

Women in the fishing Industry southeast Trinidad: Ortoire to Guayaguayare

Mujeres en la industria pesquera sureste de Trinidad: Ortoire a Guayaguayare

Femmes dans l'industrie de la pêche au sud-est de Trinidad: Ortoire à Guayaguayare

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ABSTRACT

Female involvement in the small-scale fishing industry is known to contribute to the sector. However, whatever role they play along the value chain and how much is contributed is continually overlooked or not statistically considered. This paper looks at women in the fishing industry in Southeast Trinidad from Guayaguayare to Ortoire and the roles in which they play along the small-scale fisheries value chain of production. By asking questions which focuses on the activities that are carried out by the women in that area, the benefits of the women's involvement are shown and provides a picture of what occurs in Southeast Trinidad. It also investigates the formation of the only women's fishing group and how it evolved. To be able to understand the significance of their contributions, questionnaires and interviews were carried out among the fisher folks, fisheries officers, and researchers. This research found that there are activities that involved women, which are not statistically considered. The benefits of having women involved in post-harvest activities, can be seen as very important, where they are more likely to be vendors and processors. The key findings obtained were acquiring skillsets, limited resources/cost of resources, the importance of an association and cultural stigma. Gender based data is not considered in capturing of data by both fisheries officers and researchers. Finally, it was researched how the pandemic affected the fisher folk. These are important findings as it not only provides answers for the study's aim, but also shows a broader picture of what has taken place in this specific industry.

KEYWORDS: Women, small scale fisheries, gender-based, fisheries value chain, roles

INTRODUCTION

It is estimated that 59.51 million people are actively involved in fisheries; this can range from full-time, part-time, or transient within the primary sector of capture fisheries, with 39.0 million people in capture fisheries and 20.5 million people in aquaculture for the year 2018 and women making up 14% of the total workforce (FAO, 2020).

At the local and regional level, fisheries are of crucial importance for the livelihoods of many Caribbean people, both men and women, employing approximately 200,000 people in the CARICOM region. Regional fleets comprised of approximately 25,000 boats produced over 160,000 tons of various seafood annually with a value of about USD\$700 million. (GIFT 2018). Despite the significant engagement of women in the sector, their contribution has been largely overlooked (Kleiber et al. 2015) with their work relegated to an extension of household labor (Harper et al.2017) and they are still omitted as important stakeholders and economic contributors in the sector (Frangoudes and Gerrad 2018; Salmi and Sonck-Rautio 2018).

The harvest sector is particularly dominated by men along the Caribbean fisheries value chains and is most times recorded as compared to the postharvest aspect and women in fisheries (GIFT 2018). This statement can similarly be seen in Trinidad and Tobago where an estimated 6500 people are employed in the marine fisheries sector in Trinidad; 61% are fishers, 19% in the processing industry and another 19% in fish marketing and distribution and 1% in vessel and/or gear construction and maintenance (Kuruvilla et al., 2002). Women's participation in the fishing industry is not well documented. Even knowing this limitation, women are known to be involved in the processing and marketing activities, are boat owners, net menders, purchasers of fishing equipment, accounting, and financial managers, and they assist the deployment of beach seines, and as vendors, roles of leadership can be found in the community along with managing the household (Mohammed et al 2011).

By not acknowledging female participation in fisheries, this leads to biases. Such as Women's labor; this is more likely to be viewed as being part of the household duties and assisting their husbands, whilst the high-paid positions in fisheries are mostly occupied by men (Toth and Brown 1997) and thus results in a deficiency in the data capturing process, creating an incomplete understanding of coastal livelihoods, This study was conducted to explore the roles that women play, as well as their levels of social and management inclusion, in the fishing industry in Southeastern Trinidad.

It was achieved by investigating the women's role along the value chain of production of targeted species (pre- harvest, harvest, and post-harvest). The study also explores the effectiveness of creating a female fisher organization, determining if there was any change in the approach of collecting data by both researchers and fisheries officers and whether policy makers use this social data when creating effective policies specifically for fishing communities and lastly how the pandemic impacted the fishing activity and if there was a change in gender dynamics.

Literature Review

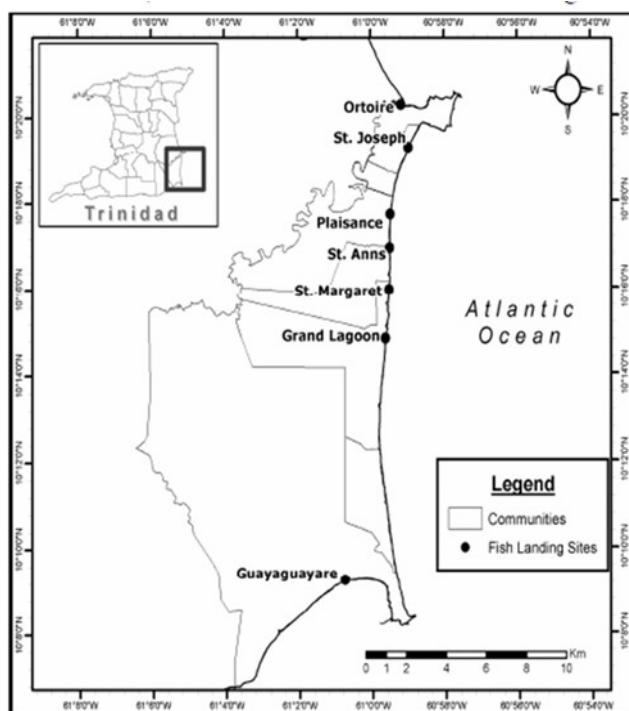


Figure 1. Map of study area Kishore et al., 2007 .

The core value of Sustainable development is the approach in which development looks at balancing, varying and most times competing needs, against an awareness of the environmental, social, and economic limitations that are faced by society. (sdcommission.org.uk).

Women globally have an annual catch of approximately 2.9 million tons of seafood with female participation of 2.1 million women in SSF (Harper et al 2020). The contributions that are made by women to the national economies still is continuously overlooked simply because of their dominance in an informal economy where it normally goes unrecorded (Chen, 2000; Kronen, 2007) which is not picked up by the official statistics (Salmi and Sonck -Rautio, 2018; Siles et al 2019; Weeratunge et al, 2010)

Women who are part of small-scale fisheries organizations play both a critical and useful role when it comes to providing new perspectives to fisheries value chains (Frangoudes, 2013).

Even with the UN SDGs (Sustainably Development Goals) that targets women empowerment and life below water with targets that deals with fisheries specific activities, there remains a problem; women continue to be marginalized in this sector due to gender biases. The problem of insufficient attention paid to women not only transcends to the more formal setting such as government policies in both the fisheries and aquaculture sector but also programs and activities of governments, the private sector and civil society (CSO) (Women’s Economic empower-

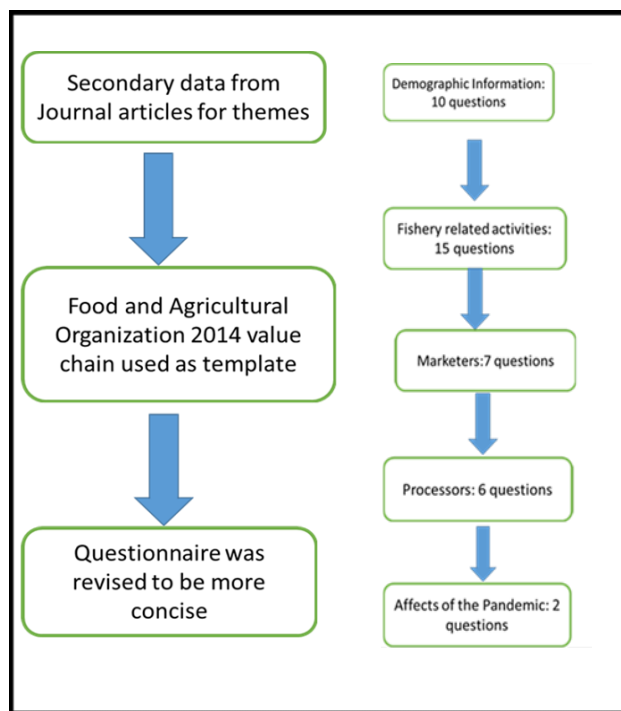


Figure 2. Flow chart used for constructing themes and questions.

ment in fisheries in the blue economy of the Indian Ocean Rim, 2020) This can be seen in Trinidad and Tobago.

Women in the fishing industry in southeast Trinidad from Ortoire to Guayaguayare, look at the roles and jobs that are conducted by them and how these activities affect their personal lives and the community by extension.

This paper also investigates the once only women’s association, WIFA, looking into what activities were conducted during their operations, reasons for their dissolvment, and the future of WIFA. It also provides varying perspectives of the various stakeholders, some of whom assisted with the formation of WIFA and to better understand the importance of women activities in the fisheries sector and the benefits of having a women’s group. A comparison should be made between Trinidad and Tobago and other regional countries for example Barbados.

2.1. Formation of women’s group

Even though in Barbados, women have a prominent role in the post-harvest segment in the flying fish value chain, this fact is not reflected in their participation in fisherfolk organizations.

As individuals it was harder to address the concerns of the women about the working spaces at the fish market, thus they formed an organization that is currently comprised only of women and is women led since the moment of inception (Maria Pena)

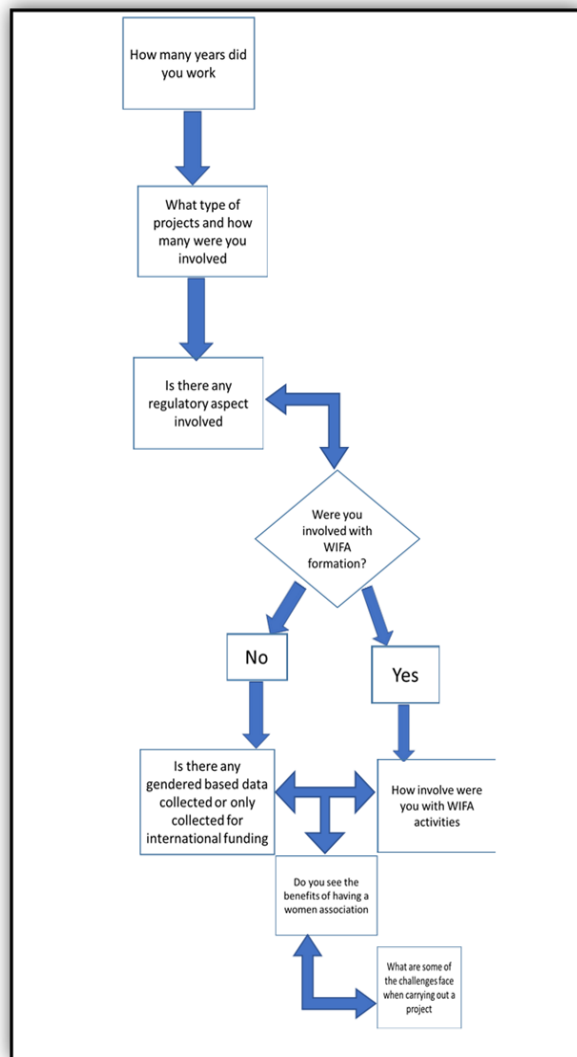


Figure 2. Flow chart showing overview of guided questions

The Central Fish Processors Association profile was established in 2005, with its primary focus being the processing of flying fish. Comprising of over 50% of total annual fish landings, with the post-harvest mainly conducted by women, even though there has been a recent increase in male involvement. The deboning and filleting of dolphinfish and amberfish are mainly carried out by the men, however the numbers does not match those of women (S. White, CFPA member, personal communication 2019). The association began with twenty members mostly women, with female leadership and grew to twenty-six members- with those new members being all women, men not expressing any interest in joining the association (Pena et al., 2018) even though membership was open to any fisher folk that resides around operations, without restriction to race, sex or religion (CFPA,2005).

Formation of WIFA:

According to an IMA report which explored co-

management strategies framework in Southeast Trinidad, there was a recognition for improving the livelihood and the need for representations when there was increasing conflicts when it came to the oil and gas sector. In August 2004 two fishing associations were created, the Southeast Fishing Association (SEFA) and the Women in Fishing Association (WIFA) the first women's fishing group to be formed in Trinidad and Tobago.

These women of Southeast are boat owners, and or managers of the fishing activity on behalf of either their husbands or sons. Additionally, women are also involved in more traditional roles of fish processors and retail vendors.

WIFA believes that they can provide meaningful contributions through management and the consequential improvement of the fishing industry on the southeast coast. The acceptance of WIFA organization encourages and helps with discounting the taboo of women's involvement in the formal management and decision-making in the fishing industry.

MATERIALS AND METHODS

Study context

On the southeast coast of Trinidad there are seven landing sites, within the villages of Ortoire, St. Joseph, Plaisance, St. Ann's, St. Margaret, Grand Lagoon and Guayaguayare, with many of the communities called Mayaro. With a population made of up approximately 11,000 (CSO 2002), the most significant economic activities that occur in this area are oil and gas production, tourism, which has made a resurgence in the 1990's and fishing. (Kishore et al 2008) with fish and seafood capture and sale is considered their main source of livelihood (IMA, 2003).

The women in Trinidad were not traditionally allowed to participate in the "man business" of fishing as it is seen to be a bad omen or given a higher paying job within the beach seine fishery, even when these women were taking on increasingly significant roles in all aspects of the fishery.

DATA TOOLS

Questionnaire design:

The questionnaire design was made up of 5 sections and was informed by secondary data that was derived from reports authored by IMA research team, grey literature from regional and international reports derived from similar research.

Section one consisted of 10 questions which gathered demographic information: Participants were asked if they were sole breadwinners and if not, specify who

| Gender | No% | Yes% | Total% |
|--------|--------|---------|---------|
| Female | 50.000 | 50.000 | 100.000 |
| Male | 0.000 | 100.000 | 100.000 |
| Total | 15.789 | 84.211 | 100.000 |

Table 2. Showing statistical analysis on dependents

is in their household. Section two gathered fishery related data through 15 questions and whether they are part of a fishing organization, whether they are active members of the fishing organization. Structured questions were mainly found in these two sections.

A list of possible jobs was created asking participants which of them are full-time/part-time, paid, or unpaid, the number of days they work per week and if it was a main source of income.

Postproduction was broken into two sections: marketers (section 3) and processors (section 4) producing a total of six questions. Like section 2, they were also asked what roles or jobs are involved as well as household roles were queried. Semi-structured interview was used for the collection of data. Section 5 asked participants how did the pandemic affected them.

Participants were recruited through the former president of WIFA. The first group of participants were those on the beaches mainly the fishermen with a few fisherwomen. The second group of participants were all women with the majority being part of the WIFA groups the survey was conducted via the phone.

Interview method:

Phone interviews were conducted, and data was collected via note taking. The phone interviews were categorized into three groups while the questionnaire was used as a guide for former WIFA members.

The second category of phone interviews were fisheries officers and researcher, the data from these interviews were also collected via note taking.

The guided questions for fisheries officers asked:

Their involvement with community-based projects in fisheries sector, if any community-based projects specifically targeted women in fisheries or carried out gendered based research. It also asked if national gender data is only done when international bodies such as the FAO or UNDP when providing funding for research proposals or if there is collaborative work with international researchers. When

| Gender | N/A | No | Yes | Total |
|--------|----------|----------|----------|-----------|
| Female | 2.000 | 4.000 | 0.000 | 6.000 |
| | 33.333 % | 66.667 % | 0.000 % | 100.000 % |
| Male | 8.000 | 1.000 | 4.000 | 13.000 |
| | 61.538 % | 7.692 % | 30.769 % | 100.000 % |
| Total | 10.000 | 5.000 | 4.000 | 19.000 |
| | 52.632 % | 26.316 % | 21.053 % | 100.000 % |

Table 2. Showing statistical analysis on unsold produce

these projects are carried out, they are sustainable, meaning the project can sustain itself for future generations. Questions further investigated if there are any formal or informal women’s groups in either Trinidad or Tobago outside of WIFA, what species of fish are processed and the method of processing. If like Barbados, their produce is sold outside of their community or country; are produce sold regionally or internationally.

The interview goes on to ask whether these projects had continuous assessment during and after the execution and what were the limitations that were faced when carrying out such projects. The fisheries officers who were involved with the WIFA were asked if there was any noticeable development in the said area during the time of WIFA operation, but also was there a change in collecting data that is, is the information gendered based and is it being used in the creation of policies. The questions on the collection of gender-based data and its usage were also asked of the fisheries division of THA.

Interviewers were also asked how data was collected and disseminated and who would receive such information.

IMA interview questions:

The head researcher during the project “Community-based Fisheries management: A case study of fishing communities from Ortoire to Guayaguayre” was interviewed. An online interview was conducted via zoom with the chief research officer of IMA. The interview consisted of semi structured questions asking about the women in WIFA and women in fisheries in Trinidad; how involved the IMA was during and after the formation of WIFA, leading into the discussion of IMA’s awareness of WIFA’s dissolution and how it could have been prevented: such as a post review after the completion of the project and if the data that was collected during the formation of WIFA was used in fisheries policies. Permission was obtained by the interviewee, former president of WIFA. The interviewee was asked if they were comfortable having the interview recorded, before proceeding.

Two sets of phone interviews were done with the fishery officers who worked with the women of the

community. They were structured based on the interviewees' roles in fishery related activities, questions for fishery extension officers from Tobago were different from those that were from Trinidad and their area of specialty also influenced the trajectory of the interview.

Interview questions for a researcher at IICA were asked; the involvement of IICA when it comes to gender based studies, or data collection and usage in Trinidad. The questions of the interview also investigated project sustainability and posted project reviews as to whether this is a requirement when creating project proposals. Even though IICAs' focus is heavily agriculture there have been projects that investigated fisheries and aquaculture and lastly, how is a project determined to be a success?

Sampling

For this research, the target population were the women who work in the fishing industry in southeast Trinidad. Convenience sampling was the chosen type of sampling method used to conduct the research; questionnaires were handed out to both males and females who are fisher folk of Southeast Trinidad.

Data Analysis

Microsoft Excel and JASP were the two programs used for analyzing the quantitative data from the questionnaire. Thematic analysis was used to analyze the qualitative data that was derived from the interviews that were conducted, and the data summa-

rized in a matrix.

Questions were structured which allowed for followed-up questions which helped with clearer understanding of the responses.

RESULTS

Questionnaire Demographic

A total of 21 persons completed the questionnaire, 16 males and 4 females participated.

Through cross tabulation, it can be noted that 50% of females have dependents, whereas 100% of male participants have dependents. This is because the dependents of the males are young children and or elderly parents versus the females who even though they have children, they tend to be adults who work or do not live in the same household, or they have no children at all.

The average income (figure 6) of participants varied, that is fishermen's average salary would be daily whereas both the vendors and processors were a monthly basis with 'good' representing days when the conditions are favorable and 'bad' representing conditions that are not favorable (severe weather, no fish caught.). The 'importance of participants' job was asked with 87% of participants responded with very important and 0 % for not important.

Excess fish that was not sold did not meet any statistical significance, however it was found that excess fish are donated to hospitals and homes for the poor, with 0% of the women answered yes, they do not donate as they

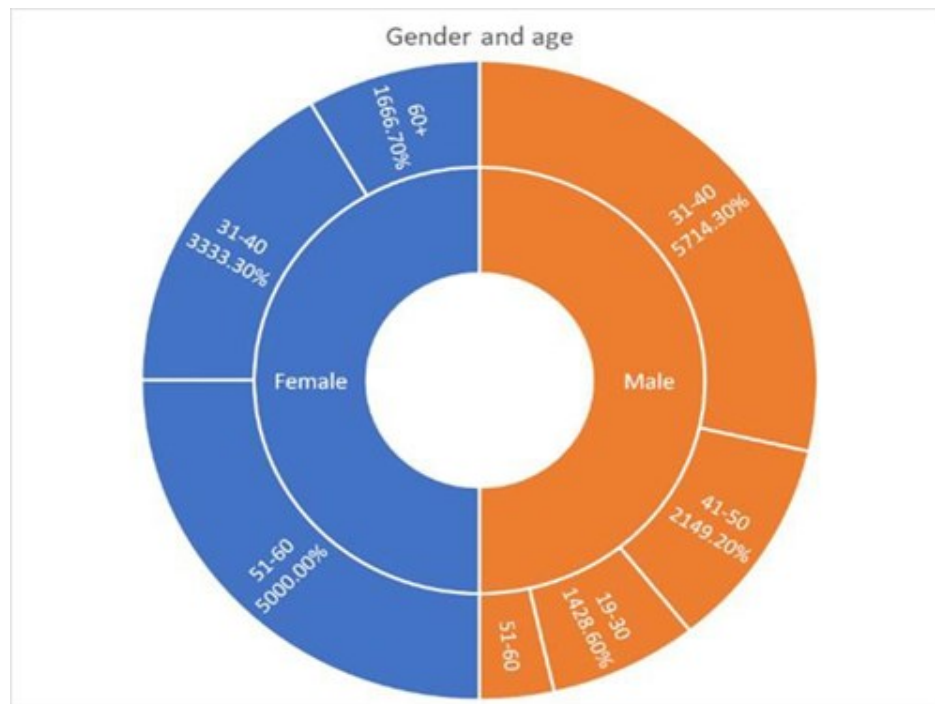


Figure 4. Showing the percentage of each age based on gender of participants

would either sell all the fish or freeze the excess and resell them. This is because the women are solely vendors or processors whereas the men are at times vendors but are fishers first by trade therefore 30.77% of them donate the excess fish as can be seen in the table 2.

More males (10) than females (3) have experienced less people buying fish which showed a 'p' value of 0.046. This is because the males are most times the fishers whereas the women are less likely to go out to fish, as they are vendors or fish processors. There was also the inability to go out to fish; it was observed that only 12 males and 1 female were impacted by this with the one female who answered 'yes' was a boat owner and therefore because of the curfew restrictions, her crew had challenges to fish during the curfew hours.

The results analyzed reflect a small sample size of those who participate in fisheries and therefore it is limited in showing the true nature of women's role in the fishing industry. There is also the fact that some of the women have office jobs and is only able to assist their husbands who are fishermen carry out administrative work, therefore contacting them was a challenge. Another factor was there are women who are boat owners, therefore do not conduct business at the fishing camp.

Interviews

WIFA, the only women's fishing association during its 10 years life span, has unfortunately dissolved. The reasons for this were investigated at varying levels, from the members to the different stakeholders who participated in its formation and those who carried out community-based projects.

Members:

Of the 6 female past members of WIFA interviewed two perspectives were given.

Perspective 1:

It is believed that the dissolution was due to some members' personal issues, which limited their time being involved and slowly their presence decreased to the point where they no longer attended meetings. There was also the issue of some females deciding to conduct their own processing business when it was realized that the money they initially received could not be sustained because distribution became an issue.

Perspective 2:

Communication became a problem between the community development officer and the WIFA group. It was expressed during the drafting of the constitution and was then given to the officer for submission. There was no appraisal until the group had reached a crisis stage and like the first perspective the distribution of money was also an issue.

Researchers and Fisheries Officers

IMA implemented a community-based project, in

Southeast Trinidad in 2003, it was a regional project for both English and Spanish speaking Caribbean countries, the funding for this initiative was provided by IOI Costa Rica (International Ocean Institute Training Centre for Latin America and the Caribbean).

- A former extension officer who has worked for CFTDI (Caribbean Fisheries Training and Development Institute) for 25 years. His area of specialty was carrying out training programs in the processing and handling of fish and he has done training in various coastal communities such as Claxton Bay, Blanchisseuse, and Cedros. He also provided shellfish processing and quality control practice training regionally in Guyana, Barbados, St. Lucia, and Antigua. He has been involved with community-based research by providing his training expertise to the communities.
- Fishery officer 1 was involved with the Fishery Division for over 40 years and has authorized several projects, one such project involved Tobago's commercial Fishing Tournament. The objective of the project was to bring awareness and celebrate the fisher folks by honoring both male and female fishers.
- Fisheries officer 2, having been part of the THA extension officers team from 1973-2008, is currently retired. It was observed that in Castara, there would be women who would go out and fish with their husbands where a few of the women would do salting and smoking, filleting, packaging, and selling. Fish deboning is not only carried out by women but also by men.
- Former fisheries assistant of 24 years and is now retired. Her area of expertise was the development of fishing associations, with an emphasis on the provision of training on the use of basic safety procedures. One of the projects she spearheaded was a collaboration with ALTA to provide opportunities for adult literacy in the community.
- Fisheries officer 3 for 25 years became a fisheries officer after the formation of WIFA and acted as an observer during meetings.

The matrix shows the most important theme observed was benefits. What was observed, was the roles women carried out in the fishing industry had positively impacted the women as a collective, the community and the women as individuals. As a collective they were able to acquire skillsets that helped in obtaining employment whether it was working at a fish processing facility in Tobago or having their own business. They were also able to gain financial literacy which helped the women in caring for their families, trickling down to bettering the community. There was also the mention of generational influence that older women who are part of the industry, influenced younger women to partake in the industry as well.

Despite the benefits, there were also challenges. These

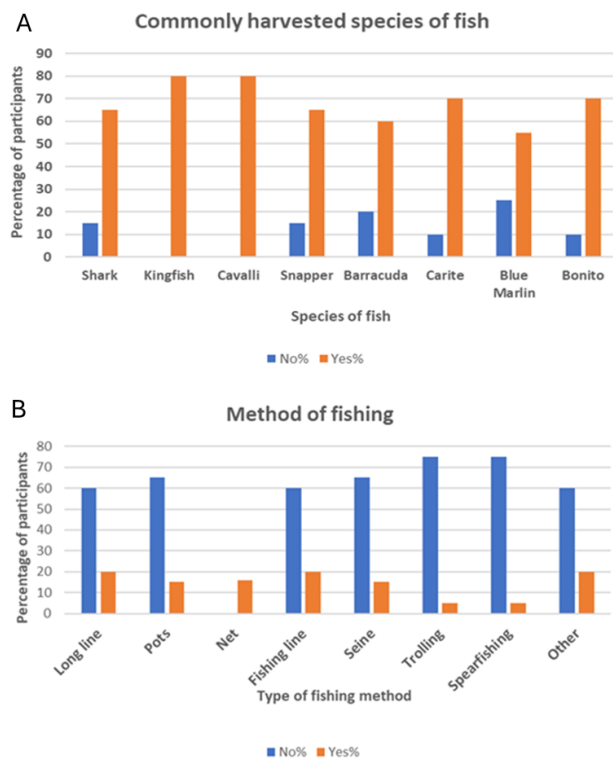


Figure 5. Showing fishery related data . A) Commonly harvested species B) Method of Fishing.

challenges occurred for both fisheries officers as well as researchers when looked at from the perspective of conducting community-based projects, specifically with women in mind, and the lack of resources for capacity building when carrying out community-based projects. The women involved in the processing component, encountered challenges such as the cost of raw material to successfully carry out their production.

Similarities in opinions created statements that were repeated by both the fisheries officers and researchers: where community-based projects do have an important function when it comes to community development, the importance of forming fishing associations and the lack of female fishing associations in the country.

The theme of taboos was found to only look at the cultural stigmas, as this can negatively impact the execution of projects.

Based on the interviews that were conducted, it was found that biological data such as type of fish caught, fishing method and size of catchment are looked at more than social data. This seeming lack of awareness highlights how formal communication between stakeholders who were involved with the formation of WIFA did not exist. When asked about the number of community-based projects they were involved in the response varies as there

is limited community-based projects being carried out.

DISCUSSION

In Gordon and Tupper 2011 research, it was pointed out that even though WIFA was provided a small grant for business projects, it was ascertained that WIFA was at a disadvantage over fully commercial fish handling and processing operations. The small size in terms of membership of the organization was also a factor. However, Tupper et al goes on to say that there is a benefit from having such support as it builds women's capacity for entrepreneurship, organizational development and leads to a positive impact on civil society. By identifying ways of building such capacities to a wider group as well as developing processes, national dialogue shifts to a more constructive discourse which is helpful.

This statement made by Gordon et al, can be seen as another factor that could possibly explain the issue of money and the dissolution of WIFA, where it was stated that because of their small size, the women were not able to compete with other corporations that provided similar services.

A former extension officer, also stated that women are more likely to only produce enough for their community due to the small size, therefore it would take an extended period (years) to see growth and experience true profit.

WIFA would have been at a great disadvantage, simply because they may have priced their product at a level which did not reflect their 'real operating cost' and thus may not have been able to maintain such a price when the grant funding came to an end.

This issue can give a false sense of security as this affects projects, even though there were resources provided, such as financial resources and personnel training, which was provided by the Fisheries Division, CFTDI; on how to process and handle fish, IMA provided technical assistance in creating a constitution and establishing WIFA's functions, and the different roles in which the women would participate. 'What did WIFA want to stand for?', 'What would they like to see happen when forming this group.' were some of the questions that was asked by the researchers of IMA.

There are also the financial provisions that were given by NGC and REPSOL, as well as the equipment that is used for smoking fish.

The IMA also, collaborated with CLICO and ADB, who helped in providing financial literacy for the women of WIFA such as insurance, opening of a bank account and the provision of loans.

Despite the input of these various resources, the project proved not to trigger sustainability in the long term.

The dissolution of WIFA serves to highlight the need for a post review to be included in the development of

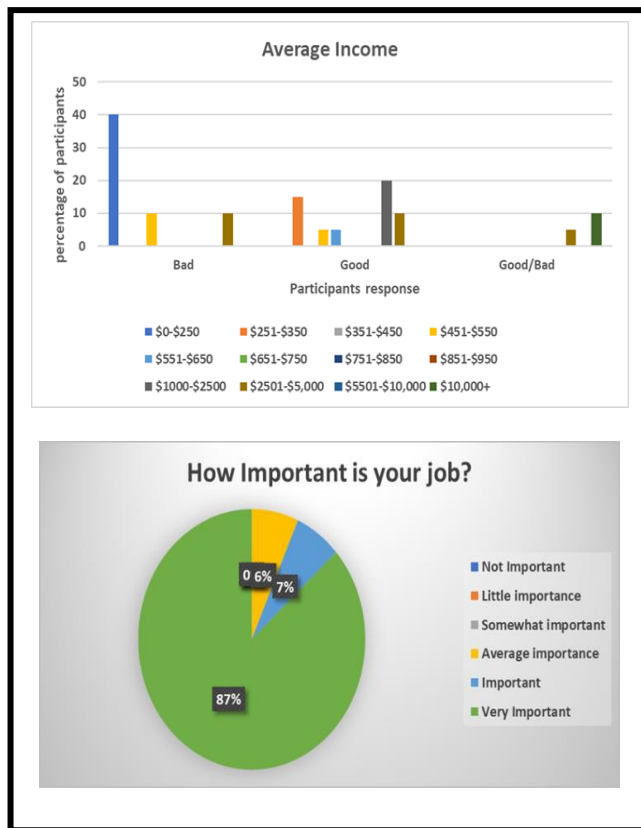


Figure 6. Showing fishery related data . Income related data.

projects as well as the need for continued proactive communication amongst the varying stakeholders for a period after the ‘book’ end date of the project. Mr. Nurse also identified this ongoing need of support for the women.

The fact that the WIFA organization was formed and lasted 10 years shows the potential for success of future female- led organizations. There should be an emphasis on learning from past mistakes and understanding the importance of incorporating the culture of the community when carrying out community-based projects. This can be seen as a reason of the success of Barbados’ women’s group, where there was the continued involvement by the fisheries division.

Common themes that were noted from women interviewed who had been part of WIFA were, they saw the benefits of being part of the group as it provided them skillsets; not only in the training of processing fish but also how to write for grants, for funding, the creation of a constitution.

The community benefitted through the projects such as the organizing and creating of Christmas hampers for the children within the community.

In Tobago, there exists a group chiefly operated by women where there is a flying fish processing plant. They have been able to realize even more tangible benefits such as, the development of the community, through the women having financial freedom where they are then able to help their children advance their tertiary level education and they themselves return to these said communities, helping to develop it through avenues such as the creation of a guest house.

In Barbados, when an issue arises, that directly impact women involved in the fish market, the CFPA are the ones that bring it to light and ensure it is dealt with. This type of power that comes with unity can be used to meet the needs of the people of the community.

Having a women’s organization does not only provide skillsets for the women and uplift the community, but it also acts as a union. This was highlighted in Tobago when the women of the largest flying fish facility did not receive their NIS benefits after retirement. They were able to negotiate on behalf of all the women. Like any other type of union, it can protect their members from being exploited and ensure that the needs of the women are met. Even though there is a fishing association for both men and women, the needs of a woman may not always be the same as the needs of men and the times when they are met, it can benefit both sexes.

In the interviews conducted with the IMA and the extension officer, it was observed that gender studies are only carried out if it is requested by a regional or international body, this implies that to this day, sex disaggregated data is not seen as important despite several literature from the 1990’s to now, stating it is limited and there is a need for this. Having general fisheries data is important, but it does however fail to emphasis the scope of women involvement along the small-scale value chain.

The future of WIFA is that of a privately owned business run by a pervious member of the WIFA organization.

This case study also shows the impact weak communication amongst stakeholders can have on the longevity of a project and understanding that it is not handholding that is required but allowing the community to take the initiative with guided support, as it can be clearly seen, the women from WIFA greatly benefitted from its formation.

The execution of this project was met with some challenges such as the questionnaires having to be done in groups, meeting with the fisher folks and getting to where they are located had to be scheduled around both the fishery officer and former President of WIFA availability. Telephone interviews were a challenge due to connectivity or persons not responding.

CONCLUSION

This paper has interestingly shown how women in the

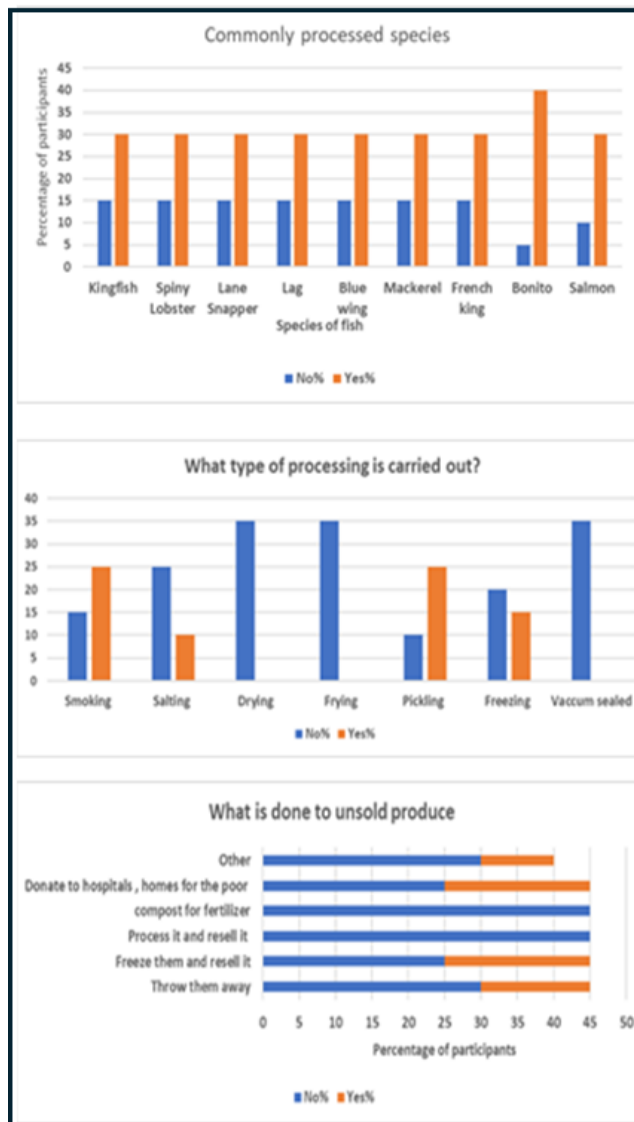


Figure 7. Showing fish processing data

fisheries sector to this day are not recognised for the contribution they make to this industry, despite extensive research and projects showing the importance of having sex disaggregated data and how it can benefit the managing and conserving of the fisheries industry, as well as uplifting the communities and help in increasing the countries' GDP through exporting of their goods.

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| Contingency Tables | | | | |
|-------------------------|--|--------|------|-------|
| | | Gender | | |
| Less people buying fish | | Female | Male | Total |
| N/A | | 1 | 0 | 1 |
| No | | 2 | 0 | 2 |
| Yes | | 3 | 10 | 13 |
| Total | | 6 | 10 | 16 |

| Chi-Squared Tests | | | |
|-------------------|-------|----|-------|
| | Value | df | p |
| X ² | 6.154 | 2 | 0.046 |
| N | 16 | | |

Table 3. Showing statistical analysis on the effects of the pandemic

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