in the industry, dismissing their inputs as being "part of the deal of marrying him".

This devaluation of the role of women stems both from the lack of compensation for their labour (with some minor exceptions- see section 6.6) and also the relative isolation these women feel from others in similar positions. While older fishermen's wives had developed strong social networks with others in similar positions as a result of necessity, today's wives and partners lack this connection.

"When me husband went to the whitefish they would often set sail at midnight, and he would be away for a ten day trip you wouldn't hear anything from them unless you spoke to the skippers wife she was the only one that would be in contact with the boat, you had no [idea] where they were or how they were getting on, if you did need to contact them you would speak to the skippers wife to pass on a message, but you would only do this if it was very important" (North Isles, Aged 81)

6.2 The Roles of Women

Women perform a variety of roles within the fishing industry, both instrumental and expressive. Quantifying the ways in which they contribute is difficult, as many of those who carry out supporting activities do not identify themselves as doing so. The degree of supportive work a woman performs within the industry can vary dramatically both between women and over time. Influencing factors include class, education, family size, income, personal health and the health of the fishing industry on a local and national scale.

When the fishing business is struggling, women often expand their supportive roles (whether instrumental or expressive) to help reduce pressure on their husbands. Conversely, the introduction of new technology can help reduce the labour of women. One retired skipper described how the advent of computers and email meant he was able to contact buyers directly, instead of through his wife:

"When I was skipper I had to contact the wife and give her our fish tally she would then contact the fish buyer and tell him what amount and type of fish to expect- he would then fax through the prices once sold. This all changed when computers came aboard, and everything was emailed" (North Isles, Aged 87)

6.3 Instrumental Work

The instrumental activities of women can be broadly defined as the various physical roles carried out by the partners and wives of fishers. As the fishing industry has become more advanced and complex both in terms of technology, gear, and management, the role of women has also expanded and become more complex, shifting away from traditional, labour-intensive instrumental activities such as processing catch and mending gear (although these activities are still fairly common) and becoming more focused on administrative support. 70% of fishers interviewed said their wives helped with their business administration in some way, whether this be carrying out all of the necessary financial work or helping respond to emails and completing paperwork.

While the majority of administrative support provided by women in the fishing industry is uncompensated, occurring informally within the family home, a small number of women are officially 'employed' by their husbands and partners. Most often these official roles involve the management of the business. One woman, a daughter of a fisherman and wholesaler, talks about her role in the business and how it shaped her education:

"I actually studied to be an accountant at the college, then when I graduated, I started working with the family business. My mum used to do all the accounts and organise all the orders and running of the business, but now I do it... She taught me a bit, but it's because the business has grown a lot the job has really changed...." (South Isles, Aged 31)

Those fishers who formally employ their wives, partners, or daughters within their business often operate a wholesaling business in addition to a fishing vessel. While the fisher himself runs the vessel, his wife will be in control of the wholesale side of the business. The legal recognition of women's roles within the fishing industry is not new, although is becoming more and more common. There are a number of female company directors or secretaries for fishing companies within Orkney, making them partly legally responsible for the running of the business. Figure 2 shows the presence of women (marked in green) with legal responsibilities for public limited fishing companies in Orkney (marked in red):

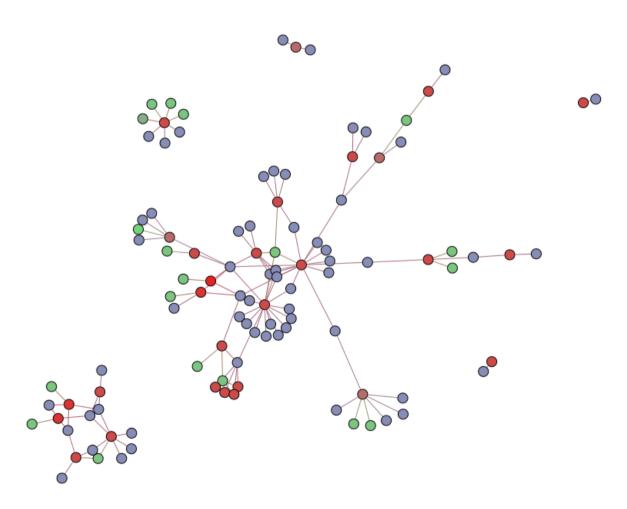


Figure 2:- Node map of the board members of limited companies within Orkney's fishing industry. Red nodes denote companies, green nodes denote women, purple nodes denote men. Lines show relationships between nodes.

Despite their growing role in the board rooms for fishing companies, women are largely absent from decision-making processes regarding the fishing industry, although they are becoming increasingly familiar with the legal aspects of the industry.

As fishing management and its supporting legislation has become more complex, women have become increasingly responsible for ensuring the family fishing business adheres to new and existing management policies (Calhoun, Conway, and Russel, 2016).

The roles of women within the industry are not just limited to onshore work: in certain circumstances women will leave their onshore roles and join their partners at sea, often in a temporary capacity (varying from days to -in rare circumstances- months). These temporary crewing positions often occur when the vessel is short-staffed or requires additional maintenance. One woman who describes says of her experiences on her husband's boat:

"I've had to go out a few times to help out, when it's been needed. Not my thing at all. Out for hours, freezing cold.... But he didn't have a crewman or anyone else, so I had to do it. It had to be done" (Mainland, Aged 59)

6.3.1 Women and Harvesting

In many cultures women play an important role in the seafood industry through shellfish harvesting (Food and Agriculture Organisation, no date). Most typically these harvesting activities occur along the shoreline, typically at low tides. While the number of women involved in similar harvesting activities in Orkney is unknown, one wholesaler estimates a third of their winkles come from women harvesters, although these numbers increase around school holidays (personal communication, 2019).

This anecdotal evidence suggests that the direct involvement of women in Orkney's seafood industry is larger than one may originally think. Attempts to quantify this number and the value of these activities were unsuccessful due to a lack of response from buyers and wholesalers. Further research into what is assumed to be the artisanal and part time harvesting activities of local women would provide further insight and may be valuable for fisheries management discussions.

6.4 Expressive Work

Traditionally the role of women has been centred around expressive work such as emotional and domestic labour. While these tasks are not confined purely to women whose husbands and partners are in the fishing industry, the emotional and domestic labour required by these women can be seen as more intense than if their partners were in other occupations. Often women are responsible for managing and maintaining the relationship between children and the fisher- a relationship which can easily become strained through the long absences necessitated by the industry (Williams, 2008; Reed

et. al., 2011). Thus, we can see how the emotional support of women plays a vital role in the socialisation of the next generation of fishers- they are able to encourage or discourage their sons from entering the industry and pass on the skills necessary for their daughter to continue to carry out the instrumental and expressive work central to a fishing household (Williams, 2008).

6.4.1 Isolation of Women in the Fishing Industry

Themes such as self-sufficiency, isolation, and decision-making were recurring in interviews with the wives and partners of Orcadian fishers, with one woman saying:

"I'm just used to it, its what he does. We're all used to it. It was tough when the children were [young] but now they're older...I got used to doing everything myself, making whatever decisions needed to be made. It's better now, that I'm older and the kids are grown" (Mainland, Aged 55)

The emotional and unpaid labour of women, necessitated by their partner's frequent absences, means the wives and partners of fishers can often feel overburdened and isolated both in their household and -thanks to the industry's culture of independence and self-sufficiency- from the wider community.

Where traditionally women would have been able to rely on family members in similar positions (often using the experiences of their mothers and grandmothers to put their own experiences in perspective (Williams, 2008) to provide support and advice, the reduction in the number of fishers, and the number of women playing supporting roles, has weakened these social networks and compounded the feeling of isolation.

In the past the Fishermen's Mission has helped support the creation of new social networks for women whose partners and husbands work in the fishing industry. These networks brought together women throughout Orkney to encourage them to share knowledge and provide emotional and practical support, helping decrease their sense of isolation and improve their wellbeing. However, the retirement of the Mission Officer has made the future of these groups uncertain- it is unknown if they will continue.

6.5 Economic Business Support

Economic necessities as well as changing cultural attitudes towards women in the workplace has led to many of the wives and partners of fishermen choosing to pursue their own career. Traditionally this paid employment was fisheries-adjacent, such as working in processing factories, but today these occupations have become increasingly diverse, with the majority of women working outside the fishing industry.

The economic contribution of these women to the family has become increasingly important in recent years, providing an 'economic buffer' against the uncertainties of the fishing industry, and -in some cases- helping to fund the family fishing business in times of financial hardship. One fisher describes how the steady income of his wife has allowed him to continue to fish during sustained periods of low market price:

"We couldn't do it without that guaranteed cash every month. Like, fishing...it changes. Some months is good, some is poor. Knowing you're going to be able to get through the bad times makes an awful lot of difference. A few times when its been really poor, I've thought 'right, that's it, I'm out of here' but it's always picked up and she's helped me keep at it."

Wives and partners of younger fishers (aged 50 and under) are more likely to hold jobs than the spouses and partners of older fishers, with the majority of these being traditionally 'feminine' positions such as teaching, administration, and nursing. However, there has been an increase in the number of women taking paid positions within fisheries management and research (see section 6.6). The role of women in visible, paid positions within the fishing industry is important and marks a turning point for the industry itself.

6.6 The Roles of Women-Paid Roles

While much of the work carried out by women in Orkney's fishing industry is unpaid and largely unacknowledged (with processing being the exception), recent years have seen a decrease in the proportion of women working in the processing sector and increase in the number of paid positions within the industry- the majority of which are in fisheries management and fisheries science.

There are 44 FTE paid positions held by women in Orkney's fishing industry- the majority of which are in processing (see table 3). While this is a traditional occupation for women, the increased complexity of fisheries management has provided additional employment opportunities for women.

Paid Positions Held by Women		
Fishing (as skipper or crew)	1 FTE	
Processing	35 FTE	
Management	2 FTE	
Research	3 FTE	
Other	3 FTE	

Figure 3:- Paid positions held by women in Orkney's fishing industry.

Traditionally, paid roles for women in the fishing industry were limited to catch processing. The image of the traditional 'gutter girl' working with herring in the streets of Stromness and Stronsay remains vivid in Orkney's cultural memory. In the 1900s, women were still dominant in the processing sector, making up the majority of workers in the factories in Stromness, Westray, Stronsay, and Rousay. One woman speaks of her time working as a processor:

"We all worked on the pier there, that's where the factory was. It was good fun, it was most of the young girls from the island that worked there. Such a shame when it closed... what can the young'uns do now but leave?" (North Isles, 83)

As the fisheries management becomes more complex, opportunities for employment in fisheries management and research have arisen. While these occupations tend to be male-dominated on a national scale, within Orkney women hold the majority of these positions.

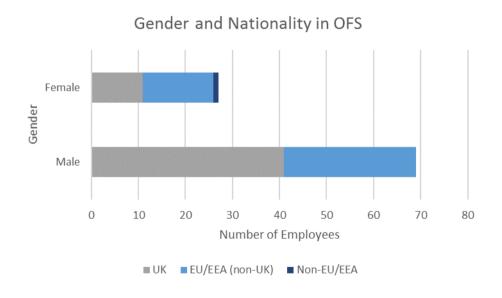


Figure 4:- Gender and nationality in Orkney Fishermen's Society. Data from Orkney Fishermen's Society, personal communication, 2017

While the specific tasks women perform within the fishing industry have changed as a result of advances in technology and fishing equipment, their roles remain similar to those carried out hundreds of years ago.

7 The Role of Retired Fishers in the Fishing Industry

The continuity and long-term success of Orkney's fishing industry is dependent on environmental knowledge and understanding. Retired fishers play an important -and largely unrecognised- role in

intergenerational knowledge transfer which allows the next generation of skippers to understand and work within an incredibly complex and risky environment. Advancements in technology have led to less emphasis on some traditional skills (e.g. meteorology) and placed increased emphasis on more modern skills and knowledge bases (e.g. engineering and accounting). A decline in the number of new entrants into the industry is putting traditional knowledge transfer pathways into jeopardy. One fisher explains:

".... Because the older fella's [are] just dying off... a lot of experience is being lost daily. It's a lot of knowledge getting lost, you ken, if you don't get these young fellas back into the job...."

Retired fishers transfer knowledge through informal events and interactions (see report *The Continuity of Orkney's Fishing Industry*), with knowledge pathways largely informed by social connections between individuals. These events are becoming increasingly common in more isolated Orkney communities as older fishers retire from the industry and pass on their knowledge to the small number of remaining fishers. The majority of knowledge from retired fishers focuses on fishing grounds. One young fisher describes 'inheriting' fishing grounds from a newly-retired skipper from a closely neighbouring island:

"[NAME] has helped me out a fair bit, shown me some of his old grounds that he [can't] use any more. I think he doesn't want to see it taken by the Kirkwall lot, so he's show[ing] me"

Another fisher describes how he takes a retired fisher out with him on calm days during the summer and is therefore able to access new fishing grounds that the retired skipper had traditionally fished. He describes their relationship:

"...I've got an old fella that came out with me, old fisherman from [island], who was at it all his life, and he showed me all his holes that's in the bottom, and [I] drop [my creels] there. And they do very well...."

Retired fishers are often not paid for this work- their compensation lies in their ability to remain involved within the fishing industry, as leaving the industry can be associated with social isolation and a sense of loss which may be compounded by the loss of the individual's social network. Upon leaving the industry a skipper no longer has access to their pier-side networks and this loss, alongside the loss of individual identity can have harmful effects on individuals, manifesting as poor mental and physical health. Many older fishers who are at the traditional age to retire are reluctant to do so, fearing their health would deteriorate:

"He's scared to sell the boat, to quit. Thinks he'll become stagnant, sitting about at home, like. That's what tends to happen...."

8 Incorporating Unacknowledged Inputs into Fisheries Management The incorporation of the experiences and knowledge of women and retired fishers into fisheries management has the potential to enhance decision-making by expanding the understanding of management consequences on the industry. Management councils in Canada have increasingly drawn upon the experiences and knowledge of women to provide vital data on the social and economic consequences of management decisions, while the ecological knowledge of retired fishers provides environmental -and economic – baselines.

As the degree of regulation within the fishing industry increases and becomes more complex, women have become more and more familiar with the legal challenges, necessities, and repercussions of fishing activities (Calhoun, Conway, and Russel, 2016). In Canada and the United States women have a relatively high level of participation in the fishing industry, working on vessels as well as representing the interests of the industry in management processes (Calhoun, 2015).

A report commissioned by the EU (MacAllister Elliot and Partners, 2002) highlights different pathways that can be taken to upgrade and expand the role of women within the fishing industry, including the creation of mutual support networks to allow individuals to share experiences and knowledge to help reduce socialisation, and the provision of training courses (both technical and managerial) to support women in becoming more involved in the fishing business and provide them with transferable skills (MacAllister Elliot and Partners, 2002).

The potential benefits of including women in local fisheries management extend beyond benefits to fisheries management. Including women in industry dialogues will increase their agency and allow them to share experiences, reducing the feeling of isolation which is prevalent within the industry, and may support the creation of social networks which may find solutions to common challenges and problems faced by fishing families. Encouraging connections between women in the fishing industry, no matter their level of involvement through the provision of education courses and support services may increase the wellbeing of fishing families and help make the industry more robust, aiding in its co-ordination and resilience in the long term.

9 Conclusions

The role of women and retired fishers in Orkney's fishing industry is vital for its continued success, resilience, and sustainability. Acknowledging the roles these groups play in the industry and providing

them with support -whether through training courses or formalised knowledge-sharing events- has potential to strengthen the industry and increase its overall resilience.

Incorporating the experiences of both women and retired fishers into management and consultation processes has been successful in countries such as Canada and has potential to benefit Orkney as well. Increased understanding of the social and cultural impact fisheries management has on individuals, families, and communities will help ensure future management decisions are robust and take a comprehensive approach to sustainability.

While this report acts as an introduction to the roles and activities of previously unacknowledged groups, it is not exhaustive. Further research into the activities of women and retired fishers may help quantify the value of the services these groups perform, but it is important to note that too great a focus on the economic value of these activities may eclipse other values such as individual and community cohesion and wellbeing.

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