

LIVELIHOODS IN TRANSITION ACROSS THE GULF OF MEXICO: A THREE CASE
STUDY APPROACH

A Dissertation

by

CORAL MARIE LOZADA PEREZ

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This dissertation meets the standards for scope and quality of
Texas A&M University-Corpus Christi and is hereby approved.

David Yoskowitz, Ph.D.
Chair

Richard McLaughlin, J.D., L.L.M., J.S.D.
Co-Chair

Greg Stunz, Ph.D.
Committee Member

Michelle Maresh-Fuehrer, Ph.D.
Committee Member

Deniz Gevrek, Ph.D.
Graduate Faculty Representative

August 2022

ABSTRACT

Livelihood transitions within coastal communities can result from biophysical changes to the environment that people make a living from, or from policies that affect an individual's or community's way of life. Using the socio-ecological framework, these transitions, and the adaptations that fishers in coastal communities have employed were analyzed for adaptive co-management potential. The hypothesis is that coastal communities that have policies that allow for adaptive co-management to occur have an increased capacity to positively adapt to a transitioning livelihood. A mixed methods convergent design was created for three case studies, where semi-structured interviews were conducted in select communities, followed by content analysis of relevant fishing policies. The Yucatan Case Study studied small-scale fishers across two coastal towns, Sisal and San Felipe. The Texas Case Study examined the Gulf shrimp fishery fleet in Palacios and Port Isabel/Port Brownsville. The last case study focused on content analysis of Cuban fishing and tourism policies. In each case study themes emerged from inductive coding of interviews that created typologies that were then paired with the findings of the content analysis, or policies from each case study. The convergence and divergence analysis were then used to produce adaptive co-management recommendations within the communities. This approach allowed a deeper synthesis and thus an understanding of the dissonance that exists when livelihood change occurs.

DEDICATION

This project is dedicated in part to the communities of Sisal, San Felipe, Palacios, Port Isabel, Port of Brownsville, and La Picadora. Without your input and time there would not have been a dissertation. It is also dedicated to the chaperones that vouched for me, your trust was of the utmost importance and was kept in mind throughout the entire process of this work.

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CHAPTER I: INTRODUCTION

1.1. Introduction

1.1.2. The Problem

As diverse user groups interact (sometimes clash) in coastal and marine environments, marine and coastal policy must take into consideration the human dimensions-social, cultural, economic, health, and governance (Bennett, 2019; Bennett et al., 2017; Christie et al., 2017) that are evolving. Past and present policy has not always considered these human dimensions in a way that honors the culture and history of coastal communities (Armitage et al., 2008; Basurto, 2008).

1.1.3 Purpose of Research

The research encapsulated within examines fishers' experiences with and adaptations to the livelihood changes that coastal communities around the Gulf of Mexico (GoM) are facing because of external forces, both man-made and natural. There are forces like climate change, policy changes, immigration, and emigration, to name a few. This work also explores how these nations' policies have addressed the needs of coastal communities facing livelihood transition from traditional marine resource extraction to other industries both historically and in the present. An adapted version of the convergent mixed method research model proposed by Creswell and Plano Clark (2018) is used to capture these changes and drivers in quantitative and qualitative measurements. A mixed-method approach was used to describe external forces such as policies and climate change and how they affect the transitions of these communities' livelihoods. A mixed-methods approach benefits his study by allowing the researcher to analyze policy and concurrently hear first-hand from fishers how they are making sense of the changes it is bringing to their livelihoods.

Through globalization, an increasing number of researchers, policymakers, resource managers, and coastal communities understand that while problems can be localized, the effects are felt across borders. Specifically, when thinking of the Gulf of Mexico, the idea of asymmetry in research across international borders (Ramírez-Valdez et al., 2021) has been documented (National Academies of Sciences, Engineering, and Medicine, 2018). Differences in political structures lead to differences in research efforts, leading to differences in the amount of published work (Ramírez-Valdez et al., 2021; Robinson & Berkes, 2011; Rubio-Cisneros et al., 2019). These differences add to the complexity and uncertainty when implementing policies and programs meant to help both communities and the resources they use (Armitage et al., 2008; Basurto, 2008; Trimble & Berkes, 2015).

1.1.4 Objectives

The study objectives are 1) to establish a benchmark for effective implementation of policies; 2) to identify criteria for what adapted co-management could look like for each case study, and 3) to identify institutions that could work across borders to help communities experiencing livelihood transitions.

1.2 Background and Relevance

1.2.1 Coastal Communities

No community is stagnant, especially a coastal one. Communities do not stay the same even though society likes to romanticize them as doing so. For these places to exist presently means that they have undergone and are undergoing change to grow or shrink. Coastal communities are those that make their means of living (livelihoods) by relying- in some form or fashion- on marine and coastal ecosystems (Carloni & Crowley, 2005). This dependence has led to both the ecosystems and the people living and using them being exploited and depleted (Lau et al., 2019).

Coastal communities can be further distilled into the community of place (residents) and community of interest (those that commute to the location but don't live there) (Thomsen et al., 2009). For this study, both types of communities will be considered because both affect the resources and the culture of the site.

This broad description accommodates the varied and mixed livelihoods of coastal communities' small-scale fisheries (SSF), natural resource extraction, and tourism (eco-tourism or sun sand and sea) (Armitage et al., 2017; Coronado et al., 2020; Khakzad, 2018). The mixing of livelihoods allows the study of coastal communities from various angles, including resiliency, sustainability, urbanization, climate change, sea-level rise, and land degradation. These angles have been studied to paint a picture of what it means to live on a coast somewhere on Earth. In short, this picture reveals a scarcity of resources, such as water, fish, land, and fuel, and, as human populations continue to expand, these problems are compounded (Moore et al., 2014). The solutions must also show integration (Adger, 2003; Ostrom, 2009; Trimble & Berkes, 2015). To meet these complex problems and work through and around them, communities have several tools, like government policy. The present study examines individual and community perceptions about their adaptations, livelihoods, and government policy to build a picture of how coastal communities across the Gulf of Mexico manage livelihood transitions that have occurred and are occurring to them. Adaptive co-management (ACM) tackles this complexity as long as the interested parties are willing (Armitage et al., 2011a; Berkes, 2009). Given that law enables policy, policymakers create programs. Looking through present policy and the programs they make for ACM, language or principles gives managers and researchers a starting place to create more inclusive programs. Coupling this with identifying "linking institutions/organizations" can

help with the trust problem that communities have asked to work with resource managers and agencies to solve (Berkes, 2002; Metcalf et al., 2015).

Researchers are taught to think in a defined way, and managers are trained that the most significant task is to uphold their duty to the resource they are tasked with managing. This way of thinking and interacting with communities that live and use the ecosystem and resources has led to mistrust (Metcalf et al., 2015). This imbalanced way of thinking leads to co-management and adaptive management to fail (Kofinas, 2009; Olsson et al., 2004). Instead of trying to force a square into a round hole (using ACM as a panacea), it would be first helpful to understand if the base for ACM to occur exists in present policy (through laws or programs that come about because of laws) and if the communities perceive the need for this type of interactive management. Building case studies for the three nations surrounding the Gulf of Mexico gives an essential snapshot of what is working and is not. Seeing in one place what the asymmetries are can help put recommendations into perspective and start the troubleshooting process.

1.3 Study Site

The Gulf of Mexico (GoM) is the 9th largest body of water in the world and the largest open water internationally protected in the Atlantic (Mendelssohn et al., 2017; Yáñez-Arancibia & Day, 2004). The three countries that border it (US, Cuba, and Mexico) are linked using the resources the GoM provides. Its richness has made it a productive region for its coastal communities in terms of hydrocarbons, commercial and recreational fisheries, and tourism (Lam et al., 2016; Mendelssohn et al., 2017; Ward & Tunnell, 2017). Understanding how each community in each country that borders the Gulf adapts to changes in their livelihoods would be a monumental task, a wicked problem on its own. However, creating three case studies using two communities from each country allows for patterns of livelihood transitions and perception of

adaptations to the transitions to emerge. The case studies will be introduced in greater detail in Chapters 2-4. Figure 1 is a map of the Gulf of Mexico showing the US, Cuba, and Mexico, with case study communities labeled.

Figure 1
Gulf of Mexico map with the study sites for each case study shown.



1.3.1 Case Study One: Yucatan

Chapter two investigates small-scale fisheries transitioning to tourism in the state of Yucatan. The Yucatan peninsula is a karstic region that depends heavily on its freshwater from cenotes and whose northern coast is characterized by mangroves, marshes, and salt flats (Cano & Sosa, 2016). Two communities were chosen from the Yucatan: Sisal and San Felipe. The sites were selected because both have historically been fishing/port communities and have experienced the strain of declining fisheries and the pressure that comes from livelihood transitions. Sisal was the

first major port in Yucatan and got its most recent name from the henequen or sisal fibers that came through the town and into the rest of the world (Gobierno del Estado de Yucatan, 2020; Meza Cuellar et al., 2013). This small fishing port is located about an hour from Merida (76 km), the most populous city in Yucatan. It is wedged between a mangrove and a beach strip, leading to many issues with waste management and logistical problems as the town grows (Millán, 2019; Urrea Mariño et al., 2012). Its port town history also recalls a population drop after the Port of Progreso opened in 1871 (Meza Cuellar et al., 2013). In the 1980s, when the march towards the sea was happening, Sisal experienced some growth (Fraga, 2004). Still, it was not until the early 2000s, when the first permits for sea cucumber harvesting started circulating, along with the arrival of commodities such as indoor plumbing, that a significant expansion occurred.

San Felipe is about three hours (198 km) northwest of Merida, up the coast near Rio Lagartos (UNESCO Biosphere). This small port has a strong history as a fishing port and has been studied by researchers as an example of successful cooperatives and fishing management in the Yucatan (Chuenpagdee et al., 2002; Coronado et al., 2020). San Felipe is one of the more remote ports. It sits inside a narrow channel and therefore has no real beachfront. Tourists enlist a boat and take it to the other side of the channel to get to a beach. Much like Sisal and other regional ports, San Felipe is surrounded by mangroves. Water was the only way in and out before the roads that helped connect San Felipe to Merida and the rest of the Yucatan. Cattle raised in the small agricultural communities surrounding San Felipe were shipped to Progreso and Merida via large boats (Gobierno del Estado de Yucatan, 2020). Apart from its SSF, this town is also known for being one of the first to have fishing tourism and eco-tourism (Fraga, 2006; Moraes & Montes, 2011). Unlike many other ports, San Felipe boasts a small fleet dedicated to eco-tourism and fishing.

1.3.2 Case Study Two: Texas

Chapter 3 will focus on the commercial shrimping industry in Texas. The state's commercial shrimping licenses are divided into Gulf, bay, and bait (Funk et al., 2003). Gulf shrimping has been highly scrutinized and studied from a biological perspective, but little attention has been paid to the communities that make a living from shrimping. This industry has faced closures to Mexico's national waters (EEZ 1980s), seasonal closures, license buy-backs, regulatory changes (TEDs and BRDs), market pressure from cultured shrimp, vessel insurance issues, and visa worker problems (Draper, 1996; Gallaway et al., 2020; Mamula, 2009; Nance et al., 1994; Samonte-Tan, 2000; Warren & Bryan, 1981) to name a few. All these events will be discussed in further detail in Chapter 3. The Gulf shrimping industry in Texas, while diminished from its historical fleet size, is still one of the most productive fishing industries in the state, making up about 81% of the commercial fish landings and bringing in around \$265 million on an average year to the state's economy (Dudensing et al., 2021b). Unlike bay fishing, which has a historical tie to Texas gulf communities, Gulf shrimping started after World War II when Louisiana shrimpers moved to Texas in search of better shrimping (Maril, 1995). This case study will focus on the Gulf shrimping fleets of Palacios and Port Isabel/Brownsville.

Palacios is a small town located in Matagorda County. Historically it was a bay shrimping town but switched to Gulf shrimping when the bay and bait shrimping licenses became limited entry after the license buy-back programs around 1995 (Funk et al., 2003). Known as the Shrimping Capital of Texas, it is home to several generations of shrimpers. The first came from Alabama in the 1920s and helped set up Gulf shrimping in the area (The Bates Family | Palacios Chamber of Commerce, n.d.). During the 1980s, when shrimping was at its height in Texas, the town had around 400 Gulf trawlers (Palacios, n.d.). In the late 1970s through 80s, several

Vietnamese families settled in Palacios and took part in bay shrimp fishing and later in Gulf shrimping thanks to several grant in aid programs. Still, with around 200 boats, Palacios is maintaining its shrimping history.

The second site is in south Texas and situates the shrimping fleet in an ideal spot to take advantage of Mexican waters at one point in history. The Port Isabel/Brownsville fleet will be looked at together for this case study since there is an overlap between the towns shrimping history. Both fleets are in Cameron County and bring approximately \$80.9 million to the county (Dudensing et al., 2021a). Shrimping became a strong industry in Texas after the end of World War II when diesel became more affordable, and larger trawlers could be built (Holland & McGrath-Avery, 2020). In the 1960s, 65% of the shrimp produced in Texas came from this area (Garza, 2002). The Brownsville Ship Channel was constructed in 1936 and joined the Port Isabel Ship Channel and Gulf Intercoastal Waterway (Breuer, 1972). When the Shrimp Basin was built in 1953, much of the shrimp fleet from Port Isabel moved there ("A Look at the Brownsville Shrimp Basin," 2019; Holland & McGrath-Avery, 2020).

1.3.3 Case Study Three: Cuba

Chapter 4 will examine Cuba and how small-scale fishing, agriculture, and tourism industries are redefined and working together throughout the different transitions that have affected the island. Particular attention will be placed on agrotourism and eco-tourism in this case study. Cuba's history with tourism was redefined after the revolution in 1959 when the US placed an embargo on it, again in the 1990s during the Special Period after the fall of the Soviet Union, and most recently in the late 2010s as its relations with the US opened back up (Hingtgen et al., 2015; Simoni, 2016). Its position between the Gulf of Mexico, and the greater Caribbean, makes

it a jewel for tourism in the area (Simoni, 2016). This positioning also makes it vulnerable to climate change (Galford et al., 2018).

After the Special Period of the 1990s, Cuba turned to international tourism to integrate itself into the global market and bring much-needed revenue (Lindeman et al., 2002; Simoni, 2016). This push has profound socio-economic and environmental impacts that must be addressed (Lindeman et al., 2002). The country has two main national laws, Environmental Law 81, and Coastal Management Decree Law 212, limiting development in coastal areas and helping mitigate against climate change impacts such as sea-level rise (Baur et al., 2018; Galford et al., 2018; Lindeman et al., 2002). The island's tourism history and reputation for some of the most pristine coastal and marine environments make a case for nature-based tourism like that of Costa Rica to be the model moving forward. In Cuba, nature tourism is all tourism whose motive or selection of travel is based on the enjoyment of nature (Acea & Vega, 2014; Navarro-Martínez et al., 2020).

The first site is Caguanes National Park (CNP), located in the province of Sancti Spiritus and is just north of the municipality of Yaguajay (Navarro-Martínez et al., 2020). It is part of the National Park System of Cuba, which has 211 protected areas (Galford et al., 2018). This park has an extensive cave system, for which the area was named with archeological importance along with various pictographs (Acea & Vega, 2014). Also of note is the endemism of its vegetation with 27 types of endemic flora (Navarro-Martínez et al., 2020). In the surrounding municipality of Yaguajay, sugar cane and, most recently, cattle have been the biggest agricultural producers (Ramenzoni et al., 2020).

The second site will be Ciénaga de Zapata (Zapata Swamp), a RAMSAR and UNESCO Biosphere Reserve. Zapata Swamp is the largest wetland in the Caribbean and is home to many

of Cuba's endemic species (Galford et al., 2018). Part of the Matanzas province, the Ciénaga is one of the largest municipalities and one of the least populated (Moya et al., 2005). Currently, tourism is the main source of income for the communities located in and around the Ciénaga followed by artisanal fishing, apiculture, and silviculture (Durán Zarabozo et al., 2004; Gobierno de Cuba & Cubadebate, n.d.; Moya et al., 2005). Recently, fly fishing has become a tourist activity that has developed in the area due partly to the abundance of bonefish found in the Ciénaga (Rennert et al., 2019; Valdez & Cotayo, 2007).

1.4. Study Approach

1.4.1 Adaptive Co-Management Literature Review Template

This study will focus on using pillars of adaptive co-management (ACM), which were used to structure the content analysis, to understand where communities of the GoM are headed. Table 1 shows the template that helps narrow down which policy documents might have pillars or criteria of adaptive co-management. The pillars are from different literature and are common throughout the bodies of work and were compiled from the literature review. The pillar *presence of feedback* between government and communities could manifest as knowledge sharing, working relationships, public commentary period, and support from the government for the community (Armitage et al., 2011b; Plummer, 2009). The next pillar is *local responsibility* supported by the government, and this can come in one of two ways: mechanisms for communities to apply for grants or programs or communities having a form of public voice or another channel of communication (Armitage et al., 2011b; Galappaththi & Berkes, 2015; Plummer, 2009). The next pillar is *engagement between local/federal officials and communities*, including between communities and private entities. Engagement between local/federal officials, private entities, and communities would look like partnerships would show a clear division of

labor and learning by doing (Galappaththi & Berkes, 2015). Learning by doing is an essential component of ACM because the entire process depends on adapting and re-doing or troubleshooting as problems or new information arises. The final pillar is *local empowerment*, which could come across as achieving shared interests of multiple parties; and addressing issues of inclusion in decision making, knowledge interpretation; willingness to recognize and accept different forms of knowledge; and inclusion and effective participation in the entire process (Armitage et al., 2011b; Galappaththi & Berkes, 2015; Plummer & Armitage, 2007).

Table 1. Pillars of Adaptive Co-Management

| Pillars |
|--|
| <p>Is there a presence of "feedback" between government and communities? (Armitage et al., 2011b; Plummer, 2009))</p> <p>Knowledge sharing?</p> <p>Working relationship?</p> <p>Public commentary period?</p> <p>Support from the government for the community (are there leads or other identified?)</p> |
| <p>Local responsibility supported by the government? (Armitage et al., 2011b; Galappaththi & Berkes, 2015; Plummer, 2009).</p> <p>Are there ways for communities to apply for grants or programs?</p> <p>Do communities have some form of public voice during town halls or other channels of communication?</p> |
| <p>Engagement between local/federal officials and communities? (Galappaththi & Berkes, 2015).</p> <p>The partnership between government and local people or groups with a division of labor is based on the respective comparative advantages of each partner?</p> <p>Learning by doing?</p> |
| <p>Local empowerment? (Armitage et al., 2011b; Galappaththi & Berkes, 2015; Plummer & Armitage, 2007).</p> <p>Achieving a shared interest of multiple parties by pooling resources to solve problems with attention to issues of inclusion in decision-making?</p> <p>Knowledge interpretation?</p> <p>Willingness to recognize and accept the existence of different systems of understanding and practices?</p> <p>Inclusion and effective participation in the process?</p> |

1.4.2 Co-Management and Adaptive Co-Management (ACM)

A literature review by Hasselman (2017) provided a detailed overview of the origins of co-management, adaptive management, and adaptive co-management, used since the 1970s in the resiliency and socio-ecological literature (Hasselman, 2017; Lundmark et al., 2014). Co-management is a form of bottom-up management (Berkes, 2009). Usually, co-management needs political structure to already be in place for it to emerge, but there are examples of community-initiated co-management in the literature (Armitage et al., 2008; Berkes, 2009; Butler et al., 2015; Cinner et al., 2012; De la Cruz-González et al., 2018). For example, in Canada, the Atlantic and Pacific halibut fisheries were co-managed by fishers who could work with government and non-government institutions to create their rules and fishing seasons (Pinkerton et al., 2018). Another place where the community-initiated co-management was in Cardoso Island State Park, Brazil, where the Maruja community co-created a management plan along with the park (Sattler et al., 2015). Because co-management requires sharing of power and responsibility between communities, private, and political sectors, there is also a worry about a power imbalance occurring and, in many cases, marginalized groups being left out of the dialogue of planning and implementation (Berkes, 2009; Plummer et al., 2017).

Successful co-management stories have some core themes in common: They had full community support, the presence of political or non-governmental organizations within the community space while the projects were taking form, and a diverse stakeholder group invested during the dialogue planning stage (Berkes, 2009; Cinner et al., 2012; De la Cruz-González et al., 2018; Galappaththi & Berkes, 2015). However, there are few examples of taking co-management further and creating adaptive co-management where the communities or stakeholders are engaged after project implementation during periods of troubleshooting (Berkes,

2009). For this study, adaptive co-management (ACM) is defined as a flexible community-based system of resource management tailored to specific places and situations and supported by working with various organizations at different scales (Olsson et. al., 2004a).

One cannot talk about ACM without putting other important ideas into context. For this study, adaptive capacity is an outcome of the social and institutional relationships and how they mediate varied interests to avoid adverse effects (Armitage, 2005). Another important distinction to make is that of institutions (rules in use that create enduring regularities of human action in situations structured by rules, norms, and shared strategies) and organizations (social collectives with membership and resources, which function as a component of broader social networks) (Chapin et al., 2009). The essence of ACM is an approach to ecosystem governance that is useful in dealing with complexity, legitimizing the decision-making process, and conflict resolution (Fabricius & Currie, 2015), a problem faced by all three nations border the GoM.

1.4.3 Socio-Ecological Systems (SES)

For this study, we will use a Social-Ecological Systems (SES) framework, an adaptive co-management lens, and a mixed methods research approach to help us understand how fishers along the Gulf of Mexico (GoM) describe their experiences with these changes and the effects they can have on their livelihoods. By including the behavior of the individual or a community, as well as the adaptive properties of SESs (Olsson et. al., 2004a) that are reflected in institutional behavior and policy creation, these integrated and multi-faceted problems can be approached in a way that the communities that face them will not be negatively affected (Rounsevell et al., 2012). Ostrom's (2009) paper noted that qualitative and quantitative data about SES were needed to create improved policies. A way to understand and put into practice the SES framework is to use an Adaptive Co-Management (ACM) approach. Adaptive co-management takes adaptive

management and adds a collaborative element (Armitage et al., 2011b; Lundmark et al., 2014; Wilson et al., 2018).

1.4.4 Policy Development Complexity

There is a wealth of literature on the following: how policy can dictate change (Allison & Ellis, 2001; Amundsen et al., 2010), policy and climate change as a driver for livelihood transitions (Allison & Ellis, 2001), and where policy fits into the socio-ecological systems (Allison & Ellis, 2001; Amundsen et al., 2010; Barclay et al., 2017; Bennett, 2017; N. J. Bennett et al., 2016; Carneiro, 2011; McClanahan & Abunge, 2016; Steenbergen et al., 2017).

Development might include gentrification, programs that promote livelihoods transition, or younger generations leaving to live in bigger cities. Coastal gentrification comes with a connotation of loss of historical and cultural identity of the displaced groups (Jepson, 2007a). These coastal communities have dedicated generations to fishing, shrimping, and harvesting resources that coastal habitats provide. These places and the people who live there or those who don't leave or can't go are often stigmatized (Smith & Basurto, 2019). People who work off the sea – such as small-scale fisheries, shrimping (offshore and coastal), or artisanal fishers – are seen as being vulnerable, poor, threatened, and marginalized (Armitage et al., 2017; Basurto et al., 2012; Jepson, 2007b; Salas et al., 2007).

Science has moved towards an integrated approach via the socio-ecological systems (SES) model to address the integrated problems arising from climate change and the compounded effects of policy and socio-economic pressures. SES models look at systems, keeping in mind that humans are part of the wider environment (Berkes, 1996; Lereboullet et al., 2013; Ostrom, 2007, 2009). By including the individual or community behavior and the adaptive properties of SESs reflected in institutional behavior and policy creation, these integrated and multi-faceted

problems can be approached so that the communities that face them will not be negatively affected (Rounsevell et al., 2012).

Many coastal communities are in a state of change and must adapt to that change, whether man-made or natural. An example: fishing communities are no strangers to livelihood transitions caused by policy shifts, fishery stock fluctuations, and climate change, to name a few (Adger, 2003; Amundsen et al., 2010; Becker et al., 2015; Cinner et al., 2009; Steenbergen et al., 2017). These changes often blend into the communities' histories and create complex problems and adaptations (Coronado et al., 2020). The complexity of these problems has led to various frameworks and techniques to address sustainability challenges. Given the range of issues, researchers from both quantitative and qualitative paradigms have created a diverse set of lenses and tools to understand and describe them. Sustainability, resilience, and social-ecological systems research have all come into existence to grasp and help tease solutions to the problems arising from the complexity of coastal communities, especially as they face climate change and socio-political change, fisheries collapse, and gentrification.

1.5 Mixed Methods

The project will follow a convergent mixed methods design adapted from Creswell and Plano Clark (2013). The adapted design is shown in Figure 2 and will allow for data to be gathered through quantitative (QUAN) and qualitative (QUAL) means concurrently (Creswell & Plano Clark, 2018). Both strands will be analyzed independently at first, and then the results will be integrated and analyzed once more (Schmidt et al., 2019). Using quantitative and qualitative techniques allows for a deeper understanding of results than when applying a single discipline (Creswell & Plano Clark, 2018; Plano Clark, 2019; Schmidt et al., 2019). Due to the distance and diversity in culture and livelihoods of each of the study sites, a mixed methods approach also

allows for an ethical and just exploration of the adaptations and perceptions that the participants expressed (Metcalf et al., 2015).

The conceptual model adapted from Creswell and Plano Clark (2013 & 2018) will be used for each of the three case studies: one for each nation that borders the GoM. Each case study will focus on a different livelihood; Yucatan's small-scale fisheries, Texas' shrimping industry, and Cuba's fishing tourism to paint a broader picture of what livelihoods in transition look like across the GoM. Research questions are used to structure the synthesis of results that will answer the following hypothesis.

Hypothesis: Communities with policies that allow for co-management to occur have an increased capacity to positively adapt to a transitioning livelihood.

The research questions are the following:

Research Question 1 (RQ1): How do fishers describe adaptations that they have implemented throughout the different transitions that have affected their livelihoods?

Research Question 2 (RQ2): How, if at all, do the members of the coastal community explain the impact of relationships with organizations (NGOs, governmental, university) on their livelihoods?

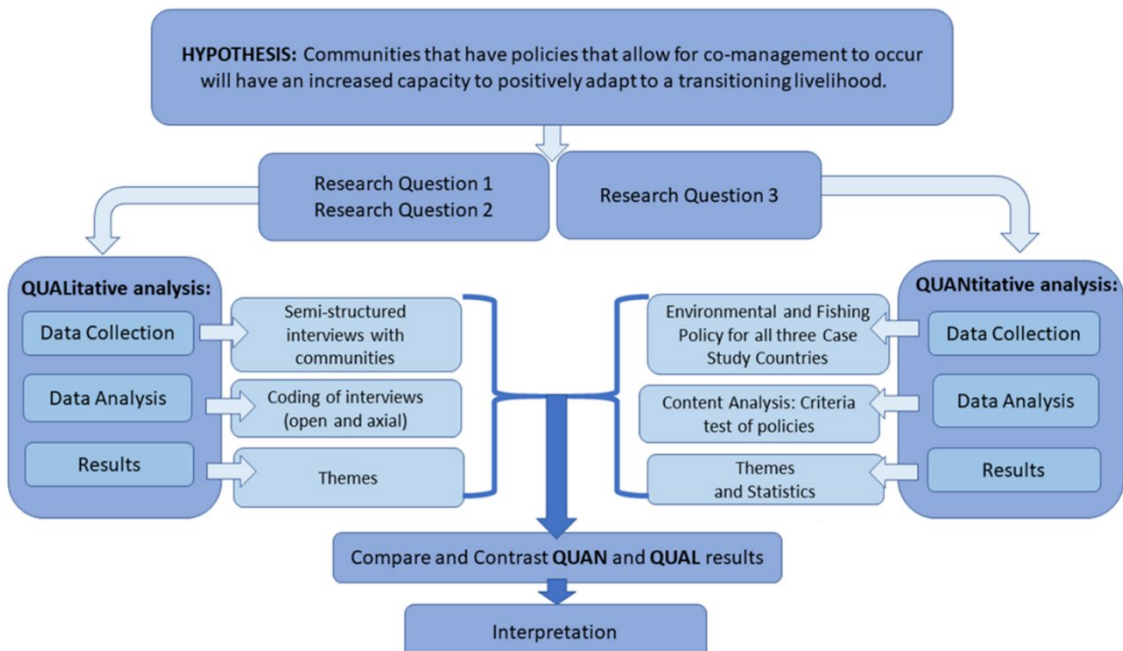
Research Question 3 (RQ3): To what extent are adaptive co-management techniques or language present in existing policy documents, laws, or grey papers dealing with fishing policies?

Semi-structured interviews will be used to answer the first two research questions. It is crucial to make the distinction between institutions, which are the entities that create the rules, and organizations, which are community units (Chapin et al., 2009). The use of organizations and institutions for these interviews will depend on how the respondents use them since their definitions of both could be different.

RQ3 corresponds to the quantitative portion of the data collection and analysis and is structured as such; this research question creates the mixing of both paradigms as a quantitative question (Creswell & Plano Clark, 2018). This research question will guide the environmental and fishing policy content analysis for all three case studies.

1.5.1 Conceptual Model

Figure 2
Convergent Case Study Conceptual Model



Note. Adapted from Creswell and Plano-Clark (2018). This conceptual model shows how the flow of the project will progress.

1.5.2 Qualitative Data Collection and Analysis

1.5.2.1 Semi-structured interviews

For each case study, semi-structured interviews will be used to answer RQ1 and RQ2. Semi-structured interviews allow the respondent to relate information with guiding questions (Rubio-Cisneros et al., 2019; Whiting, 2008). Compared to straightforward questioning, this

interviewing style enables the interviewer to converse with the respondent, revealing more information about the topic (Whiting, 2008). Given how busy fishers are, especially during heavy seasons, it is understood that some would only be able to provide ten minutes of their time. Each study site within each country has 15 respondents, each totaling 30 respondents or interviews per case study, a standard sample size for this type of study (Morse, 2015).

Respondents will be selected via a purposive sampling method, snowball sampling, using a local guide who is knowledgeable of the industry and can refer other fishers until all 15 interviews are conducted. Purposive sampling allows for the focus on respondents with a set of characteristics that will give the most depth of information when asked the interview questions (Etikan et al., 2015; Tongco, 2007).

Before going to each site to interview, there will be a period of introducing the community to the researcher. Since the study sites are international and the work will be done using community members' own words, it is ethically imperative to have partners in each site to help build rapport in the towns. For example, in the Yucatan, students that have lived and worked in the two sites will be asked to be chaperones and start the snowball selection process. Using a chaperone is also required by the TAMU-CC Institutional Review Board (IRB) guidelines. A partnership with Texas Sea Grant was used in Texas because of their longstanding relationship with the Texas shrimping communities. Texas Sea Grant is a partnership between NOAA, the state of Texas, and universities in the state (Texas Sea Grant, 2020). The introduction to Cuban communities will be enabled and facilitated by park rangers from Caguanes National Park and University of Havana professors. The important piece is to not just parachute into a community, use channels of trust, and establish knowledge of this type of work before jumping into questioning and asking about perceptions (Metcalf et al., 2015). The use of IRB guidelines also helps protect the

respondent's privacy and the researcher's integrity. Given the small population sizes of each site (only looking at fishers or those involved in fisheries), no identifiable information was collected to avoid putting anyone at risk. Informed consent forms were translated from English into Spanish and Vietnamese for the different sites. Each respondent will sign them to acknowledge their rights and understand how the information they provide will be used. Interview questions were also revised to reflect the language they were given in, which sometimes changed sentence structure. Interviews were given in the language the respondent was most comfortable speaking and a chaperone who spoke the language was present in case there was a need for translation. Because many Vietnamese respondents were already busy fixing their boats for the season, the respondents that gave their time to be interviewed chose to do so in English.

Each case study will feature a mix of community members involved currently or at one point in the livelihood being studied for each site. This mixing is done to capture a holistic picture of adaptations and how they have changed over time. The interviewer will use an interview guide designed with questions that address both RQ 1 & 2. These questions encompass the broad categories of:

- **Introductory Questions:** Used to get the respondents comfortable with the interview process and establish baseline information such as retired, fisher, or Co-Op leader.
- **Questions about fishing gear and safety:** Focused on how gears changed for seasons and species and captured if the fishers were specialists that only worked for a particular season.
- **Questions about fishing structure in town:** Specifically asking about women's participation and other aspects of fishing that might have changed, such as shark fishing.
- **Policies and laws questions:** Used to understand if the respondents had any knowledge about policies that might affect their livelihoods.

- NGOs and universities work: To understand if any non-profits, universities, or government institutions were working with the fishers or in the towns.

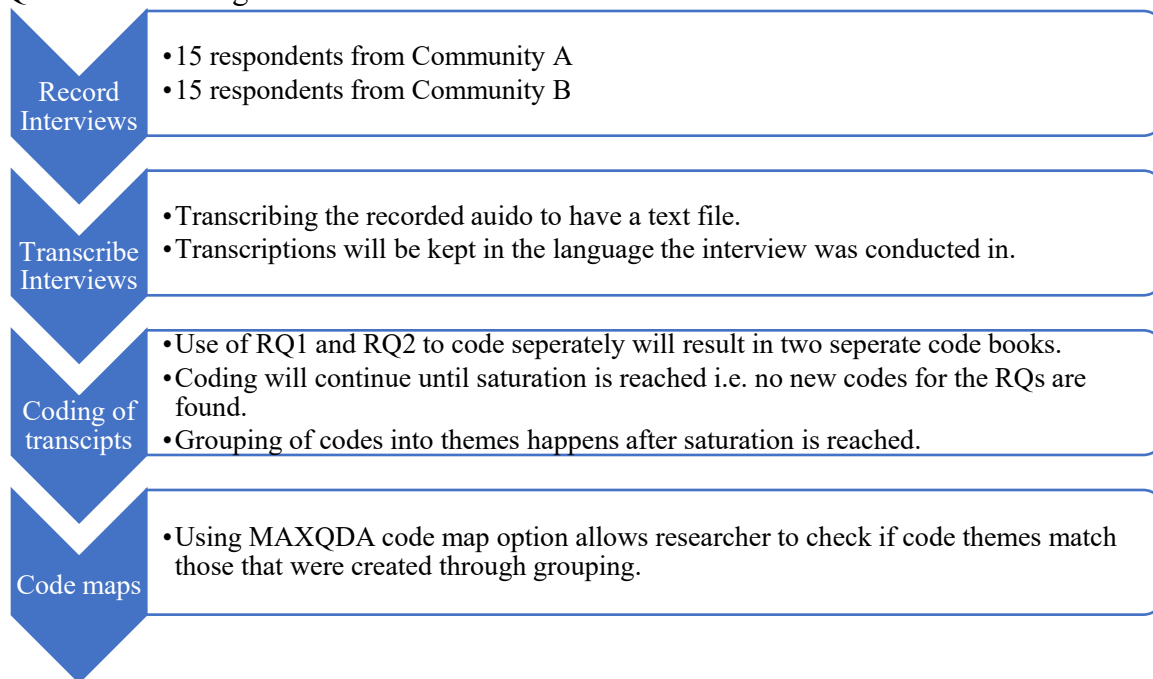
All interviews were recorded and transcribed. Transcribing is taking what is said, including pauses and nonverbal cues, and translating them into written words (Bailey, 2008; Stuckey, 2014). Interviews will be transcribed in the language that the interview is conducted to ensure that each respondent's tone comes through and that there is nothing lost in translation. All interviews were recorded using an Olympus Recorder and uploaded into MAXQDA transcription software as audio files. MAXQDA will produce a transcript document for each recording (Rädiker & Kuckartz, 2020). Selected segments discussed in the results section of each case study will be translated into English if needed.

1.5.2.2 Qualitative Coding

Qualitative coding was carried out in the MAXQDA program; the coding process is shown in Figure 3. A blended coding approach will feature both inductive coding, which creates emergent codes, and deductive coding. Coding requires the researcher to find patterns in the responses of the interviews, and the actual codes are the names given to those patterns (Fereday & Muir-Cochrane, 2006). Inductive coding is done in the initial phase when understanding what the respondents are saying, this initial step leads to emergent codes or those patterns that naturally emerged (Fereday & Muir-Cochrane, 2006; Wittink et al., 2006). Inductive coding is used because there were no existing typologies for the questions asked, and the coding process creates typologies by identifying themes. Deductive coding is done in the second phase of the coding process when RQ1 (looking at adaptations that describe livelihood changes) and RQ 2 (looking at the impact if any of relationships with NGO's, universities, or other "institutions/organizations") are used. Deductive coding is used when a typology has been

established. Once codes were finalized through saturation of data, no new codes appeared for RQ1 or RQ2, and a code matrix was created. Each research question will have a code matrix that will show how codes are compared in each town.

Figure 3
Qualitative Coding Process



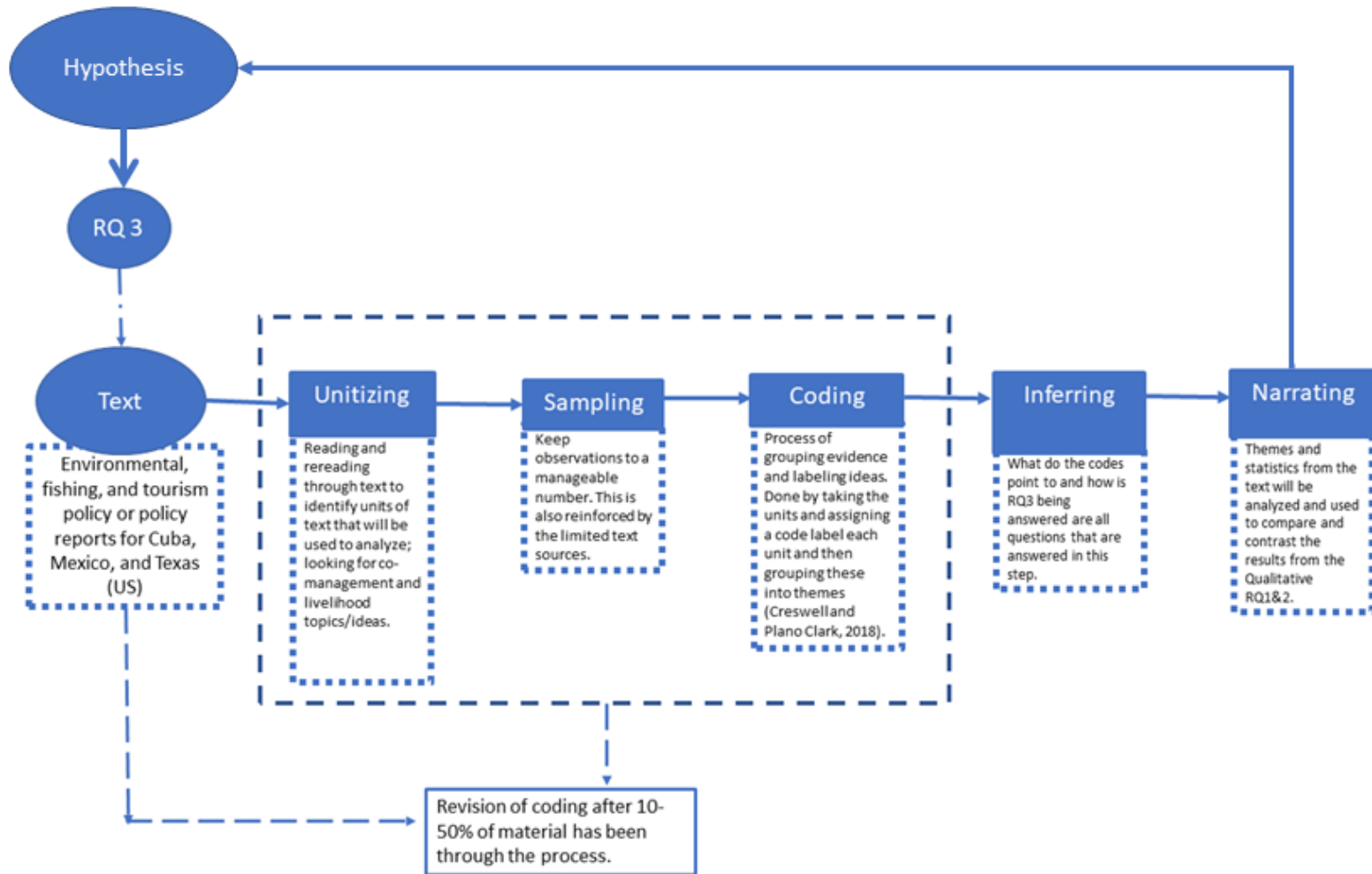
Note. Process for semi-structured interviews.

1.5.3 Quantitative Content Analysis

Content analysis was used as a quantitative technique that makes replicable and valid inferences from textual data to their context via codes (Krippendorff, 1989). This analysis has been used in healthcare, policy review, and, increasingly, fisheries studies (Daugbjerg et al., 2009; Erlingsson & Brysiewicz, 2017; Khakzad, 2018). Krippendorff's (1989) framework for content analysis, shown in Figure 4, was used to answer RQ3 for all three case studies using environmental, fishing, and tourism policy text for Mexico, U.S., and Cuba. Following the framework, the policy texts will be analyzed for pillars and keywords that revolve around the idea of adaptive co-management and livelihood transitions. These pillars and keywords were

presented in the template (Table 1). The framework flows in the following way: a body of text (the data) is chosen to answer RQ3, the context is then selected in this case, looking for co-management and livelihood transition themes, and the context is then operationalized via the codes that are created for the themes, inferences are then made based on the codes and themes that appear through the iterative process, and finally validation of the evidence (Krippendorff, 2004).

Figure 4
Content Analysis Process



Note. Adapted from Krippendorff (1988) shows how RQ 3 will be answered. Each step of the analysis is broken down into specifics and mirrors the conceptual model.

CHAPTER II. CASE STUDY 1: YUCATAN COASTAL COMMUNITIES

2.1 Introduction

The Food and Agriculture Organization (FAO) has, for the past several years, made a point to say that small-scale fisheries (SSF) are an underrepresented group in fishing policy (FAO, 2020). This does not mean that they are not heavily studied; a google scholar search with the term "Small Scale Fisheries" showed 597,000 results from 1980-2021. This study will focus on the challenges facing SSF (also referred to as *pesca ribereña*) in the state of Yucatan in Mexico. In Mexico, fishers participating in SSF are characterized as those whose main livelihood is fishing in rivers, lakes, and lagoons and close to shore up to three nautical miles (Guardado, 2007; Inteligencia Publica & EDF de Mexico, 2019). This distinction is shifting as fishers describe having to go out further and for extended periods (Huchim-Lara et al., 2016; Salas & Gaertner, 2004).

Mexico's fishing policy began with Article 27 of the Mexican Constitution in 1917, which created the framework for the management and growth of its fisheries and agriculture (DOF, 1917). A comprehensive national fishing law was created in 1925 to set the foundations for fishing permits and define what constituted fishing. The definition is quoted below from Article 29 and translated (Vargas, 2001).

The fishing policy in Mexico has been centered around efficiency and bringing the fishing fleets up to compete internationally (Alcalá, 2003; Vargas, 2001). This first version of the law kicked off Mexico's race to become a competitor in the global fishing market (Espinosa-Romero et al., 2014a; Vargas, 2001). From the 1930s to the 1980s, Mexico saw a growth in its agricultural and industrial fishing sectors (Alcalá, 2003; Fraga, 2004). However, much of its small-scale fishing fleet languished. In the late 1970s through the early 1980s, there was a sharp

growth in the SSF sector due to policies that fomented fishing cooperatives and fishing as a form of poverty alleviation (Bennett, 2017; Salas et al., 2011; Vargas, 2001). This increase was happening at a national scale as well as at local levels.

From the late 1960s through the 1980s, the Yucatan had survived on the monoculture of sisal or henequen fibers; the collapse of this industry due partly to an increase in synthetic fibers (Méndez-Contreras et al., 2008) left thousands of people without jobs and caused the closing of huge haciendas (Fraga, 2004). A national policy bolstered fishing and programs that promoted and helped enlarge the SSF fleets and the cooperatives. This growth meant that the coastal towns of the Yucatan also experienced a surge of people who flocked to them from rural and inland communities. This flood of people – termed *La Marcha al mar* or the march towards the sea (Fraga, 2004) caused impacts like a strain on local economies and the growth of the communities still being studied in the region. A timeline adapted from previous work examining the governance and policy of fishers in Mexico (Alcalá, 2003; Espinosa-Romero, 2020) shown in Figure 2.5 was created using the national and local policy and significant events pertinent to this case study.

The fishing policy in Mexico, like in many other Latin American countries, is focused on economic growth that enables competition with a global market (Vargas, 2001). Recently, buzzwords like *sustainability* have started appearing in policy and agency reports, such as *using sustainable management techniques* (Aguilar-Perera et al., 2009; Bennett, 2017; Salas et al., 2011). However, fishing statistics in Mexico show that fishing productivity is down (FAO, 2020; INEGI, 2011), and many of the economically important fisheries of the Yucatan region (octopus, snapper/grouper, and lobster) are classified as overexploited or in danger of collapse (Inteligencia Publica & EDF de Mexico, 2019).

This case study will use semi-structured interviews to capture the fishers' perspectives and illustrate the dissonance between what policy is trying to accomplish and what is happening within the communities.

2.1.2 Fishing Policy and History of the Yucatan

The Yucatan is a karstic area that has no real rivers and gets its fresh water from sinkholes or cenotes (Millán, 2019; Vázquez-Domínguez & Arita, 2010). What it lacks in river systems, it makes up in mangroves, marshes, and salt flats. The geography of this area is important to note since it plays into the history of the towns chosen for this case study. Twelve port towns across the Yucatan coast participate in SSF (Gobierno del Estado de Yucatan, 2020), and each exhibits its own fishing culture. SSF is not homogeneous (Salas et al., 2007), and even though the problems they face like overfishing and illegal fishing can be reflected at a national and even global level, each must be considered at an individual level for these problems to be mitigated (Coronado et al., 2020; Salas et al., 2007). For this reason, two communities were chosen for this case study.

Fishing has been a traditional livelihood in the region since the pre-colonial era (Bennett, 2017; Fraga, 2004). However, in the late 1960s, fishing became a concrete means of putting food on the table that was recognized and promoted by the federal government (Fraga, 2004). During the 1980s and through the early 2000s, fishing, especially artisanal fishing, became one of the most prominent jobs in the Yucatan (FAO, 2020; INEGI, 2011).

Specifically, in the Yucatan, this increase in small-scale fisheries was caused by a fall in the production of henequen fiber that spurred a series of policies to increase the fishing capacity in the Yucatan. This series of policies were called *Marcha al Mar* and promoted inland rural families that had worked in the henequen industry to move to coastal towns and start fishing.

This march toward the sea was also during a time of economic growth in Mexico's fishing industry (Bennett, 2017; Fraga, 2004; Salas & Gaertner, 2004). The late 1990s and early 2000s also saw an increase in demand for octopus globally (specifically in Europe and Asia) which led to the second wave of growth for the fishing communities. The final wave of development (2000-2008) is from the boom of sea cucumber fishing. Although short-lived, it still has lingering resounding effects along the Yucatan coast today (Bennett & Basurto, 2018).

2.1.3 Site Description

Two communities were selected in the Yucatan: Sisal and San Felipe (shown in Figure 5). Both have historically been fishing/port communities and have experienced the strain of declining fisheries and the pressure that comes from livelihood transitions.

Sisal

Sisal was the first major port in Yucatan and received its most recent name from the henequen or sisal fibers that came through the town and were exported to the rest of the world (Gobierno del Estado de Yucatan, 2020; Meza Cuellar et al., 2013). This small fishing port of 2,347 people (INEGI, 2020b) is located about an hour by car from Merida, the most populous city in Yucatan. It is wedged between a mangrove to its back and a beach strip at its front, leading to many issues with waste management and logistical problems as the town grows (Millán, 2019; Urrea Mariño et al., 2012). Its history as a port town also recalls a drop in population after the Port of Progreso, to its east, opened in 1871 (Meza Cuellar et al., 2013). In the 1980s, when the march towards the sea was happening, Sisal experienced some growth (Fraga, 2004). Still, it was not until the early 2000s, when the first permits for sea cucumber harvesting started circulating, along with the arrival of commodities such as indoor plumbing, that the population and infrastructure expanded significantly.

San Felipe

San Felipe is about three hours by car away from Merida, up the coast near Rio Lagartos (UNESCO Biosphere). This small port of 2,332 (INEGI, 2020a) has a strong history as a fishing port and has been studied as an example of successful cooperatives and fishing management in the Yucatan (Chuenpagdee et al., 2002; Coronado et al., 2020). It is one of the more remote ports, sits inside a narrow channel, and has no real beachfront. Tourists enlist a boat and take it to the other side of the channel to get to a beach. Much like Sisal, and other regional ports, San Felipe is surrounded by mangroves. Before the roads that helped connect San Felipe to Merida and the rest of the Yucatan were built, water was the only way in and out. Cattle raised in the small agricultural communities surrounding San Felipe were shipped to Progreso and Merida via large boats (Gobierno del Estado de Yucatan, 2020). Apart from its SSF, San Felipe is also known as one of the first communities to have fishing tourism and ecotourism (Fraga, 2006; Moraes & Montes, 2011).

Figure 5
Map of the Yucatan Peninsula, Mexico



Note. Map showing the two coastal communities of Sisal and San Felipe and their distance from the most populous city in the state of Yucatan, Merida

2.2 Methodology

Using a convergent mixed methods approach adapted from Creswell and Plano Clark (2018), both qualitative (interviewing) and quantitative (content analysis) approaches occurred simultaneously in both case study communities. This process is captured through the conceptual model in Figure 6.

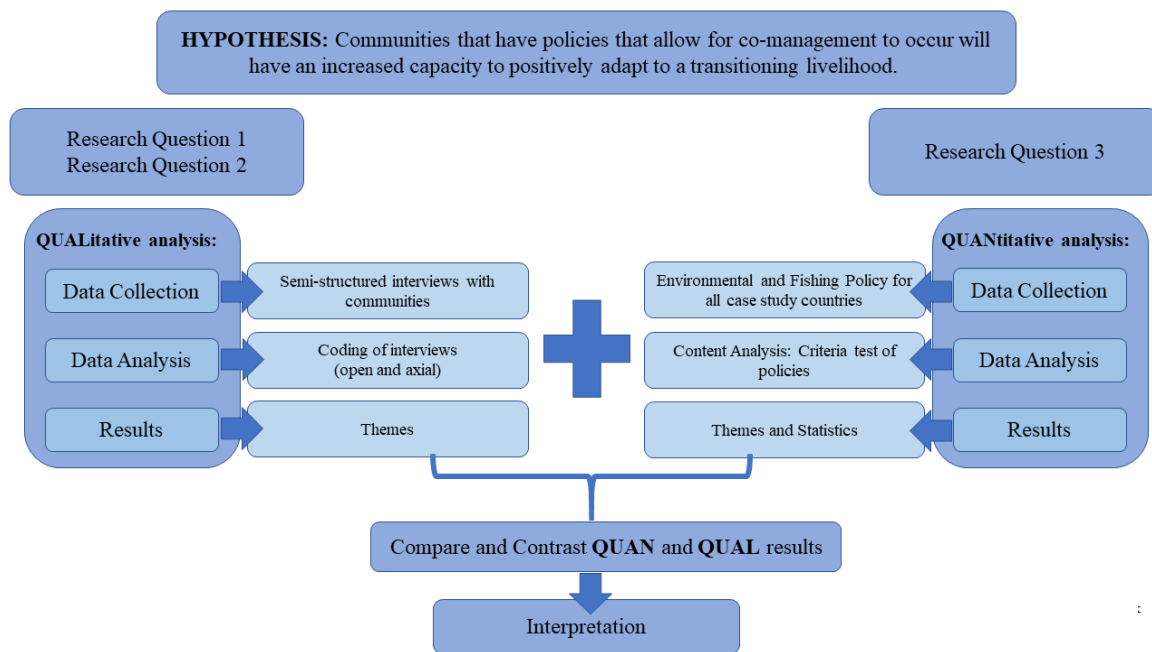
Hypothesis: Communities that have policies that allow for co-management to occur will have an increased capacity to positively adapt to a transitioning livelihood.

Research Question 1 (RQ1): How do fishers describe adaptations they have implemented throughout the different transitions that have affected their livelihoods?

Research Question 2 (RQ2): How, if at all, do the members of the coastal community explain the impact of relationships with organizations (NGOs, governmental, university) on their livelihoods?

Research Question 3 (RQ3): To what extent are adaptive co-management techniques or language present in existing policy documents, laws, or grey papers dealing with fishing policies?

Figure 6
Convergent Conceptual Model



Note. Convergent Mixed Methods conceptual model adapted from Creswell and Plano-Clark (2018), shows how the hypothesis will be answered.

2.2.1 Semi-Structured Interviews

Research Questions 1 and 2 were answered using 10-to-30 minute semi-structured interviews. Participants were selected using a snowball selection approach in which fishers identified at the docks who agreed to give an interview would also recommend another person (Heckathorn & Cameron, 2017). This method was used to interview only fishers from each town, and no migrant fishers’ perspectives were captured. Semi-structured interviews allow the

respondent to relate information with guiding questions (May, 2019; Revollo Fernández & Sáenz-Arroyo, 2012). This interviewing style also allows the interviewer to have a conversation with the respondent, which leads to more information about the topic in question than straightforward questioning. Some of the fishers were in a hurry to get back out on the water and were only able to provide 10-15 minutes of their time.

There were 15 respondents from Sisal and another 15 from San Felipe who participated, totaling 30 interviews recorded interviews. Respondents included a mix of cooperative leaders, fishers, and retired fishers to capture a holistic picture of how each has adapted and how adaptations have changed over time. Before interviews could begin, participants had a chance to read through the Consent Form (Appendix A); if they could not read the consent form, it was read to them either by myself or the town guide who volunteered to witness the interviews. The interviewer used an interview guide (Appendix B) with questions that addressed both RQ 1 & 2. These questions encompassed the broad categories of:

- **Introductory Questions:** Used to get the respondents comfortable with the interview process and establish some baseline information such as retired, fisher, or co-op leader.
- **Questions about fishing gear and safety:** Focused on how gears changed for seasons and species, but also to capture if the fishers were specialists that only worked for a specific season.
- **Questions about fishing structure in town:** Specifically asking about women's participation and other aspects of fishing that might have changed, such as shark fishing.

- Policies and laws questions: Used to understand if the respondents had any knowledge about policies that might affect their livelihoods.

NGOs and universities work: Used to understand if any non-profits, universities, or government institutions were working with the fishers or in the towns.

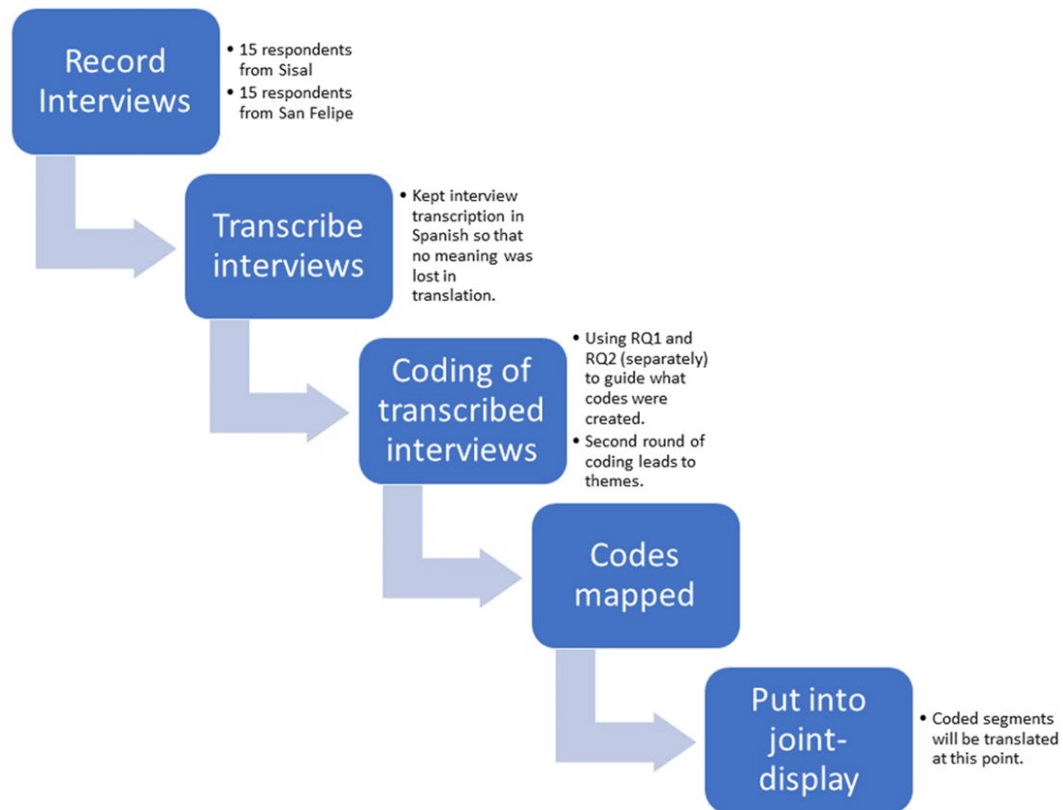
All interviews were recorded using an Olympus handheld recorder and then uploaded as audio files into MAXQDA software, where they were transcribed. Interviews were transcribed in Spanish to ensure that each respondent's voice and tone came through. Selected segments discussed in the results section are translated into English.

2.2.2 Qualitative Coding

MAXQDA was also used to organize and code the transcripts. Codes are words or phrases that capture an attribute being studied (Saldana, 2008); this study's raw data unit. All transcribing was done in MAXQDA's interface, with each interview recording becoming a pdf document (Rädiker & Kuckartz, 2020).

The coding sequence process, shown in Figure 7, contains the basic steps followed for each interview. A blended coding approach featured both inductive coding that creates emergent codes (codes emerged from the interviews) and deductive coding (using the research questions to guide what codes were produced). Inductive coding was conducted in the initial phase when understanding what the respondents were saying, deductive coding was conducted in the second phase, where the research questions were answered. Once codes were finalized through saturation of data - no new codes appeared for RQ1 or RQ2 - a code matrix was created. Each research question has a code matrix (Appendix C and D) that shows how codes are compared in each town.

Figure 7
Semi-Structured Coding Process Case Study One



Note. Coding sequence diagram for all the interviews.

2.2.3 Timeline

A timeline of federal and state policies that would have affected the fishers in Yucatan was constructed. Criteria for what policies were included were:

Federal fishing laws

Amendments to federal fishing laws

State fishing laws

Amendments to state fishing laws, and

Reports from state agencies and NGO

The timeline was adapted from Espinosa-Romero's (2020) and Alcalá's (2003) timelines. These same policies, government organizations, and university reports from programs working with the fishing communities were used for the content analysis to answer RQ3.

2.2.4 Code Mapping

Code mapping assesses which codes appeared the most at the different interfaces. This allows for coding between interviews to see if certain themes emerged. Coding between the sites allows examination of similar themes between the towns and which are different. The differences show why one town is receiving more aid or has had an easier time with the livelihood transitions. Code proximal mapping was used for both RQ1 and RQ2.

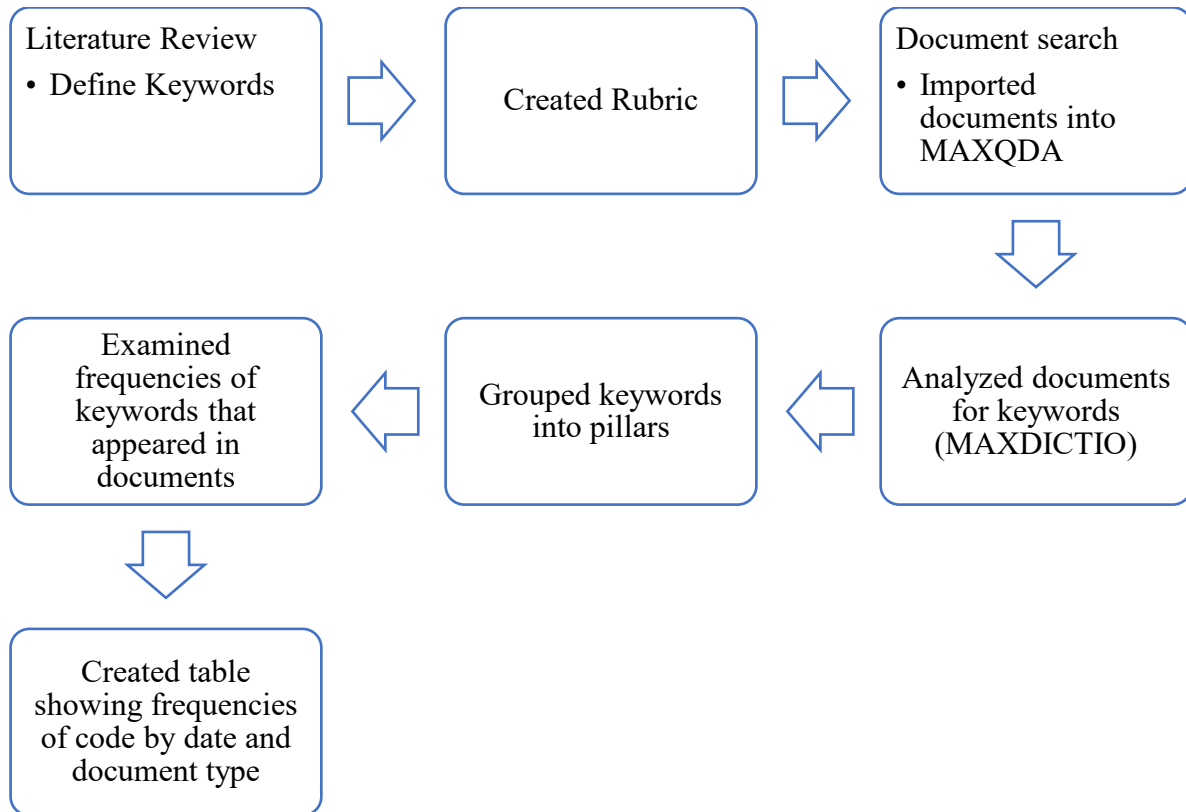
2.2.5 Content Analysis

For RQ3, which looked at adaptive co-management language within fishing policy and reports, Krippendorff's (1989) classic content analysis process was used. This type of analysis follows a 6-step process described as follows:

- Design: Creation of RQ3.
- Unitizing: Using the rubric with criteria to identify policies that will be analyzed.
- Sampling: The policies and reports that will be analyzed.
- Coding: Using the criteria and existing themes from RQ 1 and RQ 2 to help find themes in the policies.
- Drawing Inferences: How the themes that arise from the codes answer RQ3.
- Validation: Cross-referencing the themes from RQ1 and RQ2 with those of RQ3 and comparing the results to accept or reject the project hypothesis.

A modified version of the aforementioned steps is shown in Figure 8. This is how the process was carried out in MAXQDA.

Figure 8
Modified Content Analysis Process



2.2.6 Analysis Integration Procedures

The final step in analyzing the quantitative (QUAN) and qualitative (QUAL) data is to find points of convergence. This was done by integrating the individual results using a modified joint display. This type of integration allows for a more robust understanding of the data sets than can be shown from individual analysis (Creswell & Plano Clark, 2011; Van Scoy et al., 2018). Showing the resulting themes for the interviews (QUAL) separated by research question and the resulting themes and percentages of each subtheme from the content analysis (QUAN) for RQ3. Modifying a traditional joint display table allowed for both converging and diverging themes to be displayed. The integration and interpretation were grouped with the discussion to synthesize the results more thoroughly.

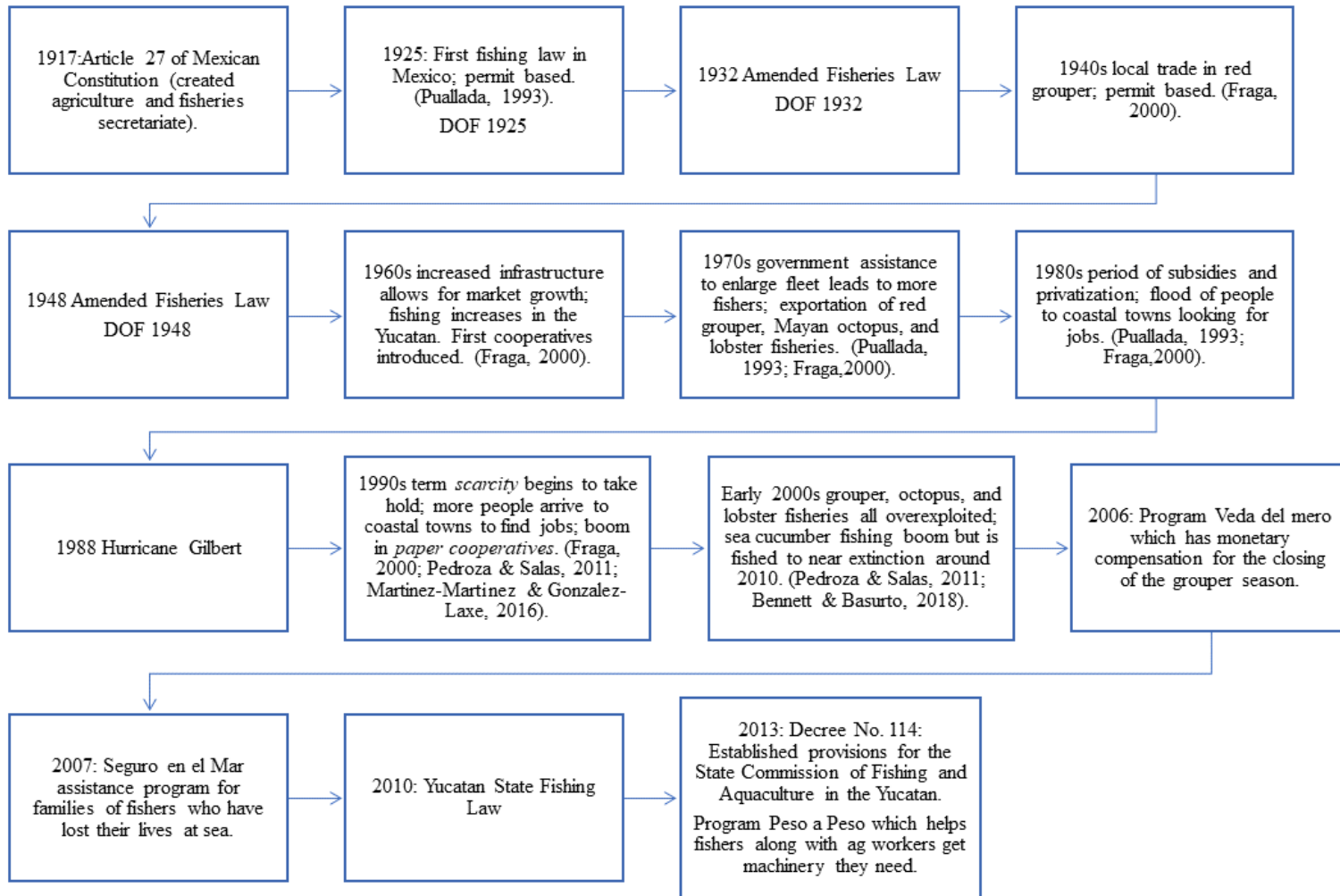
2.3 Results

2.3.1 Timeline

The timeline modified from the work that Espinosa-Romero (2020) developed on marine fisheries governance in Mexico is shown in Figure 9. Apart from the most influential policies such as Article 27, the 1925 General Fishing Law, important laws and policies from the literature, fishers' memories of significant events, and State fishing laws were added. This helped tie together the interviews and policy documents to understand the region's fishing trend. In the 1940s, the red snapper fishery was the prominent fishery in both Sisal and San Felipe and across the entire state of Yucatan (Fraga, 2004).

During one interview, an older fisherman from San Felipe remarked, "My grandfather would smoke the fish and then sell it to the nearby towns." (Sisal Interviews\Sisal_11: 15 - 15 (0)). These words were said by several of the older fishers in both towns. When this was written, the snapper/grouper fishery was still culturally important; even though it is not as lucrative as the octopus fishery, fishers described putting their whole hopes into the latter. The snapper fishery also has a compensation program tied to its closure. The first mention of the program and the snapper/grouper season closure was in 2006 in the state's government online archives, which states that this program, Programa Veda del Mero, was created to supplement the fishers during the closure of the season (Programa de Respeto a la Veda de Mero, n.d.). There are mixed opinions on the program, changing over time from direct payments to vouchers.

Figure 9
Timeline Case Study 1



Note. Timeline of policy events, important dates from literature review, and fishers' interviews. Adapted from Espinosa-Romero (2020).

2.3.2 Codebook

Emergent codes from the first research question can be seen in Table 2, generated from MAXQDA. This table shows the code frequencies to grasp how some adaptations emerged more throughout the interviews. Table 3 shows the codes and frequencies for the second research question. Both tables show the frequencies for the combined towns. With RQ1 asking specifically about adaptations that the fishers or communities used to deal with the changes in livelihood brought on by multiple factors, the respondents described hurricanes, changes in ecosystems, policy changes, forced changes in occupations like the fall of the henequen industry, and market expansion and collapse. These codes are descriptions of the adaptations, not of the actual adaptations that have been used.

Table 2. Code Book RQ 1 Case Study 1

| Code System | Description of Code | Frequency |
|-----------------------------|--|-----------|
| Not given/Not enough | No help was given or what was offered was not enough. Could be monetary or other. | 9 |
| Forced change in occupation | Respondent felt that they had to change jobs or careers in a manner that they would not have chosen. | 11 |
| Continuously learning | The idea that there is always something new to learn when fishing. | 12 |
| Market creation | When there was not a market to sell into one was created. | 14 |
| Growth of fleet | Fleet grew either in number of boats or number of fishers. | 16 |
| Most lucrative species (+) | Species with most value have shifted over time. | 25 |
| Olden things | How things were in the old days. | 32 |
| Part-time jobs | Any job that the fisher does to supplement their income. | 35 |
| Lack of opportunity | Feeling that there is nothing to do besides fishing. No alternatives. | 39 |

| | | |
|---------------------------------|--|-----|
| Negatives of market expansion | Any negatives that fishers addressed from a market expanding. | 40 |
| Changes in technology | Anything new or change existing technology. | 42 |
| Collaboration with institutions | Any collaborations that fishers find worth mentioning. | 47 |
| Assistance | Specifically, government aid and what kind. | 54 |
| Change in routine | Any change to the daily routine of the fisher. | 73 |
| Important but not RQ | Any other detail that the fisher mentioned as important but does not fall under RQ1. | 95 |
| Code System Total | | 544 |

Note. Emergent codes for Research Question 1 from interview transcripts.

Table 3. Code Book RQ 2 Case Study 1

| Code System | Description of Code | Frequency |
|---|--|-----------|
| Negative impacts | Have any of the policies in place negatively impacted the fishers. | 3 |
| Success/Failure of implementation | Have there been successes attributed to any of the policies implemented. | 7 |
| Disconnect between organizations and activities | Do the fishers see a disconnect between what the organizations (universities or government) are saying they will do and the activities that are actually carried out? | 13 |
| Lack of awareness of organizations | Are the fishers aware of the different organizations that are involved with the fishing industry? | 28 |
| Code System Total | | 51 |

Note. Emergent codes for Research Question 2 from interview transcripts.

2.3.3 Research Question 1 Results

During the interviews, codes such as *Assistance* emerged through the following types of language shown in Table 4. Sisal and San Felipe Assistance focused on the different government subsidy programs, such as the Veda del Mero program that gave fishers vouchers to make up for the income that could be lost with the season closures. Some fishermen chose to share about

other forms of *Assistance* like government-funded workshops. Most of the responses were focused on the lack of proper assistance.

Table 4. Examples of the code Assistance for Case Study 1

| Code | Sisal | San Felipe |
|------------|--|--|
| Assistance | The government gifts you this. Because according to them it cost about 16 thousand (Mexican pesos) per person for that workshop. Which for us didn't even cost any money just our time. Sisal_1: 27 - 27 | Well yes. Yes, because it has also been a good thing that the government has given this economic support to those that respect the season closures. San_Fe_1: 24 - 24 |
| | We do a job, for example, we do handiwork. For example, this is dirty over there (points across the street) we get a group together and we clean and there is a list made and that is turned into the deputy or to the nautical committee. Well, it's called a "working day" and we give the list and everyone signs up so that they (local government) can give us the 350 and food basket for the week. Sisal_6: 36 - 36 | Because the government trying to keep people and money away from agriculture starts opening fishing as an alternative. They started pushing people to come to the coast. The strategy was to equip small permit holders with equipment and boats (through government assistance programs). San_Fe_4: 12 - 12 |
| | Everyone always comes offering help (monetary). I mean, with the idea that you will work for them (talking about a loan program). Because you will be paying and paying and paying and will never fishing paying and after all that time it will never be your boat. Sisal_8: 32 - 32 | Well yes, right now there is assistance from the government, at least I think it's through the government for the season closure. They are giving us vouchers for groceries. San_Fe_9: 44 - 44 |

Note. Examples of code Assistance from Sisal and San Felipe.

Table 5 shows examples of the code *Changes in routine*. It emerged through different questions, not just about changes in fishing techniques or times. Fishers talked about how their times of leaving and coming had changed, the price of gasoline, fishing grounds changing, and just the type of fishing that could be done. The Yucatan had a rich history of shark fishing (Fraga, 2004; Pérez-Jiménez & Mendez-Loeza, 2015) and was mentioned many times in the interviews when fishers would talk about how fishing in both towns had changed since their grandfathers had practiced.

Table 5. Examples of code Change in Routine for Case Study 1

| Code | Sisal | San Felipe |
|-------------------|--|---|
| Change in routine | <p>Now, well back then you would take 50-60 liters of gasoline and now they go out 180-200 kilometers and they take 400-5000 liters. They are spending about 20,000 pesos. Sisal_4: 30 - 30</p> | <p>He (grandfather) fished for sharks and he did have nets that he would make himself using a thick silk line. I remember he would use the fish he salted as bait. He would leave with all this and he would come back with, my grandfather would bring back sharks, rays, and back then well every once in a while, he would bring back a turtle that got caught. This was for eating at the house, not for selling. Back then there wasn't much pork, chicken, or beef to be found. San_Fe_1: 6 - 6</p> |
| | <p>Mmmhmmm and since the time the fish comes out has changed. Now the fish don't come up to eat during the day they come at night we have to work at night and that's why we go on these long trips. The fishing is all done at night, we haven't slept yet. All night were diving (hookah) we were putting in our marks and checking them to see if there were any fish. Sisal_6: 42 - 42</p> | <p>Your fishing point, you work, and you come back to land, but you run about 15, 20, 10, 8 miles depending, right. Now it's not like that. Now you go out about 30,40, even 45 miles some people go to more than 50 miles out to see to fish. San_Fe_4: 22 - 22</p> |
| | <p>Yes, in fact for the fisherman it's time more than anything (that has changed) because they leave early, well okay right no not so early they are leaving (port) around 8-8:30 am. But it's all the same while they prep their boats and have their breakfast, go and fish for a bit and come back around mid-day very tired (from too much sun) you only have the energy to shower and get some rest. Well, then there is no time to say keep up with all the things we could do wrong (talking about all the laws that fishers need to keep up with). Sisal_13: 74 - 74</p> | <p>Now then (talking about back in the day) the price for fish was lower but then again, the gasoline price was also cheaper and you didn't have to go so far offshore to fish. San_Fe_8: 10 - 10</p> |

Note. Examples of the code Changes in routine from Sisal and San Felipe.

The code *Change in technology* (Table 6) emerged by asking questions specific to gear restrictions and would even come out when fishers were talking about *Changes in routine*. There were enough technology shifts that allowed this code to become separate from *Changes in routine*. Like, most other fishing communities, ice was a changing factor in how the fishing was carried out (Alcalá, 2003; Fraga, 2004). Before ice was available in the towns, the main way to prepare and transport fish was by smoking it and then selling it to nearby towns. The transition from wooden sailboats to fiberglass boats with motors was another transition that many fishers felt was instrumental to how the fish is now.

Table 6. Examples of the code Changes in Technology for Case Study 1

| Code | Sisal | San Felipe |
|----------------------|---|--|
| Change in technology | It was using sails you had to put the sails and the boats were made of wood so how could we make as much as them? You would start poles to push you out and then use the sail and then you could take it down when you would leave Sisal (you could use little motors after that). In those days you had to, well it was small motors like 25 horses but daily you had to take everything home with you. Sisal_8: 8 - 8 | One of the first ways we fished (for octopus) was using a hook and diving but later this type of fishing technique (jimba) was used. The jimba technique was used for fishing octopus. San_Fe_1: 14 - 14 |
| | By the time we started fishing there was already ice (when our grandfathers and fathers started there wasn't). Sisal_11: 15 - 15 | Well, when it comes to technology, we can talk about the GPS we didn't use GPS (back then) we would just use compasses. San_Fe_7: 22 - 22 |
| | When I started there weren't any fiberglass boats, they just didn't exist it was purely wooden boats and there were no motors I mean gasoline-powered motors there just weren't any. It was all done (fishing) using sails and a compass because there was no GPS so you also had to use the stars to navigate and when it was overcast you would have to use the wind, waves, and the sun, yea. So, we were taught that to be a fisher you had to learn to use a compass, sails, and the wind. Sisal_15: 18 - 18 | Wooden. They were wooden (the boats) the very few motors that existed were bass bistro Yamahas. San_Fe_12: 18 - 18 |

Note. Examples of the code Change in technology from Sisal and San Felipe.

Table 7 shows examples of how the code *Collaboration with institutions* emerged. Both towns could immediately name universities and colleges that routinely came to give workshops and government agencies (discussed in Table 4). There was also dissatisfaction with the type of work these institutions/organizations currently do. The examples below speak to many universities doing one-time projects and community members never seeing the outcomes of the projects.

Table 7. Examples of code Collaboration with Institutions Case Study 1

| Code | Sisal | San Felipe |
|---------------------------------|--|---|
| Collaboration with institutions | That's what I was commenting about, for example, the university that we have here, they might have like 10 people from Sisal working there. How does that help us? And if you don't want the fishing effort (amount of people) to increase, I'm so sorry to tell you that all the people that are leaving (fishing) we aren't saying they have to all be students, but they can be secured. Sisal_1: 45 - 45 | Yes, of course, I mean the people who have come have been for example mainly here to do workshops for the divers. San_Fe_2: 54 - 54 |
| | With UNAM. Yes, I was with UNAM for a bit. I would bring them to live canane (yellowtail snapper). Sisal_3: 30 - 30 | Well as for scientific investigation, no. There has been research done and we have taken the workshops but those have been provided by government entities, right. San_Fe_8: 24 - 24 |
| | Sometimes the CINVESTAV comes but with the idea of doing a project. In this case, the professor came and wanted to study and needed help. Usually, they come and do the study and we never see them again. Sisal_11: 35 - 35 | Well, they were giving us workshops. I'm not sure if it was a professor from the UADY but they started training us on how to make artisanal crafts apart from tourism. We would go to Merida for 2-3 days for a workshop and we would share with other women's cooperatives. San_Fe_15: 46 - 46 |

Note. Examples of the code collaboration with institutions from Sisal and San Felipe.

Table 8 shows examples of the code *Forced change in occupation*, which was more prevalent in Sisal than in San Felipe. Sisal’s examples centered on fishing being a means to an end, with people looking to tourism as the next step. The few examples for San Felipe were centered more around fishing being the only occupation for people in the surrounding areas.

Table 8. Examples of code Forced Change in Occupation Case Study 1

| Code | Sisal | San Felipe |
|-----------------------------|---|--|
| Forced change in occupation | Well, now several of the younger fishers are also doing tourism. Now they are turning to everything on land since if there is no fishing one day with one or two that you get (tourist) per week you can survive. Sisal_8: 14 - 14 | But he (the father) saw that it wasn't too feasible to sustain his family (agricultural job) so he opted for fishing. It's how we stayed here in San Felipe. San_Fe_2: 12 - 12 |
| | Because the customs house and port were moved to Progreso and with it, the few jobs started disappearing those that stayed started dedicating themselves to fishing but like I previously said it was fish they had to smoke and then sell the surrounding towns. Sisal_11: 15 - 15 | About the time of Miguel de la Madrid, he leaves, and another president comes in and since then things have been declining (fishing and job-wise). San_Fe_3: 12 - 12 |
| | In this case, the fishers feel, we the fishers feel like they are hurting us in the sense that they impose the closing of the fishery and we can't work. Sisal_15: 44 - 44 | N/A |

Note. Examples of the code Forced change in occupation from Sisal and San Felipe.

Table 9 shows examples of the code *Lack of opportunity*, in which both towns felt they were having trouble adapting to an ongoing lack of jobs and means to get by. Many fishers, men, and women of various ages (the oldest fisher interviewed was 93 years of age at the time) felt that fishing was something they had to do as a last result. Many spoke of not wanting their children or grandchildren to continue fishing since they only came to it from necessity. Another way this code emerged was fishers talking about migrant fishers and their need for work that brought them to both towns.

Table 9. Examples of code Lack of Opportunity Case Study 1

| Code | Sisal | San Felipe |
|---------------------|---|--|
| Lack of opportunity | There isn't another source of work that you could "Well I'll do that". Sisal_1: 27 - 27 | Well, I became a fisherman because of necessity and well because it was the only thing to do here. San_Fe_1: 4 - 4 |
| | But it doesn't matter, it doesn't add up to be enough (fishing). Sisal_4: 38 – 38/ | It was the necessity that brought me here. To work I had gotten married and went to Chetumal to work as a mason. San Fe 3: 12 - 12 |
| | Well because there wasn't anything else. I didn't finish school so the only place for me to go was into fishing and then from that point I've been working about 40-45 years as a fisherman. Sisal 8: 6 - 6 | Well, it's all a chain they have to work to be able to survive that's just life on a port. Since they don't like school, they go diving (fishing). San_Fe_10: 28 - 28 Sisal_6: 24 - 24 |

Note. Examples of the code Lack of opportunity from Sisal and San Felipe.

Table 10 shows examples of the code *Part-time jobs*; this was initially grouped in with *Lack of opportunity*, but enough distinction between these two codes emerged. Many fishers felt that while there were no true opportunities, there were part-time jobs that they could do. These jobs were not ideal, but they helped put food on the table. Part-time jobs were those done when the heavy fishing seasons are over and mostly are moto-taxi drivers and working agriculture.

Table 10. Examples of code Part-time Jobs Case Study 1

| Code | Sisal | San Felipe |
|----------------|---|--|
| Part-time jobs | It's fishing, fiberglass, and glass (only places to find jobs). Other than that, in Sisal, I don't know maybe a small job as a mason I sometimes do that as well. Sisal_6: 24 - 24 | Like how I am a guide others are for example ranchers... some are into agriculture...and some that are masons...and even some that open up their little shops in their houses. San_Fe_2: 28 - 28 |
| | The majority of people (fishermen) from Hunucmá head back and have other activities such as masonry, driving taxis, or security but they have another form of work. Sisal_11: 27 - 27 | For example, I dedicate myself to tourism and agriculture and that's how I alternate my days (along with fishing). San_Fe_4: 16 - 16 |

| | | |
|--|--|--|
| | I can't tell you exactly why, but I would alternate well with one fishing season a year at a time as a waiter at the Duck Hunting lodge and also would work as a tailor. Sisal 13: 8 - 8 | My grandfather who passed away not so long ago left fishing all together because he liked agriculture life better. San_Fe_5: 8 - 8 |
|--|--|--|

Note. Examples of the code Part-time jobs from Sisal and San Felipe.

Table 11 shows examples of the code *Continuously learning* that emerged in San Felipe. It was primarily seen in the same spaces as *Lack of opportunities* and *Change in routines*. This code spoke to the understanding that fishers constantly have to learn new techniques and that their skills directly affect the safety of others on the boat.

Table 11. Examples of code Continuously Learning Case Study 1

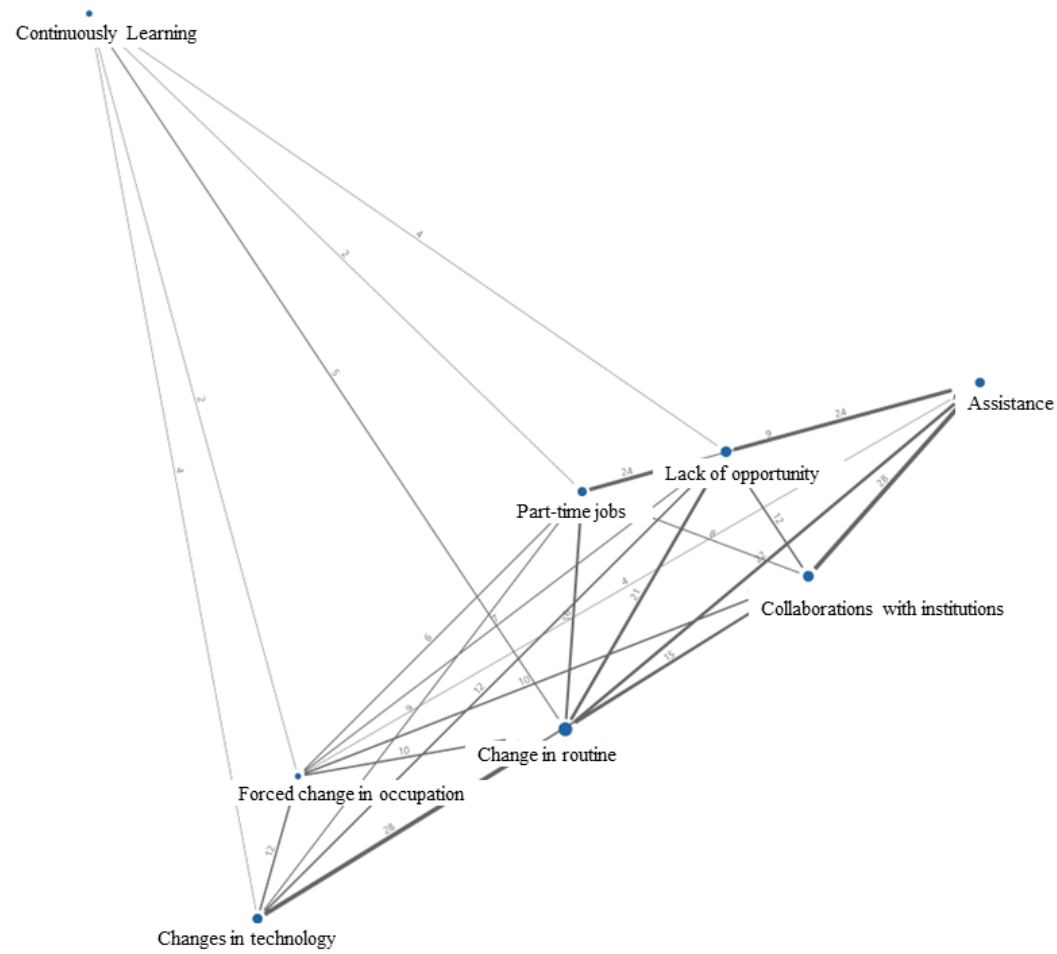
| Code | Sisal | San Felipe |
|------------------------|-------|---|
| *Continuously learning | NA | And it was when I got here that started to learn fast. Necessity forces you to learn. San_Fe_3: 12 - 12 |
| | NA | Well, it's the techniques of fishing that you learn, every time you go out you learn a little more and something new, right? San_Fe_7: 26 - 26 |
| | NA | You know it's trial and error and well you have to do things right and up to a certain point you rely on the person you are working with and that inspires others to trust you and you start building a routine and camaraderie and then everything starts to work right. San Fe 9: 32 - 32 |

Note. Examples of the code Continuously learning from San Felipe.

Figure 10 is the code map for both Sisal and San Felipe. The bolder lines connecting the codes are, the closer those two codes are found to one another; there is also a number associated with these lines showing how many occurrences of these codes appear alongside each other. The numbers also show the frequency of the connecting codes. Since this is a combined code map, some codes look like outliers *Forced change in occupation* while others look like they were omitted because they had no overlap *Continuously learning*. Codes like *Part-time jobs* were close because they often appeared close together. *Assistance* and *Collaboration with institutions* are also close together with a thick line, meaning that many times when fishers spoke of

Assistance they also mentioned collaboration. Another set of codes to look at are *Changes in technology* and *Change in routine*, which were most often mentioned together.

Figure 10
Combined code map for Research Question 1



2.3.4 Research Question 2 Results

For RQ2, interviews revealed themes associated with NGOs and other organizations such as universities and the type of training or continuing education they provided for the fishers and the towns. These themes can be seen in Table 12, which shows in what proximity the codes that created the themes were to one another. *Collaborations with institutions* were closely linked to *awareness of organizations*, and most collaborations with the institutions were centered around the most lucrative species in the area. The outlier is *negative impacts* that were only mentioned in San Felipe when working with organizations/institutions. It is interesting to note *success of the implementation* was only mentioned seven times while *collaboration* and *awareness* were mentioned 47 and 28 times. Many fishers talked about the work and the programs implemented through government agencies or universities. There was confusion about who provided the training, where they came from, or what was to be done after the training. In both towns, there was a disconnect between organizations/institutions and the activities they were promoting or giving to the fishers.

Table 12. Examples of all codes for RQ 2

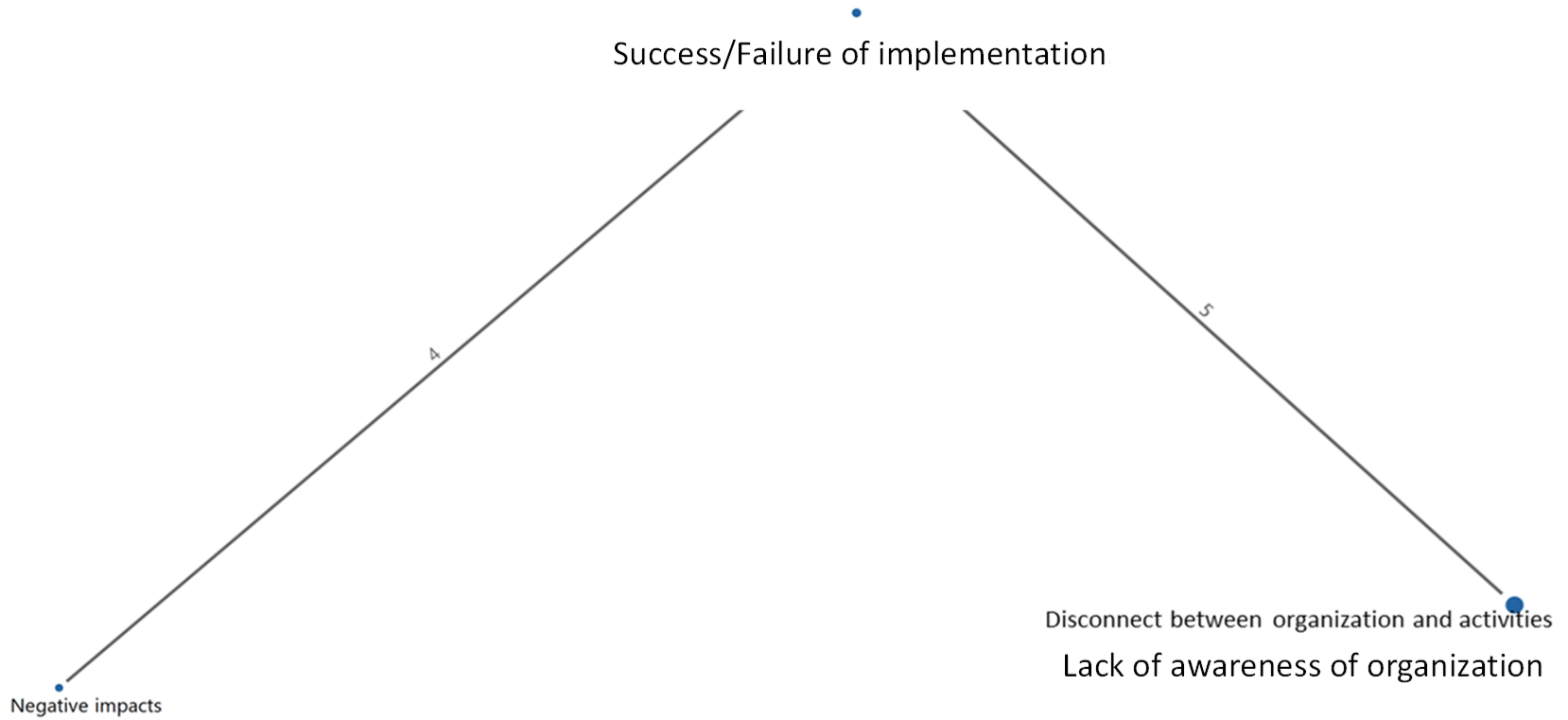
| Theme | Sisal | San Felipe |
|-----------------------------------|---|---|
| Lack of awareness of organization | Aha, they let the permit holders, or the cooperative leaders know. The National Commission for Fisheries (CONAPESCA) is the one who gets the information to them and they stick the paper with the new laws to the bodegas. It's the state government that is in charge of that Sisal_9: 52 - 52. | Not that. It comes through the cooperative. Since the cooperative is recognized (by the government) they work with us and through them, they ask the government for our workshops. San_Fe_2: 56 - 56 |
| | Yes, yes mostly they send us a bulletin from the SAGARPA which now is the Secretariat of Fisheries that sends them. They send us an email that tells us what the limits are for each species and which we can't fish. Sisal 12: 32 - 32 | Well, no, we just know that there is a closed season but not why. But there isn't any rule in place that says you can't go in a certain type of boat... No, we don't have those types of rules or laws. San_Fe_5: 34 - 34 |

| | | |
|---|---|--|
| Disconnect between organizations and activities | No, there aren't any. I mean the fisherman doesn't know let's say about 80% of the laws. People that dedicate themselves to fishing are people with little resources. Sisal_13: 34 - 34 | And yes, it has yielded some good results because here for example during the snapper season-closing there is the temporary work for the season closing. I don't know how it works but I do know that regretfully not everyone makes it in. Sometimes no fishermen make it in. San Fe 1: 24 - 24 |
| | And I feel like it's not like that. This is how I know I'm repeating myself that's how they want to shape their laws without taking into consideration the fishermen. The opinion of the fishermen. Sisal_15: 46 - 46 | But there is a problem because they say it's 750 (Mx pesos) worth of vouchers and 750 (Mx pesos) of money that they are supposed to give us. They are only giving us 600 (Mx pesos) worth of vouchers. San Fe 6: 60 - 60 |
| Negative impacts | | But regretfully, it happens a lot that for example they (government) come and trains us but who does the follow-up to make sure things are being done? San Fe 4: 42 - 42 |
| Success/ Failure of implementation | It's giving results in the sense that through the Secretariate of Tourism they (townspeople) solicited other training and now there are I think about 36 more people who are trained to do tourism as an alternative. Sisal_15: 64 - 64 | For example, the SENASICA (National Sanitation and Quality Control Service) comes and trains us on how we have to maintain our freezers and how to handle the product during octopus season...The measures are very strict and hygienic. San_Fe_9: 42 - 42 |

Note. Examples of all codes from Research Question 2 from Sisal and San Felipe.

In the case of *Collaboration with Institutions*, they were able to name specific institutions - in this case, universities - but the interactions were limited. The combined code map for RQ2 grouped *Disconnect between organizations and activities* and *Lack of awareness of organization* (Figure 11) *Negative impacts* were not grouped closely to any other code because it was only mentioned in San Felipe.

Figure 11
Combined code map for Research Question 2 codes



2.3.5 Display Content Analysis Model and Themes

The third research question investigated existing policies/laws dealing with fishing for themes of adaptive co-management that may be present but not explicitly stated. Using the timeline mentioned above (Figure 5) along with previous work (Alcalá, 2003; Espinosa-Romero, 2020; Fraga, 2004; Hernandez & Kempton, 2003; Vargas, 2001) and finally, input from the fishers' interviews, a list of possible documents for analysis was created. Among these, Article 27 (1917) set the framework for fishing in Mexico (Cano & Sosa, 2016; Espinosa-Romero et al., 2014b) and the first fishing law "Ley General de Pesca" of 1925. A mix of state and federal documents was analyzed in the content analysis along with some of the reports agencies have put out to get a good mix of language used and how these entities interact with the fishers.

Table 13 organizes the documents in the following way: document-level (state or federal), year created, type of document (decree, law, amended law, regulation, manual, or report), and then the presence of the different themes that were important to adaptive co-management manifesting. Presence and absence were shown using (1) and (0); indicating that this was a broad look at how adaptive co-management could appear, if at all.

Table 13. Content Analysis Presence/Absence and Document type Case Study 1

| Document level | Year created | Type of document | Presence of Feedback Mechanism | Presence of Local Responsibility Supported by Government | Presence of Engagement between Government and Communities | Presence of Local Empowerment |
|-----------------------|---------------------|-------------------------|---------------------------------------|---|--|--------------------------------------|
| Federal | 1925 | Law | 0 | 0 | 0 | 0 |
| Federal | 1979 | Manual | 0 | 0 | 0 | 0 |
| Federal | 1995 | Law | 0 | 0 | 0 | 0 |
| Federal | 2007 | Report | 0 | 0 | 0 | 0 |
| Federal | 2010 | Report | 0 | 0 | 0 | 1 |
| Federal | 2010 | Report | 0 | 0 | 0 | 0 |
| Federal | 2010 | Report | 0 | 0 | 0 | 1 |
| Federal | 2012 | Report | 1 | 0 | 0 | 0 |
| Federal | 2017 | Report | 1 | 0 | 0 | 0 |
| Federal | 2017 | Report | 0 | 0 | 0 | 0 |
| Federal | 2018 | Amended Law | 1 | 1 | 1 | 1 |
| Federal | 2019 | Report | 0 | 0 | 0 | 0 |
| Federal | 2019 | Report | 0 | 0 | 0 | 0 |
| Federal | 2020 | Report | 0 | 0 | 0 | |
| State | 2008 | Regulation | 0 | 0 | 0 | 0 |
| State | 2010 | Law | 1 | 1 | 1 | 1 |
| State | 2010 | Report | 1 | 0 | 0 | 0 |
| State | 2012 | Amended Law | 1 | 1 | 1 | 1 |
| State | 2012 | Report | 0 | 1 | 1 | 0 |
| State | 2012 | Manual | 0 | 1 | 0 | 0 |
| State | 2013 | Decree | 0 | 1 | 1 | 0 |
| State | 2013 | Regulation | 0 | 0 | 0 | 0 |
| State | 2013 | Regulation | 0 | 0 | 0 | 0 |
| State | 2013 | Law | 0 | 0 | 0 | 0 |
| State | 2018 | Report | 0 | 0 | 0 | 0 |

Note. Content Analysis presence of themes showing the document levels and type of document.

Table 14 shows the themes and sub-themes searched in the different documents. *Public and Government Partnerships* were the most prevalent, appearing in 14 documents (n=25) and making up about 56% of the sub-theme language that included programs that would benefit the fishers and the communities. A surprising find, given that there have been instances where town halls have been mentioned, is that there is a lack of a *Public Commentary Period*; *Knowledge Sharing* and *Working Relationships* were the only types of *Feedback Mechanisms* presented in the documents. This could be due to document criteria being too narrow since there was a *Public forum for communication* present.

Table 14. Pillars and sub-themes of Adaptive Co-Management Case Study 1

| Pillars | Sub-themes | n | % | Example |
|--|-----------------------------------|----|-----|---|
| Presence of Feedback Mechanism | Knowledge Sharing | 5 | 20% | Establish a calendar with all the season closures in coordination with the National Council of Fisheries and Aquaculture, which will be published in all the mayor communication outlets of the state (Yucatan). "Ley De Pesca Yucatan (2012)" |
| | Working Relationship | 4 | 16% | |
| | Public Commentary Period | 0 | NA | |
| Presence of Local Responsibility Supported by Government | Grant or fund application process | 4 | 16% | The Attendance Program with the Federal entities consists of three components (agriculture, livestock, fisheries and aquaculture) through which incentives are distributed to the producers (of these three areas) of the state (Yucatan) using a mix of federal and state funds to carry out strategic projects with the goal of increasing production levels (in these areas). "DOF (2015)" |
| | Public forum for communication | 5 | 20% | |
| Presence of Engagement between | Public & Government partnerships | 14 | 56% | The objective is that they (fishers) participate in capacitation workshops that |
| | Learning by doing | 1 | 4% | |

| | | | | |
|----------------------------------|--|---|-----|---|
| Government and Local Communities | | | | would allow them to enhance and widen their technical capacity and skills with the goal being to better the productivity of the fishing sector. "Diagnostic Report (2016)" |
| Presence of Local Empowerment | Inclusion and effective participation in the process | 4 | 16% | Promote the active participation of the communities and the producers (fishers and others) in the administration and management of the fishing and aquaculture resources via the Council. "Ley de Pesca Yucatan (2012)" |
| | Knowledge interpretation | 3 | 12% | |
| | Shared interest that leads to inclusion in decision-making | 4 | 16% | |

Note. Themes and subthemes from Content Analysis and the percentage each one appeared in the documents.

2.4 Discussion:

2.4.1 Integration

The final phase of the convergent mixed methods conceptual model (Figure 2) shows that the themes from RQ1-2 and RQ3 must be compared and contrasted and then interpreted. This was achieved using a modified joint display table (Figure 8). Convergent themes, listed, are themes that overlapped in both the fisher interviews and the content analysis of policy and agency documents.

- Government Assistance
- Collaboration with Institutions
- Knowledge Sharing
- Grant or Fund Application Process
- Public and Government Partnership

While these themes alone are not indicative of adaptive co-management happening or manifesting, they do point to the groundwork for this type of collaborative management style to develop. With the problems these coastal communities face, like gentrification and expansion, it is important to have building blocks that span governance and community (DeFries & Nagendra, 2017). Since there are already mechanisms in place for these convergent themes to exist in both areas (governance and community), there is a way for both to leverage these themes and start to create relationships that can address and manage the shifts in livelihoods. To leverage the convergent themes, resource managers, community leaders, and NGO's can look at work done through the Human Ecology programs at CINVESTAV, Merida Unit in the Yucatan, which have had several ongoing projects with coastal communities in the area and can be seen as a bridging organization. Much work has been done on science communication to help address the knowledge to action gap (Emmelhainz et al., 2021) referenced by fishers' interviews.

Divergent themes, as follows, were themes that were identified as needed or important in fisher interviews and were also part of the adaptive co-management rubric but not present in the policy documents.

- Working Relationships
- Inclusion and Effective Participation in Process
- Disconnect Between Organizations and Activities

These appeared in the interviews or the content analysis but were not crossing the boundaries. Even though fishers talked about *Collaboration with institutions*, it was still not mentioned as part of the *Working Relationships*. Past collaborations but not sustained relationships showed long-term growth or end goals from an agency standpoint or the fishers' own words. A deeper dive into the types of documents collected from the agencies (a more

extensive content analysis) and more targeted interviews with the fishers would shed light on whether this has happened in the past or if it is a relationship/collaboration that needs to be fed.

2.4.2 Interpretation

The overarching hypothesis “Communities with policies that allow for co-management to occur have an increased capacity to positively adapt to a transitioning livelihood” was partially correct in this case study. While there was no formal mention of adaptive co-management by either town, the convergent themes found in both towns showed that the groundwork is being laid for ACM. Sisal and San Felipe showed different attitudes toward best handling livelihood changes; for example, San Felipe had the code “continuously learning” emerge more than once, while in Sisal, it did not occur.

Policies in place do not mean that they will be carried out effectively; this was a complaint from both towns, and both found different ways to handle this. Sisal has started a community-driven tourism program in which many resident fishers are investing their faith to mitigate the lousy fishing seasons. San Felipe sees itself primarily as a fishing town that does tourism on the side and understands that continuously learning sets it apart from other towns. As shown on the right of Figure 8, themes of ACM are present, albeit sparingly within the documents used. This makes sense since Mexican fishing policies have been grounded in inefficient use of resources and have recently started shifting to sustainable use of resources. The policy has yet to begin dealing in SES terms. However, as shown by the interview codes and themes (left side of Figure 8), the communities are starting to transition towards ACM themes, which indicates that there is room for them to grow. When communities are observed separately, differences in attitudes can be seen even though the same themes appear. Sisal has seen many changes throughout its history and adjusts at its own pace. The fishers are moving towards eco-tourism and are looking for

ways to bridge their fishing history with emerging tourism plans. Sisal was first and foremost a port town with several livelihood changes. Its growth is constricted by its geographical location (between mangrove and gulf) and a shifting demographic of fishers. The next steps for fisheries management or any resource management would be to actively involve the cooperatives, permit holders, and the community as a whole. While done in the past, needs assessments need to be reevaluated and their findings need to be discussed with the people affected by any policy changes.

San Felipe is steadfast in keeping its fishing ways and quickly adapts to tourism if it is under its terms. The fishers feel like there needs to be follow-up for collaboration between the community and organizations/institutions. As stated, the purpose of this case study was to use the words of the fishers to illustrate the dissonance between what policy documents are trying to accomplish and what is going on within the communities. This was clearly shown between the interviews and content analysis of these policies. Each fishing community across the Yucatan Peninsula will be culturally different. Still, there is the same echo of people wanting to preserve their history while meeting the challenges of their changing resources and landscapes. Suppose institutions/organizations such as NGOs and universities can start to adopt ACM into their outreach and capacitation plans. In that case, an outlet for true collaboration and follow-up can be created between these and the communities they serve.

A hallmark of ACM is experimenting and troubleshooting; it empowers the resource users (fishers and communities) and managers through responding to changes by being supported by and working with various organizations at different levels (Hasselman, 2017). Given that feedback is a hinge for ACM, it was good to see that the communities were also thinking about it as a follow-up process. Feedback aids collaboration and cooperation across different scales

(Cosens, 2010), in this case, not just from a regulatory or resource management standpoint (e.g. trying to get fishers to follow *vedas*), but also from a community standpoint. A formal commentary period was not present in many of the documents, but a feedback mechanism can also come in informal ways. Universities are well versed in working with the communities and are a presence that the fishers are familiar with even if they feel like there is no long-term collaborative relationship.

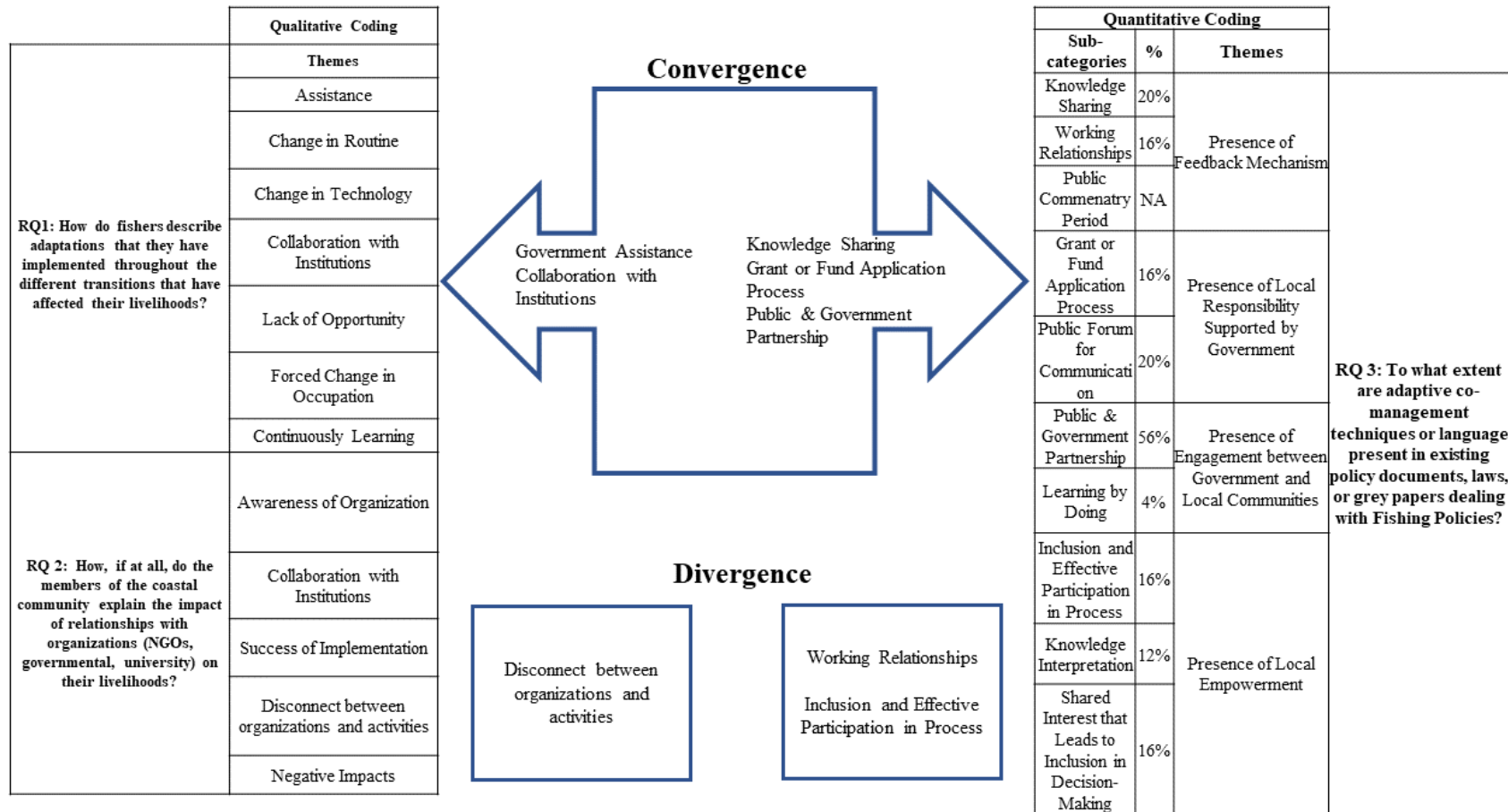
Recommendations specifically for the coastal communities of the Yucatan are for community engagement; resource managers and universities should reimagine their relationship within the community and restructure accordingly. An easy feedback mechanism would be to have these types of institutions be a means of feedback or liaison between the communities they work in and the management dependencies they work with.

If ACM or any collaborative and adaptive management scheme will work, then communities, resource managers, and institutions/organizations need to take ownership of these types of research and community growth projects. No bottom-up management technique will work unless it is vetted and taken an interest in by the community it seeks to help. Resource managers and policy makers can create relationships with the communities their decisions affect by understanding, acknowledging, and adopting different ways of knowing researchers. Too often, the natural sciences forego the humanities in search of impartial truths, but every decision (policy) that is created affects people and the environments in which they live. To create meaningful change through science-driven solutions, the entire system must be considered.

When exploring and recommending management schemes, especially ones in community engagement, it is imperative not to homogenize the cultures across areas and try to give cookie-cutter results (Bakker et al., 2019; Ortega-Álvarez et al., 2021). From a theoretical standpoint,

this is a given since socio-ecological systems literature discusses how there is no one solution for complex issues (Young et al., 2006). This is the first case study of three that will look at fishers and their livelihood changes and adaptations across the Gulf of Mexico.

Figure 12
Joint-Display



Note. Showing results from Research Questions 1-3 and which themes and codes converged as well as where divergence could be found.

2.5 Limitations and Future Works

This case study is just one example, a microcosm of what the fishers in the Yucatan and across Mexico might perceive. A more extensive interview process, over time, would show perceptions changing about the different policies and involvement with organizations and institutions. Since these case studies are happening in three different countries, there is a time restraint on the depth of information, including a pandemic. The last interviews were completed before the COVID-19 pandemic started; a follow-up set of interviews after the pandemic's peak would shed light on shifts in perceptions and adaptations to this recent livelihood change. A more extensive content analysis looking at just current policy documents and agency reports would also show how current policy is shifting. To keep with ACM, all future work should involve the communities more in the feedback loop.

CHAPTER III. CASE STUDY 2: TEXAS GULF SHRIMP FISHERY

3.1 Introduction:

3.1.1 The Problem

Communities along the Gulf of Mexico (GoM) are vulnerable to an array of problems like sea-level rise, poverty (Laska et al., 2010), population growth (Colburn & Jepson, 2012), increased hurricane activities, and regulatory changes (Jacob et al., 2010; Jepson, 2007b) that can all cause changes to their livelihoods. Grouping all the 52 counties that make up the northern GoM together would be unwise since each community faces its changes differently. This case study focuses on the regulatory changes that have impacted the Texas Gulf Shrimp fishery using the policy that created the changes and the words/perspectives of the individuals who lived the changes.

3.1.2 Texas Gulf Shrimp Industry

The Magnuson-Stevens Act (MSFCMA), which created the eight regional councils that manage fisheries in the U.S., is also the policy document that mandated that fishing communities be considered when creating regulations that impacted them (Jepson, 2007b). Along the gulf states recreational and commercial fishing are important industries. Commercial fishing landings revenue was \$816.1 million in 2019 across the five states that border the GoM (National Marine Fisheries Service, 2022). Commercial fishing is all fishing that is done with the intention to sell for profit (Fisheries, 2007). Within this type of fishing there is a particular sector which has historically been of importance both economically and culturally, the commercial shrimp fishery which in 2019 brought in \$371 million to the region (National Marine Fisheries Service, 2022).

The Texas Commercial Shrimp fleet operates in federal waters nine miles from the Texas shoreline out into the Gulf of Mexico (state water limit). The Texas offshore fleet saw its heyday

in the years after World War II when bigger diesel engines became widely available, and shrimpers could venture further out into the Gulf of Mexico (Holland & McGrath-Avery, 2020). During this period of about 30 years there was an increase in the fleets along the Texas Coast with communities like Port Isabel and Port O’Connor boasting fleets of 500 or more boats. Local bay shrimping boats were outfitted to venture out into the Gulf along with bigger vessels coming from out of the state and later being built in Texas (Bullis, 1951; Holland & McGrath-Avery, 2020; Maril, 1995).

It is important to make the distinction between bay shrimping and Gulf shrimping for this case study. Bay shrimping is where many of the families who were interviewed for this case study started, focusing on shrimping nearshore and in the Texas bays (Funk et al., 2003). This case study focuses on the offshore shrimping or Gulf shrimp fishery which catches larger (mature) shrimp (Funk et al., 2003). Both fisheries have had a contentious history of regulations such as license buy-back programs (bay fishery) and license moratoriums (Gulf). Table 15 shows the total number of active licenses in the state of Texas for the two counties in which interviews were carried out for the 2021-2022 season (data provided by TPWD). Much like other fisheries, it is not only regulations and management that have affected the livelihoods of the people who work in the industry or live from it. Factors such as fuel prices, worker recruitment, graying of the fleet, and pandemics have all helped shape the industry over the last seven decades (Blomo, 1981; Gallaway et al., 2020). This chapter discusses how shrimpers perceive the adaptations they have implemented when faced with livelihood changes and the roles of resource management bodies like NOAA, Texas Agri-Life and Texas Sea Grant within their industry.

Table 15. Total number of active licenses in Texas 2020-2021

| License Type | County | Total |
|--------------------------------------|-----------|-------|
| Resident Commercial Bait Shrimp Boat | Cameron | 21 |
| Resident Commercial Bait Shrimp Boat | Matagorda | 29 |
| Resident Commercial Bay Shrimp Boat | Cameron | NA |
| Resident Commercial Bay Shrimp Boat | Matagorda | 33 |

| | | |
|--------------------------------------|-----------|-----|
| Resident Commercial Gulf Shrimp Boat | Cameron | 170 |
| Resident Commercial Gulf Shrimp Boat | Matagorda | 115 |
| Total | | 368 |

3.2 Site Description

Two historically prolific shrimping ports were selected based on their proximity to the border with Mexico (Port Isabel/Brownsville) and for a mix of cultures that participate in the Gulf shrimp fishery (Palacios).

Palacios

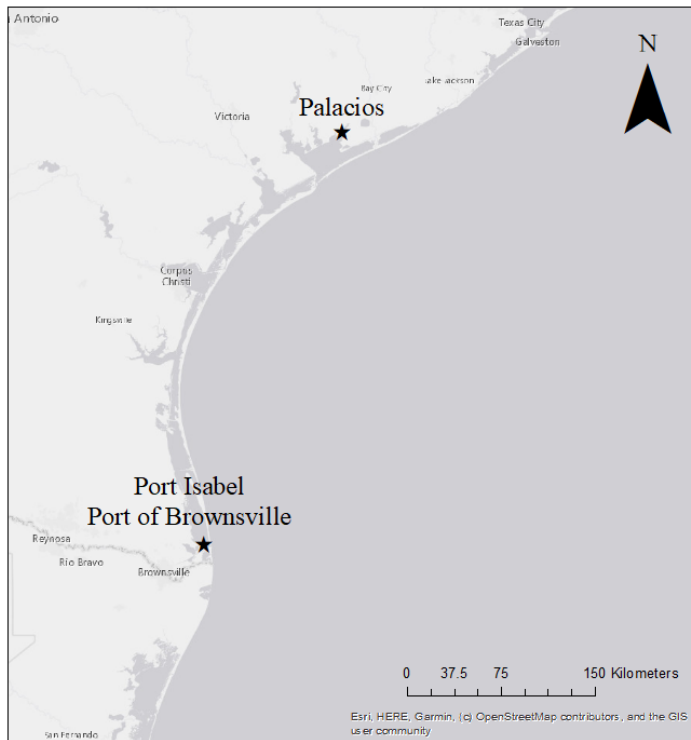
Palacios is a small town of around 4.5 thousand people located in Matagorda County about 110 miles southeast of Houston (U.S. Census Bureau, 2020). Characterized as a fishing dependent town with little industry outside of shrimping (Jacob et al., 2010; Petterson et al., 2005). Most industry opportunities are located outside of the city and include oil/gas and agriculture (Jacob et al., 2010). The Palacios Economic Development Corporation (2015) also mentions tourism, waterfront development, film, and light industrial as potential sectors of industrial growth for the city. Currently the biggest employer in Palacios is the South Texas Project Nuclear Operating Company which is located in Bay City about 30 miles northeast (Matagorda County EDC, 2022; Petterson et al., 2005). Historically it was a bay shrimping town but switched to Gulf shrimping when the bay and bait shrimping licenses became limited entry after the license buy-back programs around 1995 (Caillouet et al., 2008; Funk et al., 2003). Known as the Shrimping Capital of Texas, it is home to several generations of shrimpers. The first shrimpers came from Alabama in the 1920s and established Gulf shrimping in the area (Bullis, 1951). During the 1980s, when shrimping was at its height in Texas, the town had around 400 Gulf trawlers (Griffin, 1952). In the late 1970s through the 80s several Vietnamese families settled in Palacios and took part in bay shrimping and later in Gulf shrimping thanks to several grant-in aid programs (Blomo, 1981). Still, with around

200 boats making it the second largest commercial shrimping fleet in Texas, Palacios is maintaining its shrimping history (PEDC, 2015).

Port Isabel/Brownsville

The second site is in south Texas and situates the shrimping fleet in an ideal spot to take advantage of Mexican waters from about the 1960s till Mexico enforced its 200 mile EEZ and the practice was terminated in 1980 (Gulf of Mexico Fishery Management Council, 1981). The focus was on the shrimp fleet and because most of the fleet moors in Port Brownsville while the smaller vessels are in Port Isabel (Holland & McGrath-Avery, 2020; Petterson et al., 2005) they were evaluated as one. Evaluating as one also allowed the histories of the families interviewed to flow since some had started in Port Isabel, moved to their operations to the Port of Brownsville and then moved back to Port Isabel. Both fleets are in Cameron County and bring approximately \$80.9 million to the county (based on 2014-2019 estimates) (Dudensing et al., 2021a). Shrimping became a strong industry in Texas after the end of World War II, when diesel became more affordable and larger trawlers could be built (Holland & McGrath-Avery, 2020). In the 1960s, 65% of the shrimp produced in Texas came from this area (Garza, 2002). The Brownsville Ship Channel was constructed in 1936 and joined the Port Isabel Ship Channel and Gulf Intercoastal Waterway (Breuer, 1972). When the Shrimp Basin was built in 1953, much of the shrimp fleet from Port Isabel moved there (Holland & McGrath-Avery, 2020; Rodriguez, 2019). This area is also known for its tourism and recreational fishing industry but there is also petroleum industry support services (Garza, 2002; Petterson et al., 2005).

Figure 13
Map of Texas Coast



Note. Showing where the two sites were located.

3.3 Methodology

Using a convergent mixed methods approach adapted from Creswell and Plano Clark (2018), both qualitative (interviewing) and quantitative (content analysis) approaches occurred simultaneously in each case study community. This process is captured through the conceptual model in Figure 14. Adaptive co-management (ACM) is defined as a flexible community-based system of resource management tailored to specific places and situations and supported by working with various organizations at different scales (Olsson et. al., 2004a).

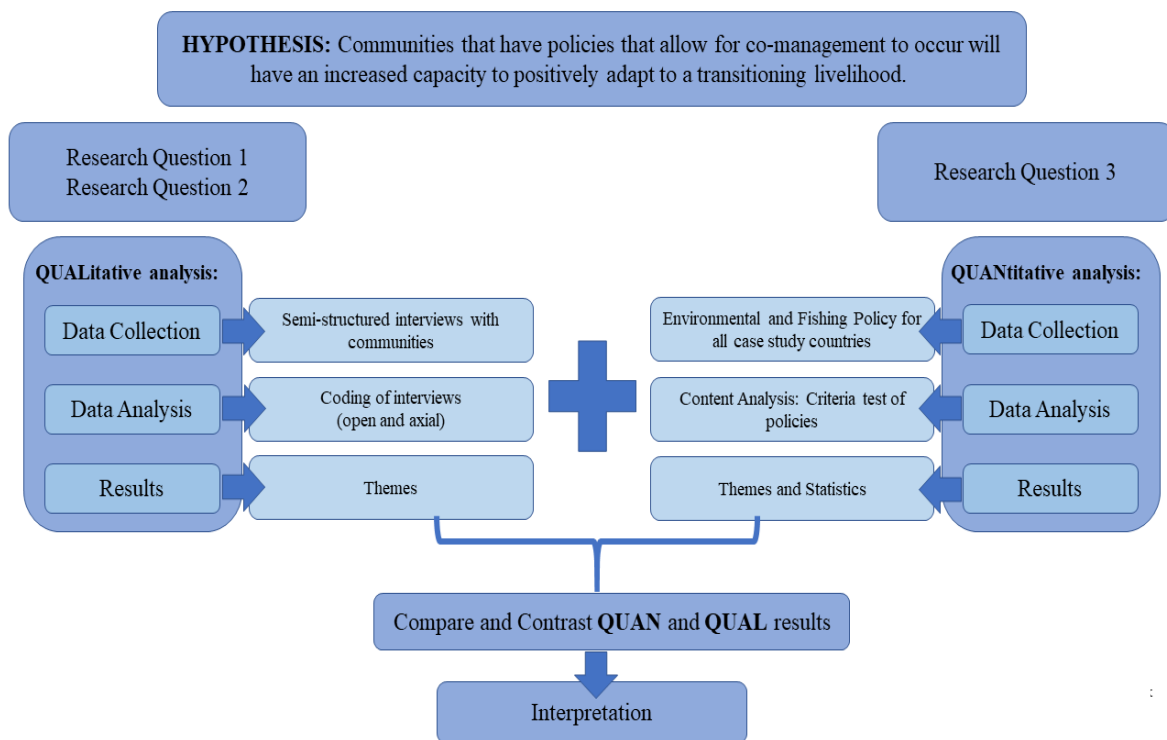
Hypothesis: Communities that have policies that allow for co-management of the shrimp fisheries to occur will have an increased capacity to positively adapt to a transitioning livelihood.

Research Question 1 (RQ1): How do shrimpers describe adaptations they have implemented throughout the different transitions that have affected their livelihoods?

Research Question 2 (RQ2): How, if at all, do the members of Palacios and Port Isabel/Port of Brownsville explain the impact of relationships with organizations (NGOs, governmental, university) on their livelihoods?

Research Question 3 (RQ3): To what extent are adaptive co-management techniques or language present in existing policy documents, laws, or gray papers dealing with shrimping policies?

Figure 14
Convergent Conceptual Model



Note. Conceptual model for the mixed methods convergent design showing how the hypothesis will be answered through research questions and how data will be collected and analyzed.

3.3.1 Semi-Structured Interviews

The first two research questions were answered using 10-to -30-minute semi-structured interviews. Participants were selected using a snowball selection approach in which shrimpers identified at the docks, as they agreed to give an interview, would also recommend another person (Heckathorn & Cameron, 2017). This was done so that only shrimpers from each town were

interviewed and so that no migrant shrimpers perspectives were captured. Semi-structured interviews allow the respondent to relate information with some guiding questions (May, 2019; Revollo Fernández & Sáenz-Arroyo, 2012). This style of interviewing also allows for the interviewer to have a conversation with the respondent, which leads to more information about the topic in question than straightforward questioning. Some of the shrimpers were in a hurry to get back out on the water and as such, were only able to provide 10-15 minutes of their time.

There were 15 respondents each from Palacios and the Port Isabel/Brownsville area who participated in a recorded interview. Respondents included a mix of owner-operators (both owned the boats and were captains), captains, crew members, and others related to shrimping industry to capture a holistic picture of how each has adapted and how adaptations themselves have changed over time. Before interviews could begin participants had a chance to read through the consent form (Appendix A); if they were unable to read the consent form was read to them either by myself or the town guide who volunteered to be witness to the interviews. The interviewer used an interview guide (Appendix B) designed with questions that addressed both RQ 1 & 2. These questions fell into the broad categories of:

- **Introductory Questions:** Used to get the respondents comfortable with the interview process and to establish some baseline information such as age, time in the industry, and position.
- **Questions about fishing gear and safety:** Focused on how gears changed for seasons and species, but also to capture if the shrimpers were specialists that only worked for a certain season.
- **Questions about fishing structure in town:** Specifically asking about women's participation and other aspects of fishing that might have changed such as shark fishing.

- Policies and laws questions: Used to understand if the respondents had any knowledge about policies that might affect their livelihoods.
- NGOs and universities work: Used to understand if any non-profits, universities, or government institutions were working with the fishers or in the towns.

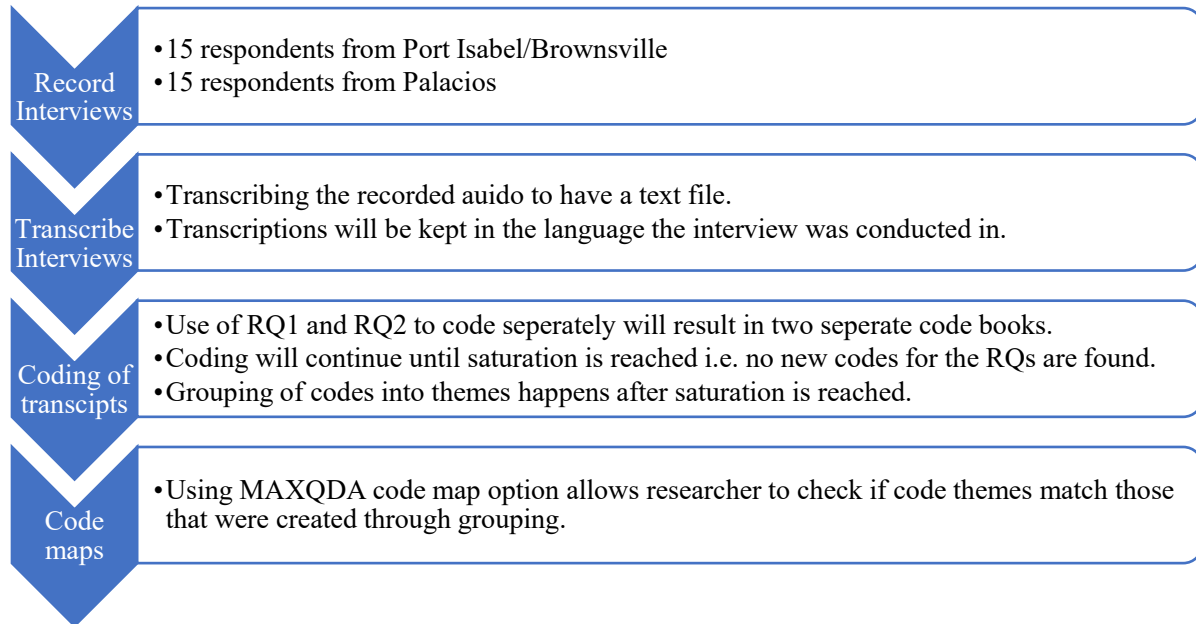
All interviews were recorded using an Olympus handheld recorder then uploaded as audio files into MAXQDA software where they were transcribed. Interviews for this case study were a mix of English and Spanish. Where appropriate interviews were transcribed in Spanish to ensure that each respondent's voice and tone came through. Selected segments discussed in the results section are translated into English.

3.3.2 Qualitative Coding

MAXQDA was also used to organize and code the transcripts. Codes are words or phrases that capture an attribute that is being studied (Saldana, 2008), it is the raw unit of data for this study. All transcribing was done in MAXQDA's interface with each interview recording becoming its own pdf document (Rädiker & Kuckartz, 2020).

The coding sequencing process, shown in Figure 15, contains the basic steps followed for each interview. A blended coding approach was used that featured both inductive coding that creates emergent codes (codes emerged from the interviews) and deductive coding (using the research questions to guide what codes were produced). Inductive coding was conducted in the initial phase when trying to understand what the respondents were saying, deductive coding was conducted in the second phase where the research questions were answered. Once codes were finalized through saturation of data - no new codes were appearing for either RQ1 or RQ2 - a code matrix was created. Each research question has a code matrix (Appendix C and D) that shows how codes are compared in each town.

Figure 15
Semi-Structured Interview Process for Case Study 2



Note. The process of data collection and subsequent coding of the interviews for RQ1 and RQ2.

3.3.3 Timeline

A timeline of federal and state policies that would have affected the Gulf shrimp fleet was constructed. Criteria for what policies were included were:

- Federal fishing laws
- Amendments to federal fishing laws
- State fishing laws
- Amendments to state fishing laws

The timeline was adapted from Espinosa-Romero's (2020) and Alcalá's (2003) timelines. These same policies along with government organizations and university reports from programs working with the fishing communities were used for the content analysis used to answer RQ3.

3.3.4 Code Mapping

Code mapping is an assessment of which codes appeared the most at the different interfaces. This allows for coding between interviews to see if certain themes emerged. Coding between the sites allows examination of similar themes between the communities and which are different. The differences build a picture of why one community is receiving more aid or has had an easier time with the livelihood transitions. Code proximal mapping was used for both RQ1 and RQ2.

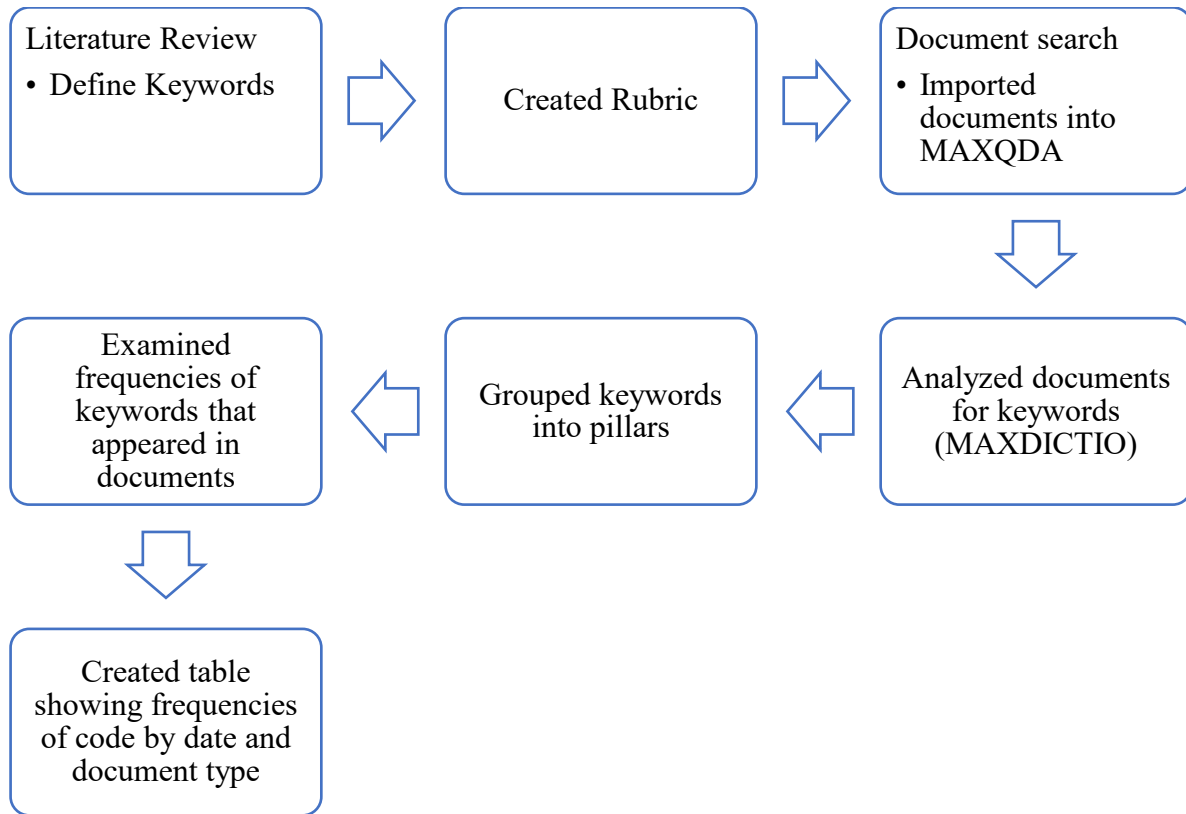
3.3.5 Content Analysis

For RQ3, which looks at adaptive co-management language within fishing policy and reports, Krippendorff's (1989) classic content analysis process was used. This type of analysis follows a 6-step process described below:

- Design: Creation of RQ3.
- Unitizing: Using the rubric with criteria to identify policies that will be analyzed.
- Sampling: The policies and reports that will be analyzed.
- Coding: Using the criteria and existing themes from RQ 1 and RQ 2 to help find themes in the policies.
- Drawing Inferences: How the themes that arise from the codes answer RQ3.
- Validation: Cross-referencing the themes from RQ1 and RQ2 with those of RQ3 and comparing the results to accept or reject the project hypothesis.

A modified version of the aforementioned steps is shown in Figure 6. This is how the process was carried out in MAXQDA.

Figure 16
Modified Content Analysis.



3.3.6 Analysis Integration Procedures

The final step in the analysis of both the quantitative (QUAN) and qualitative (QUAL) data is to find points of convergence. This was completed through an integration of the separate results using a modified joint-display. This type of integration allows for a robust understanding of the data sets than can be shown from individual analysis (Creswell & Plano Clark, 2011; Van Scoy et al., 2018). Displaying the resulting themes for the interviews (QUAL) separated by research question and the resulting themes and percentages of each subtheme from the content analysis (QUAN) for RQ3. Modifying a traditional joint display table allowed for both converging themes as well as diverging themes to be displayed. The integration and interpretation were grouped with the discussion to synthesize the results in a more complete way.

3.4 Results

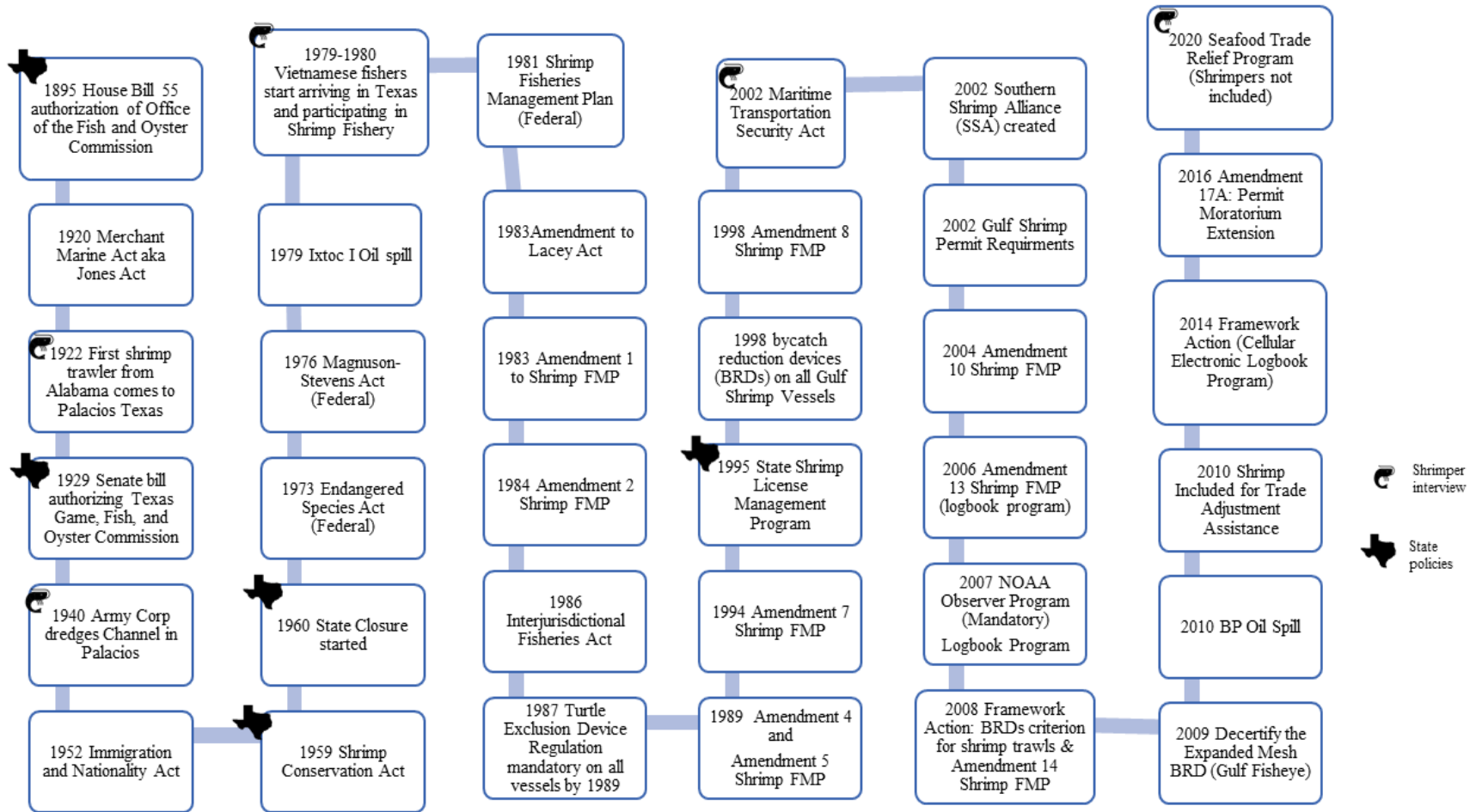
3.4.1 Timeline

The timeline for the Texas Gulf shrimping fleet, Figure 17, was created using information gathered from Texas Sea Grant, National Sea Grant Law Center, and interviews. To visually differentiate between state-wide important events and those described by the shrimp industry a Texas symbol and a shrimp symbol were used. If there was no icon on the box, then the event is a federally important one. Even though it did not specifically mention shrimp, House Bill 55 (1895) which created the Office of the Fish and Oyster Commission, did create broad oversight for marine life (Gammel & Simmons, 1899). In fact, it was not until about 1959 that Texas started regulating shrimp specifically.

The timeline mentions several important policies and events that were kept out of the Content Analysis because while they gave details as to how the Gulf shrimp industry was created and shaped over the years, these documents/events did not mention working with shrimpers specifically. There are certain laws and policies that were included because they were specifically mentioned by shrimpers as having affected their lives (for example, the 1920 Jones Act and the 1983 Amendment to the Lacey Act). Specifics on which Shrimp Fisheries Management Plan (FMP) answered RQ 3 are discussed later in this section.

The most talked about event which rocked the industry was the adoption of Turtle Excluder Devices (TEDs) followed by the H2B visa worker permits. The latter does not appear on the timeline because a specific date could not be found for when the industry started having issues getting permit workers. Codes pertaining to both TEDs and H2B visa permits can be found in the RQ1 and RQ 2 results on the following pages.

Figure 17
Timeline of Events and Policy Case Study 2



Note. Showing events that were considered significant to the shrimp industry by shrimpers and the Texas Sea Grant agents. The icon of Texas denotes a state event while the shrimp denotes an event specifically mentioned by the shrimping community

3.4.2 Codebook

Table 16. Codebook for RQ1 Case Study 2

| Code System | Description of Code | Frequency |
|--------------------------------|---|------------------|
| Faith | A greater power that allows the shrimpers to stay in business or keeps them safe. | 2 |
| Creating relationships | Creating and maintaining relationships with others in the industry to help one another out. | 4 |
| Setting a standard | When the person talked about setting a standard whether it was for their business model or how they treated people. This was an important concept to them. | 5 |
| Many hats | You aren't just one assigned job you need to be able to wear many hats. | 8 |
| Aging fleet | Quite literally because of cost of building new boats the fleet is aging. Boats running now were made bewtween1960-1990's. | 9 |
| Always learning | The jobs are not fixed, and new skills must be learned. | 9 |
| Longer workdays | Price of fuel and expenses have increased so now to make the same or more money crews have to go out for longer periods of time. | 10 |
| Sense of community | A lot of "back in the day talk" is about how the community would come help with the shrimping for example heading shrimp dockside was a community wide event. | 10 |
| Move to where the shrimp is at | Fishing in waters outside of Texas or for species that they don't usually fish for example fishing in Florida (pink shrimp) because of low fishing in Texas. | 14 |
| Older workforce | Could also be called "aging of the fleet". Captains that are legally allowed to operate the boats are older men. | 15 |
| Skilled workforce | It takes a lot of skill to work in the shrimping industry. Much like any other trade there is an apprenticeship stage. | 15 |
| Local workforce | Use local (American Citizens) people to work the boats. | 18 |
| Selling out | Mass selling of boats and people wanting to leave the industry. | 19 |
| Family | Communicating or interacting with their family is important for shrimpers who are out for an average of 45 days at sea. It is also a major driver for getting into the family business. | 20 |
| Lack of adequate help | Lack of a steady and dependable workforce leads to some boats being grounded during the peak of the season. | 23 |
| H2B visa workers | To combat the issues of labor force being scarce the industry started using H2B visa workers back in the 1990's. | 25 |
| Is it worth it? | Cost vs benefits of making the decisions that are made because of the ups and downs in the industry. | 25 |
| Code System Total | | 231 |

Table 16 shows the Codebook for RQ1 along with the code descriptions and the number of times they appeared. This is for both the Port Isabel/ Brownsville and Palacios locations. Codes that were most mentioned for both sites were *H2B Visa Workers* (a subcode of *Skilled Workforce*), *Is it Worth it?* and *Lack of Adequate Help*. These codes also coincide with some major timeline events as well, which illustrates just how impacted the shrimp industry felt when certain events occurred.

Table 17. Codebook for RQ 2 Case Study 2

| Code System | Description of Code | Frequency |
|---------------------------------------|---|------------------|
| Agreement with organization | Agree with certain policies or rules that organizations have put forth. | 14 |
| Too many regulations | Either mentioned that there are too many regulations or alluded to there being too many rules on shrimping. | 6 |
| Certain things not allowed | Mentioned the things that were once allowed but are no longer. This differs from "too many regulations" in that they might not mention a specific rule or policy. | 9 |
| Influence on their wages | Some policies have indirectly impacted earnings. | 3 |
| Distrust in established organizations | Any organizations that exist to benefit (help or advocate) or work with the industry and the shrimpers are distrustful of them. | 18 |
| Code System Total | | 50 |

Table 17 shows the codebook for RQ2 along with the code descriptions and number of times they appeared. Just like the codebook for RQ1 these frequencies were for both Port Isabel/ Brownsville and Palacios. Since RQ2 focused on individuals chose to or not describe how different organizations such as NGOs or government agencies impacted their livelihoods this set of codes appeared less frequently than those of RQ1.

3.4.3 Research Question 1 Results

All codes for RQ1 focused on how the shrimp industry perceived the adaptations they had employed during the different events that they felt had impacted their livelihoods. Once all the

interviews had been coded for RQ1 a second coding process was started to group the emergent codes into themes. Groupings were created if a pattern was apparent for example *Skilled Workforce* and *H2B Visa Workers* both emerged when talking about the future of the shrimping industry there was a sense of hope amidst the negative things that were said. These codes were then grouped together under the theme *Last Hope*. This section shows will look at themes that were created from this second coding process.

Nostalgia is a theme encompassed the codes *Aging Fleet*, *Faith*, *Family*, *Older Workforce*, and *Sense of Community*. Examples of what the respondents' said for each of the codes can be found in Table 18. These codes came together because they all had captured a nostalgic view of what the shrimping industry was once upon a time. The code *Aging fleet* speaks of an aging fleet due to market pressures. Boats operating now were made between 1960-1990's as described in nine out of the 30 interviews. It was primarily maintenance workers and owners that described this problem. Owners cannot keep up with rising cost of building a new boat and so they choose to work on their existing boats or purchase boats from those that are selling out or leaving the industry. This is consistent with previous work examining the industry which revealed that several events – such as a banking crisis in the 1980's and the rise in cost of production – contributed to the inflated boat costs, leading to some of the vessels in both sites to be around 50 years old (Anderson et al., 2004; Blomo, 1981; Haby et al., 2001). Additionally, shrimp trawlers are constantly needing to be refurbished so that they can keep up with the safety codes enforced by the US Coast Guard, this also contributes to the cost of boat maintenance.

The code of *Faith* was a surprise in that there was not mention of this type of guiding *Faith* in any of the other interviews. Optimism was outright stated in one other interview but not in the same capacity or paired with this idea of faith. Chapter 5, a comparison of codes and themes is

done across case studies as this code was also present in the Yucatan small-scale fisheries. Another code that emerged when *Faith* was mentioned was *Family* which occurred in one of two ways; shrimpers stated that they missed their families or that their families were driving forces for why they chose to shrimp, or sons talked about how they were taking over the family business. There was a difference between shrimpers talking about how their fathers would bring them along when they were younger in an almost nostalgic way and how the sons of owners saw taking over the family business as a duty. Many had left other careers to help their fathers manage the business due to health or age. This code was also accompanied by both shrimpers and owners saying that they would not want their children to continue in the business. This idea of shrimping not being a profitable industry - or “too hard” as one shrimper put- was also present (Anderson et al., 2004).

With this common theme of *Nostalgia* there is the code *Older Workforce* that speaks to the phenomena of greying of the fleet. Greying of the fleet is a term describing how the average age of a commercial fishermen is increasing partly because of the lack of younger people coming into the industry (Cramer et al., 2018). Both communities have experienced both a greying of the workforce and of the actual fleet (*Aging Fleet*). During the time that these interviews were conducted there was also the added stressor of the COVID-19 pandemic and some respondents had lost friends in the industry due to the disease. This *Older Workforce* combined with the *Aging of the Fleet* is causing - in the eyes of some in the industry - another shrinking down process.

The last code in the *Nostalgia* theme is *Sense of Community*. Both Port Isabel/Brownsville and Palacios were towns built around shrimping. Several interviewees spoke about how shrimping in the 1950s through about the 1980s carried the economy of both places. Many shrimpers in both towns described Port Isabel as the Shrimp Capital of the World and of a time when, because boats were smaller and used ice, the crew could not head (shrimp are stored without the head on all boats

except for the Vietnamese) all the shrimp before coming to port. The solution to this problem was for communities to come together and help head the shrimp. This was a way for mothers, the elderly, and even children to make money. This was a tradition along the coast and with the advent of freezer boats and regulations, has been done away with. Fishermen in Port Isabel/ Brownsville spoke about this time-period with nostalgia, almost as if they were mourning this community tradition.

Table 18. Examples of theme Nostalgia Case Study 2

| Theme | Code | Port Isabel/Brownsville | Palacios |
|-----------|-------------|---|---|
| Nostalgia | Aging Fleet | Well back in the early 70s a brand-new boat would probably be about a quarter of a million dollars right now it's probably \$1.2-\$1.3 million to build the same boat. You just can't catch enough shrimp to pay that debt. That's why our youngest boat out there is 21 years old. P&B_12: 30 - 30 | So those boats are 21 years old umm and uh you know and you get to a point where you either in a business you either continue to buy new or your kinda stagnate there and uh and so you know you like at that and you look at what your return on something like that and you know you bought a you know a new vessel just like the one that is sitting out there right now you know you're looking at about \$1.3 million now. Pal 15: 6 - 6 |
| | Faith | But I don't like to think of sad times you know I like to continue and I'm a very optimistic person I like to stay optimistic, and I like to work so if God gives me life for many many moons many years we plan to stay in the business you know. Palacios\Pal_15: 6 - 6 | So and then they take it and I say you know Don't gripe just try to do it I mean I say God will manage for you you know I mean yea. It may start losing you know 10% 15% of your you know income but then eventually you will know how to you know things will it seems like it will all work out. Pal_7: 26 - 26 |
| | Family | That's what happens you want the best for your family. And, even if you suffer or struggle you do it so your family doesn't. You want them to have the best so they don't struggle. P&B 5: 68 - 68 | And from there (California) I came here. I came, mija, because my whole family was here (shrimping). My dad, my brothers, and all my uncles. Pal_14: 10 - 10 |

| | | | |
|--|--------------------|--|---|
| | Older Workforce | Every year there's captains you know that I've known every year seems like one or two of them have died got sick or can't go shrimping anymore so yea. P&B_6: 32 - 32 | And that's what we are seeing I think on production now we're seeing older boat owners that are owner/operators and they are getting out of the business and their kids aren't coming in so we are now seeing another shrinking down. Pal 16: 18 - 18 |
| | Sense of Community | Like right over here where the fuels out they used to head they used to take the head off. The women would be and the kids would be in there you know maybe a 100 people in there heading shrimp. P&B_4: 2 - 2 | Well they know that the shrimp industry cashes up even though there is industry they are depending on the shrimp industry to survive if there wasn't any shrimp boat left here Palacios would be a dead town. Palacios\Pal 7: 30 - 30 |

Note. All codes that emerged for the theme Nostalgia with examples from interviews of how each code emerged for both Port Isabel/Brownsville and Palacios. Codes included are Aging Fleet, Faith, Family, Older Workforce, and Sense of Community.

The second theme that will be discussed is *Innovating* which can be found in Table 19. This theme is comprised of the codes *Always Learning*, *Creating Relationships*, *Move to Where the Shrimp is At*, *Setting a Standard*, and *Many Hats*. Shrimpers, much like other fishers are constantly learning because of the volatility of their profession. *Always learning* emerged from their responses to different parts of their jobs that kept them acquiring new skills and outlooks. From the examples in Table 4 it seems that at every stage of the evolving industry, they must adapt to meet the challenges they are facing with rising fuel prices, boat costs rising, and changes such as technology.

Some codes were more prevalent in one town over the other like *Creating Relationships* was seen more in Palacios than in Port Isabel. This could be due to individuals talking about what most resonates with them even though everyone interviewed was asked the same questions. Overall, *Creating Relationships* is something that is important to every shrimp owner's business as well as their crew since on the vessel everyone relies on one another. This code focused on the diverse

ways that shrimping industry creates and maintains relationships as an adaptation to the volatility of the market with imports, the recent COVID-19 pandemic, and even a bad production season. Some of the operations had recently (last 5-7 years) started fishing in Florida as well (a separate code was created for fleet movements) and one maintenance manager stated that they were able to do this because of the relationships they had struck with a company in Florida. Much like *Creating Relationships* the code for *Setting a Standard* was more prevalent in Palacios, in fact it solely emerged in there. Interviews in Palacios were much more about how business was conducted than how the nature of the shrimping industry goes.

The shrimping fleets movements are well known, and the code *Move to Where Shrimp is at* reflects the idea of shrimpers feeling bounded (compared to when they were not bound to a location in the past). As stated in the site descriptions there are permits for every species and for every state if a shrimp boat wants to start shrimping in Florida, because pink shrimp are more profitable, it requires another license more fuel, and a longer trip. *Moving to where the shrimp is at* emerged because the interviews talked of migrations across the Gulf of Mexico. Several individuals mentioned how their great-grandparents or grandparents moved their shrimping operations from Alabama and Louisiana down to Texas to be closer to Mexico because that is where there was better shrimping. Several international and federal policies would later come into play that closed off access to Mexican waters. Two prominent policies that were mentioned were establishing the EEZ in 1983 and the Lacey Act Amendment of 1981. Both policies resulted in restriction to foreign (Mexican) waters and therefore shrimp from access by American shrimping operations.

Shrimpers describe themselves as wearing *Many Hats*, this code emerged from the many jobs that the shrimpers and industry people had to fill because of the lack of workforce. Some companies chose to expand from shrimping into salvage work while others have decided to create

a family business and have called their children back home to work in-house in shrimping. While a lot of the older individuals interviewed remember that they got their start in the business on their father's or a close friend's shrimp boat, a lot of the younger people talked about how they went out for one trip and then were asked to work in the office either as maintenance or business administration.

Table 19. Examples of theme Innovating Case Study 2

| Theme | Code | Port Isabel/Brownsville | Palacios |
|------------|----------------------------|---|--|
| Innovating | Always Learning | Yea, you're always still learning, yea so. So, if you asked me how did I get into it. *chuckles* I was pretty much just pushed into it *laughing* so anyways. P&B 2: 8 - 8 | So, I did that last year and put the bare minimums on each boat to try to get some response back from my captains and also to get a feel of how much fuel they are burning see if it's better form the year before. Pal 10: 14 - 14 |
| | Creating Relationships | We have not had any major breakdowns it's all been a little stuff where you get, we've uh established a little relationship with a company over there where they have their mechanics. P&B_2: 20 - 20 | And even when we started this company here which it was a co-op back in 72-73, I was still in high school my dad and a bunch of fishermen started because they wanted to have control of what to do with their shrimp. Pal_3: 8 - 8 |
| | Move to Where Shrimp is At | So that's probably why the Louisiana fleet started migrating down here so they can fish further down into Mexico. P&B_7: 10 - 10 | It just, more opportunity. You know, bigger catches and just bigger area to you know you have Alabama, Florida, Texas you know up and down. Pal_13: 12 - 12 |
| | Setting a Standard | NA | And then as the years went on a few started doing it, a few started doing it and it just made people mad that we would start in August 15 till through back then it was through December 15th and we'd catch shrimp all the way up till we got a strong northern. Pal 3: 12 - 12 |

| | | | |
|--|-----------|---|---|
| | Many Hats | No, it was. I did not actually. Um it's kinda um if you would have met my boss he woulda been like here __ here you go this is what you are gonna do *laughs*. Yes, a lot of salvage we do well we still do it right but umm we did a lot with ___ (deceased owner) a lot of salvage. Uh salvage work means pulling boats off the beach, sunken boats umm anywhere from building docks I mean anything that had to with uh as far as marine stuff goes we pretty much involved in pretty much everything. (So you know a lot). P&B 2: 8 - 8 | And so I'd do anything from maintenance, production, um you know licensing. Anything that we'd need for the boat. Pal_12: 12 - 12 |
|--|-----------|---|---|

Note. All codes that emerged for the theme Innovation with examples from interviews of how each code emerged for both Port Isabel/Brownsville and Palacios. Codes included are Always Learning, Creating Relationships, Move to Where the Shrimp is At, Setting a Standard, and Many Hats. Setting a Standard only emerged in Palacios.

Along with *Nostalgia* many of the respondents spoke with a sense of *Frustration*. The codes that emerged and were later grouped into this theme can be found in Table 20. Codes that fall under the theme of *Frustration* are: *Is it Worth it?*, *Lack of Adequate Help*, *Local Work*, *Longer Workdays*, and *Selling Out*.

The code *Is it worth it?* emerged in many ways when interviewees spoke about different events that changed the industry when it comes to costs and benefits. Everyone talked about a different aspect that have does not add up for them. To some it is the simply the costs of fuel when compared to trip duration and production. Others do not see the industry as providing a stable job environment for future generations. Yet, with all the ways that this code emerged and all the negative things that shrimpers and owners had to say about the industry, many have chosen to stay.

Is it worth it? also signifies that these people find something other than the money that keeps them in the business.

A continuing problem that was mentioned in almost every interview was the lack of people to work a continuous season, or as coded *Lack of adequate help*. Many captains talked of having to come back to port and change out crews or having to cut a trip short because they took out inexperienced headers (called *green-horns*) and it did not work out. With production (amount of shrimp being caught) high and the 2019-2020 year being difficult because of COVID it seems that this problem was exacerbated. However, finding crew outside of the H2B visa program (which became a code of its own) has become increasingly difficult. Within the shrimping industry from Palacios down to Port Isabel there are two types of workforces to pull from; H2Bvisas (discussed later) and a *Local Workforce*. Up until the 1980s (according to one shrimper) local high school kids and college students, during the summer, would be the main source for headers and then they could climb up the ranks (discussed later in *Skilled Workers*). When talking about pulling from the local population there was mention of drug use and the lack of young people coming into the industry as shrimpers. The need for crew leaves boats docked for an entire season.

Shrimpers have seen several adaptations one which was notable was the mention of switching from ice to refrigeration which led to *Longer Workdays*. Until about the late 1970s (from interviews) trips were on average 15 days on the water. Before the 1970's boats would use ice to keep shrimp fresh (about 10 days) these were called *ice boats* (Holland & McGrath-Avery, 2020). With ice boats, crews could not keep shrimp fresh long enough which led the industry to switch to freezer boats. As fuel costs rose boats had to be at sea longer to catch more shrimp to even out costs (Blomo, 1981). During the 1980s with the drop in shrimp prices, rise in fuel prices, and rise in other production costs, life was hard for the shrimp industry. These events - along with the

enforcement of the Lacey Act Amendment of 1981, and then in the 1990s, the proliferation of imported shrimp- led to a lot of owners selling out of the industry. Some consolidated their fleets and others got out altogether. This selling and leaving the industry was how *Selling Out* emerged.

Table 20. Examples of theme Frustration Case Study 2

| Theme | Code | Port Isabel/Brownsville | Palacios |
|-------------|-----------------------|---|--|
| Frustration | Is it Worth it? | So, um you gotta kinda think about all that is it worth it if you have a major breakdown um you know how many boxes of shrimp are you catching, you know what I mean. P&B_2: 18 - 18 | But then with all of that then the rising cost of supplies continue to go up and if you look at the commodity price of uh shrimp it has stayed fairly flat if you look at it over the last really 30 years. Pal_15: 4 - 4 |
| | Lack of Adequate Help | We had two boats tied up. Two boats didn't have a crew at all. The other ones just went with one header so yes the production was a little bit lower than what normally when we get our workers here. P&B 3: 30 - 30 | Changes like to the industry um I think the crew is the most the thing that changed. We don't have the crew like we used to have. Pal_7: 24 - 24 |
| | Local Work | They didn't want to come help at the dock. They just want to come jump on the boat, Is the boat ready? Yea the boats ready but they don't want to come help get it ready. It's just me and the rigman who is here because he's a permit worker. The other guys that have papers. P&B_6: 34 - 34 | I mean so we're constantly trying to I say get more help local help whatever uh to fish these boats year-round, but we don't have any luck with that and even if we do they maybe they will only be on there for one trip and they won't even make a trip sometimes. Pal_15: 14 - 14 |

| | | | |
|--|-----------------|---|--|
| | Longer Workdays | I mean know we have freezer boats back then it was ice boats which was better because you come home every 2 to 3 weeks. Now you gotta spend 40 to 50 days out there. P&B 8: 8 - 8 | Oh no not as long as the American or Hispanic boat um. I remember back then my longest trip is 34 days. But mostly like about month 3 weeks. Pal_6: 16 - 16 |
| | Selling Out | It probably was right after that when these boats started you know yea people just started selling boats. P&B_3: 18 - 18 | Yea, yes mhmm and then that will be their retirement (selling the boat) yes. None of them nobody have no you know 401k or anything like that. The boat is their 401k. Mhmm. Yea so. Pal 7: 6 - 6 |

Note. All codes that emerged for the theme Frustration with examples from interviews of how each code emerged for both Port Isabel/Brownsville and Palacios. Codes included are Is it Worth it?, Lack of Adequate Help, Local Workforce, Longer Workdays, and Selling Out.

The last theme for RQ1 is *Last Hope* (Table 21). Two codes emerged that were grouped together to create this theme and they were *H2B Visa Workers* and *Skilled Workforce*. Both codes speak to the need for there to be a skilled workforce to continue the industry. With the emergence of *Lack of Adequate Help* and *Skilled Workforce* there also appeared the reliance on H2B visa workers. This code brought forth how deeply troubled the industry is. Covid-19 brought on a freeze on travel and recent regulations, such as taking away the “exemption status” for returning workers (Arcury et al., 2013; Griffith, 2020), have made getting H2B visas difficult since visas depend on a lottery system. For a while, the industry lost their exemption status (interviews) which made it harder for crews that had been working together for the last couple of years to come back. *Skilled Workforce* emerged as a code because interviewees described a hierarchy within the crews, as well as a long history of shrimping being an occupation that allows for a crew to climb the hierarchy. Shrimping is not just about hauling in bags of shrimp. Crews must work together and in close quarters for up to 50 days at a time and the hours are long since shrimping happens at night. This

code is an important shift for how fishers, or shrimpers in this case, are perceived. These crews must depend on one another and trust in each other's skills for a trip to be safe and productive.

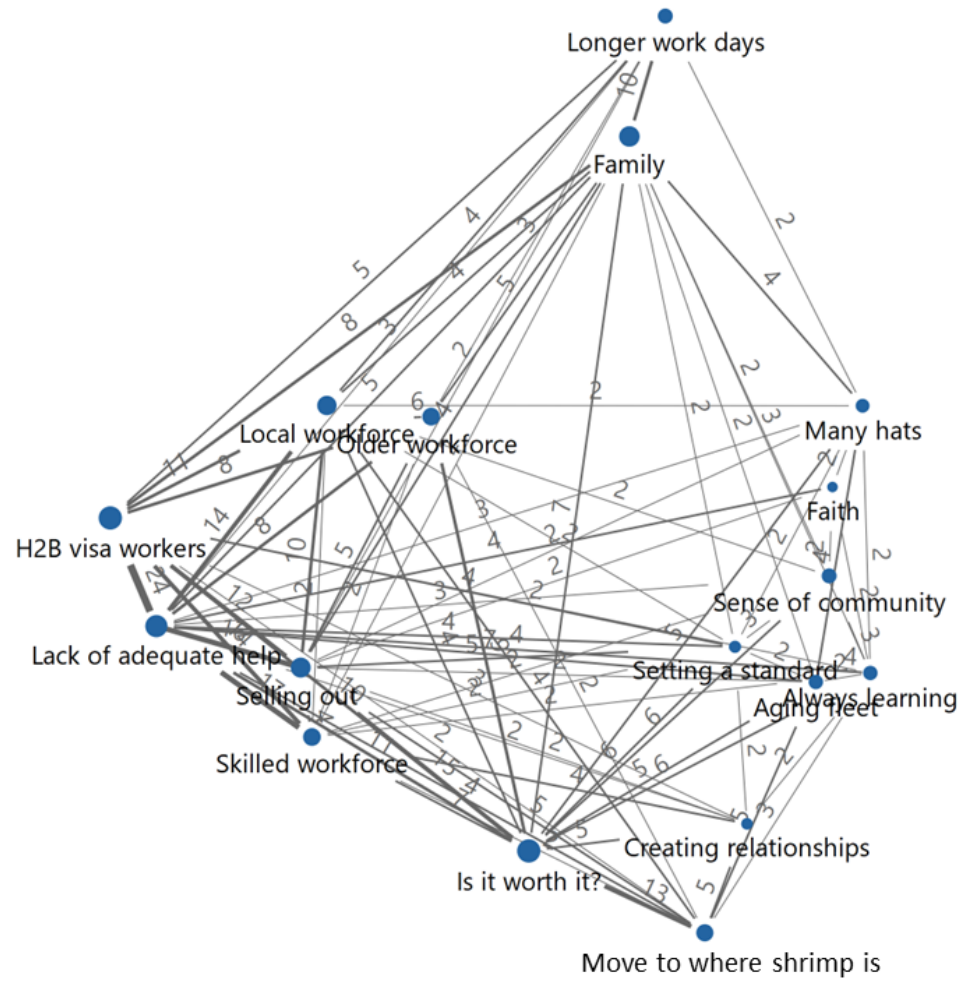
Table 21. Examples of theme Last Hope Case Study 2

| Theme | Code | Port Isabel/Brownsville | Palacios |
|-----------|-------------------|---|--|
| Last Hope | H2B Visa Workers | Yes. Like right now oh you mean like the H2B workers yea they start getting their relatives they'll bring the brothers or the nephew. Even some of them they want to bring their kids they want to bring their sons to come work in the industry P&B_3: 58 - 58 | Like we applied and go our permits the guys would come over it was never an issue um these last, I'll say these last 5 -7 years it's been extremely difficult. Pal_15: 14 - 14 |
| | Skilled Workforce | I told ___ we have to advertise every year so this year I had 150 applicants. 150 for 16 positions of headers. 150 one qualified. P&B 3: 22 - 22 | Everyone starts as a header, and they start climbing up to rigman and then captain. It's like a ladder. Pal_8: 88 - 88 |

Note. The two codes that emerged for the theme Last Hope with examples from interviews of how each code emerged for both Port Isabel/Brownsville and Palacios. Codes included are H2B Visa Workers and Skilled Workforce.

Figure 18 is the code map for the combined codes of RQ1. Code maps show how codes are related or unrelated to each other. The bigger the circle the more times a code appeared. The thicker the lines the more closely related codes are to each other. A code relating to another one does not mean that they were similar just that they were closely mentioned to one another. For RQ1 *H2B Visa Workers* was the most mentioned code as shown in Table 6 and strongly related to *Local Workforce*, *Lack of Adequate Help*, *Skilled Workforce* and *Is it Worth It?*. Given that interviews took place in Spring 2021-Summer 2021 during the COVID-19 pandemic and the travel restrictions, it makes sense that all these codes would emerge. It must be noted that in June of 2021 there was a returning worker exemption bill proposed H.R.3897-H-2B Returning Worker Exception Act of 2021 (Cuellar, 2021) but, at the time of writing, it has not been passed yet.

Figure 18
Code Map RQ 1



3.4.4 Research Question 2 Results

The following section explores the emergent codes for RQ2 which focused on how communities can or cannot explain the impacts or relationships with organizations. In the case of commercial shrimpers these organizations would be NOAA/NMFS, Texas Sea Grant, the US Coast Guard, Texas Parks and Wildlife, Texas Shrimp Alliance, and Southern Shrimp Alliance (the most mentioned organizations in interviews). Shrimpers were asked what groups or organizations they had dealt with the most and in what ways. Given that this is in their own words it was decided that organization was the best way to summarize federal and state entities as well as NGOs and lobbying groups. The organization which has had the most face time with the shrimping industry has been Texas Sea Grant which is part of the National Sea Grant College Program created by the National Sea Grant College Program Act of 1966 as a marine partner to the land-grant College System (National Academies, 1994). In the two communities studied the presence of Sea Grant was noted with several of the older owners naming two particular agents that had at one point or another also been part of the shrimping fleet. The scope of the interviews was not to determine Sea Grant's worth to the communities, but it was a topic that emerged several times.

Themes and codes for RQ2 were combined into one table (Table 22) because of the number of codes and themes present. The first theme shown is *Frustration* and the last theme with only one code is *Nostalgia*. There were many things that those interviewed agreed about when it came to how these different organizations impacted their livelihoods. This *Agreement with Organization* code ranged from seeing the relevance of a TEDs to how these organizations have helped keep certain imports from flooding the market. The code *Distrust in established organizations* emerged from the discord that was felt by many shrimpers and owners about things such as TEDs, BRDs,

and imports; Although there was an agreement on certain aspects of these policies, there was much distrust about how things came along. Many felt that they were forced into having to purchase TEDs and BRDs to continue shrimping. *Distrust in established organizations* shows that a lot of the help provided to the industry is reactionary to regulations implemented without their input.

Several of these organizations were felt to have a direct or indirect influence on the wages or earnings of the shrimp industry. Many felt that the costs of installing and maintaining TEDs was too costly for them. There was also talk about financing of boats and the cost of labor. *Too many regulations* were stated several times by other codes that the industry feels like there are too many regulations to stipulate how, when, and where shrimpers can fish. Even though there are no catch limits to put a cap on production, the shrimpers are capped by how they can perform their jobs.

With all the changes that the industry has faced since the late 1970s there were many mentions of things that were once allowed but through regulations or market changes are not anymore. For example, it was common for shrimpers to bring in a portion of their by-catch and share with the community. Now, by-catch is regulated (another code) and it cannot be taken off the boat when it docks. Another mention was of how permitting used to be easier but because of the different permitting restrictions it has become harder to navigate.

Table 22. Examples of RQ 2 theme Frustration Case Study 2

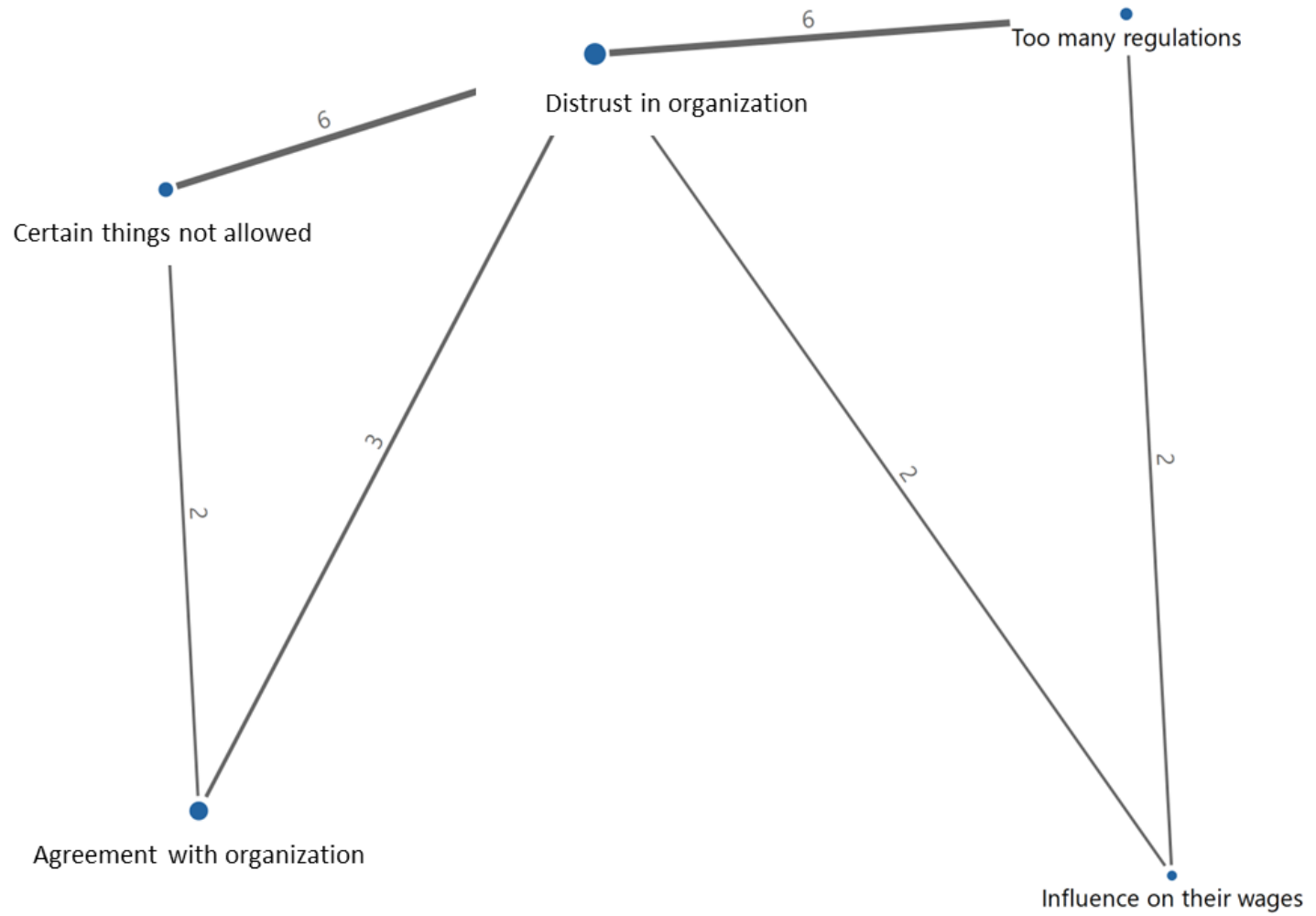
| Theme | Code | Port Isabel/Brownsville | Palacios |
|-------------|-----------------------------|--|--|
| Frustration | Agreement With Organization | And I do notice too like you (looks at Sea Grant Agent) were telling us about the TEDs well when we pick up we see the fishes come out. Pal_8: 88 - 88 | You know it's not they want to put you out of business it's just that they want to you know find a way to preserve and you know um having you know closure on this day and that day is to you know help the industry sustainable. Pal 7: 26 - 26 |

| | | | |
|--|--------------------------------------|---|---|
| | Distrust In Established Organization | Yes and that's why I've been having to fight now because she said she they would fix it over there and those at the Texas PAC did no such thing. P&B_1: 7 - 7 | So it's a combination because they're trying to certify the gulf you know there' pressure from that side and then you have other NGO's trying to you know it's difficult um because then you have costumers that want you to participate and it's I mean it's business. So there are people that are truly friends of the industry and there are people that want to manipulate the industry Pal_16: 12 - 12 |
| | Influence On Wages | Yes it did (dropped) yea. Yes. But the department of labor is what tells us what the starting prevailing wage is. Yes we have to go through the department of labor. P&B_3: 24 - 24 | The TEDs *chuckles* That was the worst law I mean you know for us. Very expensive just you know it's like when TEDs started it was just like one regulation after the other. Yea, you know it was the TEDs and its the BYRD and the by-catch and the you know all that stuff cost a lot of money to keep. You know each one of those TEDs you're looking probably 500 bucks. Pal 13: 52 - 52 |
| | Too Many Regulations | Too many. (about 1300) You can't even like lets say the coast guard comes brings in a boat for whatever reason if they don't follow or something is not complete or they have an expired um document on board ect about 4-5 years ago I went on the docks because I get there information because I have to do my monthly reports to Texas Parks and Wildlife you know the count the price etc.. P&B_3: 50 - 50 | Yea, and there's so many more regulations on the vessels when you build a boat. I don't even know if you could actually, well they're very expensive and there's a lot of regulations on them. Coast guard regulations. I think they are trying to put the you know basically the coast guard would like it where our boats would be like a ship or something where you'd be under the same laws like that. Pal_13: 52 - 52 |

| | | | |
|-----------|----------------------------|--|--|
| Nostalgia | Certain things not allowed | We had them pretty much depleted and federal government changed the laws and protections and now sharks are everywhere. P&B_6: 22 - 22 | No, you just needed a bay license for the bay gulf license for the gulf that was it. Like, when I would go to Louisiana back in the 70s (1970) whenever I would want to work I would be on my boat just run into Cameron and get a license at a grocery store. Now you have. Everything has changed it's a lot of paperwork. And well you know Texas is limited there's no more license you can't. Pal 13: 14 - 14 |
|-----------|----------------------------|--|--|

The code map for RQ2 (Figure 19) shows that *Distrust in Established Organizations* and *Certain Things Not Allowed* were the closest to each other, meaning that when those interviewed were asked about how they described their relationship with these organizations they brought these two points up together. Even though there were many mentions of *Too Many Regulations* it seems that it is the distrust that the regulations engender that are what the shrimpers most perceive.

Figure 19
Code Map RQ 2



3.4.5 Research Question 3 Results

This section contains the results from the content analysis of the policies that affect the commercial shrimp fishery. Policies were chosen based on which had impacts on the shrimp fishery directly. Therefore, some policies listed in the timeline (Figure 17) were omitted but will be discussed in later sections. For the content analysis, the Magnuson-Stevens Amendment of 2007 (MSFCMA) and several of the Shrimp Fishery Management Plan Amendments (Shrimp FMP) were analyzed. After talking with the commercial fleet owners and shrimpers as well as the Texas Sea Grant agents, the documents in Table 23 were selected.

Table 23. Documents chosen for Content Analysis Case Study 2.

| Document name | Year | Type of document |
|---|-------------|-------------------------|
| Shrimp Fishery Management Plan | 1981 | Fishery Management Plan |
| Texas Shrimp Fishery Management Plan | 1989 | Fishery Management Plan |
| Texas Shrimp Conservation Act | 1959 | Law |
| The Shrimp License Management Program (SenateBill750) | 1995 | Law |
| Reef Fish Management Plan | 1984 | Fishery Management Plan |
| Magnuson-Stevens Act Amendments | 2007 | Law |
| Final RF Amend 27- Shrimp Amend 14 | 2007 | Fishery Management Plan |
| Shrimp ELB Abbreviated Framework | 2013 | Framework |
| Final-Shrimp-Amendment-17A | 2016 | Fishery Management Plan |
| Final-Shrimp-Amendment-17B | 2017 | Fishery Management Plan |
| Final-Shrimp-Amendment-18 | 2019 | Fishery Management Plan |
| SHRIMP Amend-01&02 | 1981 | Fishery Management Plan |
| SHRIMP Amend-04 | 1988 | Fishery Management Plan |
| Shrimp-Amendment-5 | 1991 | Fishery Management Plan |

| | | |
|-----------------------|------|-------------------------|
| Shrimp-Amendment-7 | 1994 | Fishery Management Plan |
| Shrimp-Amendment-8 | 1994 | Fishery Management Plan |
| Shrimp-Amendment-9 | 1997 | Fishery Management Plan |
| Shrimp-Amendment-10 | 2002 | Fishery Management Plan |
| Shrimp-Amendment-13 | 2005 | Fishery Management Plan |
| TED Compliance Policy | 2016 | Manual |

There were 21 documents selected and of these 19 contained the themes from the adaptive co-management rubric. Broad themes from the rubric were selected and then each document was examined to see if there were specific words that identified the themes. A list of these words was compiled (Figure 20) and color coded to coordinate with the rubric themes *Presence of Feedback Mechanism*, *Presence of Local Responsibility Supported by Government*, *Presence of engagement between Government and Communities*, and *Presence of Local Empowerment*. Of the possible 20 words listed that indicated the presence of the themes only 12 were found in the documents. *Presence of Local Empowerment* was not identified with any possible word choices which is why it remains blank. This could be a possible place for agencies like Sea Grant to investigate a way to better aid the shrimping community.

Figure 20
Pillars of Adaptive Co-Management

Presence of Feedback Mechanism

- Comment
- Commentary Period
- Feedback
- Public Comment
- Public Commentary
- Public Commentary Period
- Public Hearing
- Public Review
- Written Comment

Presence of Local Responsibility Supported by Government

- Cooperation
- Partnership
- Funding Source
- Learning By Doing
- Shared Interests

Presence of Engagement between Government and Communities

- Educational Program
- Interviews
- Inclusion
- Workshops
- Education
- Fishery Engagement

Presence of Local Empowerment (NA)

Note. List of words used to in the Content Analysis and which theme they fell under.

The content analysis showed presence (1) or absence (0) of the theme mentioned above for each document that contained the list of words in Figure 20. Table 24 shows these results in full. The theme that was most prevalent was *Presence of Engagement between Government and Communities* with 16 of the 19 documents considered in the analysis containing the keywords associated with this theme. MSA was the founding document for creating the fisheries councils and the different fisheries management plans (FMPs) with one of the goals being that there be

public participation in these councils and in creating the FMPs (Fisheries, 2007). It follows that the subsequent shrimp FMP amendments would also use this theme. These documents also contained the theme *Presence of Feedback Mechanism*. Given that the FMPs allow for public commentary and review this is unsurprising. The breakdown of each of the themes and their subthemes along with examples of how these were found in the documents is in Table 25.

Table 24. Content Analysis Presence/Absence and Document type Case Study 2

| Document Name | Year | Type of Document | Presence of Feedback Mechanism | Presence of Local Responsibility Supported by Government | Presence of Engagement between Government and Communities | Presence of Local Empowerment |
|-----------------------------|------|------------------|--------------------------------|--|---|-------------------------------|
| SFMP | 1981 | FMP | 1 | 1 | 1 | 0 |
| SFMP | 1989 | FMP | 1 | 1 | 1 | 0 |
| TX SCA | 1959 | Law | 0 | 1 | 0 | 0 |
| Senate Bill 750 | 1995 | Law | 0 | 0 | 0 | 0 |
| RFMP | 1984 | FMP | 1 | 1 | 1 | 0 |
| MSA | 2007 | Law | 1 | 1 | 1 | 0 |
| RF Amend 27 Shrimp Amend 14 | 2007 | FMP | 1 | 1 | 1 | 0 |
| SELB Framework | 2013 | Framework | 0 | 0 | 1 | 0 |
| SFMP Amend17A | 2016 | FMP | 1 | 0 | 1 | 0 |
| SFMP Amend17B | 2017 | FMP | 1 | 0 | 1 | |
| SFMP Amend 18 | 2019 | FMP | 1 | 0 | 1 | 0 |
| SFMP 1&2 | 1981 | FMP | 0 | 0 | 1 | 0 |
| SFMP Amend 5 | 1991 | FMP | 0 | 0 | 1 | 0 |
| SFMP Amend 7 | 1994 | FMP | 1 | 0 | 1 | 0 |
| SFMP Amend 8 | 1994 | FMP | 1 | 0 | 1 | 0 |
| SFMP 9 | 1997 | FMP | 1 | 1 | 1 | 0 |
| SFMP Amend 10 | 2002 | FMP | 1 | 1 | 0 | 0 |
| SFMP Amend 13 | 2005 | FMP | 1 | 1 | 1 | 0 |
| TED Compliance | 2016 | Manual | 0 | 0 | 1 | 0 |

Note. Content Analysis presence of themes showing the document levels and type of document.

Table 25. Pillars and sub-themes of Adaptive Co-Management Case Study 2

| Themes | Sub-themes | n | % | Examples |
|---|------------------------------------|-----|--------|--|
| Presence of Feedback Mechanism | Knowledge Sharing | 79 | 13.39% | A fishery closure due to poor TED compliance is a last-resort management action, and one that would occur only after education/outreach and enforcement activities failed to remedy the situation (TED Compliance, 2016). |
| | Working Relationship | 54 | 9.15% | PUBLIC PARTICIPATION.—The Secretary is authorized and directed, in cooperation with the Council on Environmental Quality and the Councils, to involve the affected public in the development of revised procedures, including workshops or other appropriate means of public involvement. (MSA,2007). |
| | Public Commentary Period | 152 | 25.76% | NMFS would finish writing up the regulatory amendment and submit the document for publication in the Federal Register and ask for public comments (comment period was generally open for 15 to 30 days). (Shrimp FMP Amend 9, 1997). |
| Presence of Local Responsibility Supported by Government | Grant Or Fund Application Process | 2 | 0.34% | Evaluate data collection alternatives essential to successfully rebuilding red snapper, such as: expand logbook program to larger section of the commercial fleet; increase observer coverage (consider coverage level and funding source sub-options); federal permits or licenses; and VMS. (RF Amend 27 & Shrimp Amend 14, 2007). |
| | Public Forum of Communication | 67 | 11.36% | The Council Chairman will also schedule a public hearing before the Council at this meeting or may, at the request of the Management Committee, Schedule several hearings in appropriate locations prior to the Council meeting. (RF FMP, 1984). |
| Presence of Engagement between Government and Communities | Public and Government Partnerships | 108 | 18.31% | The Sea Grant/Novak Venting Tool designed and developed by Florida Sea Grant in cooperation with Mote Marine Laboratory...(RF Amend 27 & Shrimp Amend 14, 2007). |

| | | | | |
|--|-------------------|-----|--------|---|
| | Learning by Doing | 128 | 21.69% | Harvesting Systems personnel provided technical assistance to fisheries managers, training to law enforcement officials, and BRD workshops to commercial fishers. The workshops addressed BRD installation and fishing and handling techniques. (Shrimp FMP Amend 9, 1997). |
|--|-------------------|-----|--------|---|

Note. Themes and subthemes found in the documents along with the percentage each of the subthemes contributed as well as examples of what they looked like in the documents.

3.5 Discussion

3.5.1 Integration

This case study was bounded by looking at specific variables for each research question put forth. To answer RQ 1, shrimping communities were interviewed about their perceptions to changes in the industry and how that had affected them. Using the respondents' words, codes were created to illustrate how their adaptations to these changes were verbalized. To answer RQ2, the same respondents were asked to verbalize how they felt relationships with certain organizations impacted their livelihoods. The same process of coding was used but with the RQ2 parameters in mind. Grouping these codes together when necessary created themes for both research questions that were then compared with the pre-determined themes of RQ3.

A joint display is a visual tool to understand how the different parts of the analysis came together. This was a convergent mixed methods case study which means that both qualitative (interviewing and coding) and quantitative (content analysis) methods were used to gain a deeper understanding of how the shrimp industry has not only changed over time but has responded to the different policy changes that have impacted the livelihoods of these communities. All the themes can be found in Figure 21. When both the qualitative and quantitative themes coincide or converge it means that they were both reflected in the interviews as well as the different policy documents. In the case of the Texas commercial shrimping fleet, *Knowledge Sharing* and were the two themes

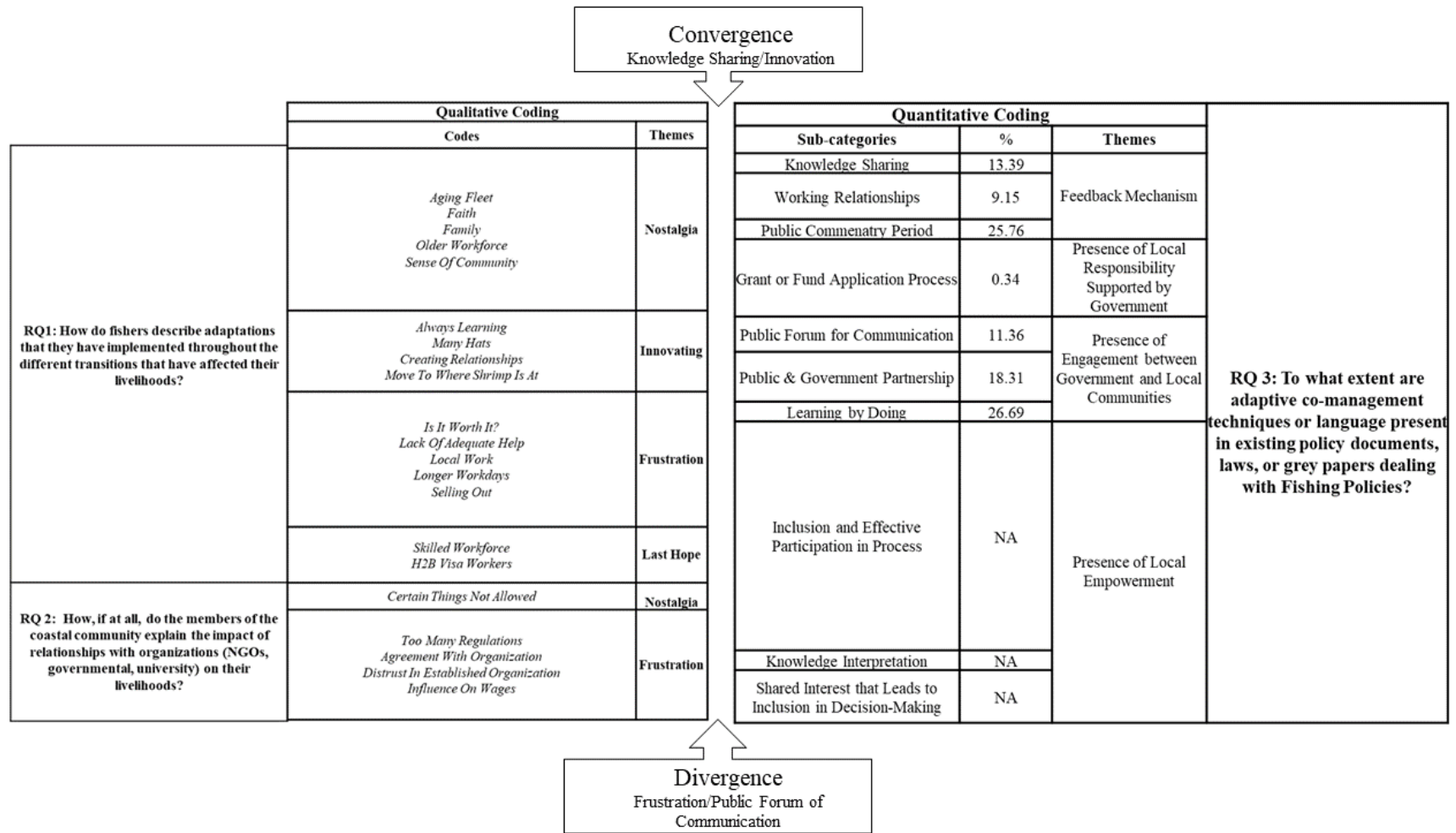
that converged. Since the late 1950s there have been several rules and regulations placed on how these individuals can carry out their livelihoods. In some cases, these men and women have agreed with these regulations (code *Agreement with Organization*), but they may not agree with how these regulations have been placed upon them. It is because of processes like *Public Commentary Periods* that these grievances can be aired.

However, as shown in the joint display under Divergence, just because a *Public Commentary Period* exists, (and different policy documents have made it clear that the shrimp industry's voice must be heard) (NMFS, 2013) does not mean that a *Public Forum of Communication* is working given that those interviewed showed *Frustration* with how regulations were implemented. One such frustration was the amendment to the Lacey-Act that occurred in 1981 when shrimp were included. There were more encounters between shrimpers and law enforcement in South Texas (Crouch, 1989). The Lacey Act prohibits the introduction into the U.S. of any species taken from a jurisdiction where the taking of that species is illegal, Mexico had closed off their federal waters in 1982 (Crouch & Miller, 1987). Divergence appears when there is a discrepancy between the qualitative and quantitative findings.

It should also be noted that there was no evidence of *Presence of Local Empowerment*. This could be due to the type of policy documents that were suggested for the content analysis as well as the parameters that were searched. This theme might be more suited for documents from NGOs or organizations such as Texas Sea Grant and Texas Shrimp Association. This is not to say that there were not mentions of this type of process. Particularly in the late 70s early 80s there was an incentive program to help the shrimp community acquire machinery and help more people enter the industry after it had fallen on hard times (Blomo, 1981; Times-Picayune, 1996). However, these types of programs did not produce the long-term effect of *Presence of Local*

Empowerment. Both of the sites for this study are now considered vulnerable to social and economic disruption through regulatory changes (NMFS, 2013).

Figure 21
Joint Display



Note. Containing the synthesis of both the qualitative and quantitative analysis that was conducted to answer each RQ. Also shows where there was convergence of themes and divergence.

3.5.2 Interpretation

As described in the joint display and integration section there were three themes that were found in the policy documents that would set the stage for adaptive co-management to occur in the commercial shrimp fishery in Texas. When using existing policy that has keywords or tools that allow for there to be engagement and cooperation across governmental scales and communities, *Knowledge Sharing* is a common method. It is a process that benefits from stakeholder or community engagement and allows for knowledge to flow and to be generated (Bohensky et al., 2016; Laplaza et al., 2017). For example, through its inception Sea Grant is tasked with combining research, education, and advisory services (knowledge sharing) in a horizontally and vertically integrated (cross-scale interaction) way to help find solutions to coastal and commercial problems in the United States (Berkes, 2002; National Academies, 1994).

A question one might ask is why if *Knowledge Sharing* is a base theme that has been well documented as occurring, then why are the commercial shrimpers in these two sites still dealing with problems that have plagued the industry/fishery since the 1980s. A problem when looking at adaptive co-management (and at any cross-scale interaction) is that many rules are not written to accommodate this type of interaction on an authentic level, resulting in power struggles (Plummer et al., 2017). In the interviews a lot of frustration verbalized about one particular regulatory tool that was imposed on the fishery: Turtle Excluder Devices (TEDs). These devices started off as a voluntary measure and were mandated by the end of the 1980s for every shrimp vessel. This led to resistance in the form of a blockade for Texas shrimpers (Awalt, 1989; Margavio et al., 1994). The blockade of 1989, considered the “largest protest over marine resource regulation in the history of the United States,” saw ship channels blocked by shrimp boats all across the Gulf of Mexico in defiance to the TEDs becoming mandated and backed by enforcement (Conner, 1987;

Margavio et al., 1994, p. 1). These events occurred over three decades ago and is still stamped into the memories of every single shrimper or community member that was interviewed. It is from the interviews that the frustration comes not with the Turtle Exclude Device that was mandated (although there are some that feel that the loss of shrimp from the TED is too much) but in the way the regulation was implemented. For future work a question to the interview guide should be added looking specifically at the By-Catch Reduction guidelines and what perceptions from the fleet are about these. The By-Catch Reduction Devices (BRYDs) were mentioned in passing when shrimpers were asked if there were other regulations like TEDs that had impacted them, but no interview went into detail.

With *Sharing of Knowledge* there is also *Public Commentary Period* and both fall under the theme of *Feedback Mechanism*. Both were present in the policy documents that were analyzed, and both are part of Sea Grant's work with the shrimping industry; however, the questions remains as to the cause of the lingering frustrations in the industry When shrimpers were asked questions pertaining to RQ1 and RQ2 they had been adapting to the different events that impacted their livelihoods shown by the theme *Innovating*. They have learned to use TEDs, Bycatch Reduction Devices, switched from ice boats to freezer boats, implemented longer trips, and found a workforce willing to work in the industry (Moberg & Dyer, 2008). Yet, themes such as *Nostalgia*, *Frustration*, and *Last Hope* emerged. These individuals perceive that the government-designed channels through which they can voice their grievances – e.g. public hearings, written comments, public commentary periods - are just another part of a document, and not a venue to engage the community in meaningful discussion that leads to knowledge sharing or trouble-shooting of a regulation that is a major part of adaptive co-management and cross-scale interactions (Folke et al., 2010; Plummer et al., 2017).

If the problem is how policy is communicated to those that it will influence, then a first step towards repairing these issues would be to understand how to effectively communicate with these communities. NOAA and Sea Grant have put a great deal of work into characterizing each community across the Gulf of Mexico and the results can be found in documents like the Shrimp FMPs and framework documents that look at social impact. There is always a problem of budget and personnel to carry out this type of work (several shrimp FMPs mentioned funding issues). Identifying people within the communities in question that could help with the knowledge sharing from Sea Grant to the industry is an achievable goal. Sea Grant already has agents in counties tied to major fishing ports, and they are well known at the docks. They would also know who in the community can be tasked with mobilizing the industry to do things as simple as help the Sea Grant agents do TED checks. NOAA would have to certify these community members so that there is legitimacy established between the two scales (government and community). This would also start the discussion of having *Presence of Local Empowerment* which was lacking in both the policy documents and the interviews. This type of collaboration could be taken a step further in having members of the shrimping industry not just take observers out, but if interested, help to collect data. By participating in the data collection and the interpretation along with Sea Grant agents and researchers, the community could partake in community science which allows for a blend of applied research methods with interactive learning and the communication of the process and results (Charles et al., 2020; Woodhill & Röling, 1998). This allows for the communities to partake in the full feedback and troubleshooting loop (Hsiao et al., 2012) while also allowing for a sense of ownership of the data and the experience.

There is also the issue of loss of traditions and culture that often occurs when there are shifts in livelihoods. Especially given that both Port Isabel/Brownsville and Palacios were considered

socially vulnerable to policy regulation shifts (Action, 2013) and that the interviews showed *Nostalgia* for a sense of community that through regulation and market pressures has been impacted negatively. There have been many coastal communities that have been negatively impacted by processes that degrade or extinguish traditions and culture of an area like gentrification of coastal communities (Colburn & Jepson, 2012). Certain communities have combated these processes by choosing to preserve their working waterfronts. The Working Waterfront Preservation Act of 2005 was introduced as a way to allow these places to preserve their way of life (Ounanian, 2015). NOAA has a webpage dedicated to helping communities estimate the economic value of their local waterfront (NOAA Office for Coastal Management, 2018). Addressing the shrimping industry and the community (in both sites) about their knowledge of their waterfront would be a first step in understanding and acknowledging the sadness that is felt about what these communities once were.

3.6 Limitations

Since this case study investigated specific question the scope of the analysis was limited to only answering the three posed research questions. In order to stay within the bounds of mixed methods research it would be imperative to revisit and re-evaluate the research questions in light of the themes that emerged. Future work could involve focus groups with the communities studied regarding their perceptions of solutions. Would they want to have people certified for TED checks within their communities? Would being engaged in the creation and style of implementation of regulations be worthwhile to them? How has by-catch reduction impacted their fishing, and do they feel it is as impactful as the TEDs? These are questions that could prompt a deeper discussion about how the shrimp industry wishes to be seen and heard by regulators and the resource managers they work with. Finally, this work took place over the 2020-2021 shrimping season which might

have caused some of the conversation to shift to problems faced because of Covid-19. A further look at how the pandemic affected the season should also be considered.

CHAPTER IV. CASE STUDY 3: CUBAN FISHING AND TOURISM POLICIES

4.1 Introduction

4.1.1 The Problem

The overarching research problem for this dissertation is how policy can affect livelihoods. Policy can hinder or foster livelihoods depending how it is written and implemented (Bennett, 2017; Berkes, 2002; Daly & Chuenpagdee, 2020). An example of policies having undesirable implications to coastal communities can be found in Mexico where policies implemented to help modernize and grow fisheries have caused user group clashes, leaving many small-scale fishers grappling with how their livelihoods are changing (Alcalá, 2003; Salas et al., 2007). “A country with its back to the sea” (Vazquez, 2009) describes Cuba’s marine and coastal policies up until the 2010s. Unlike its GoM neighbors, most Cuban fisheries, other than the commercial fleet, have not been well studied (López-Castañeda et al., 2020). Studies on fishers’ perceptions and local knowledge are helping fill in this knowledge gap, but most of these studies, though, focus on perceptions to climate change (López-Castañeda et al., 2020; Miller et al., 2018; Puga & García, 2021). This case study reviews policies for marine and coastal tourism affecting fishing communities in Cuba.

4.1.2 Brief History of Cuban Tourism and Fishing Policies

This chapter focuses on Cuba and how small-scale fishing, agriculture, and tourism industries are redefined and working together throughout the different transitions that have affected the island. Approximately 77% of Cuba’s 11 million residents are found living in urban areas, with the remaining in rural areas (FAO, 2022). The largest of the Antilles islands, Cuba’s coastline stretches 5,746 km and the country retains one of the greatest reserves of biodiversity in the Gulf of Mexico (Whittle et al., 2002).

Before the revolution of 1959, Cuba was the prime tourist destination in the Caribbean with 36% of the region's tourism traffic (Babb, 2011; Salinas et al., 2018; Simoni, 2016). After the revolution and the United States placement of an embargo, Cuba's tourism suffered (Salinas et al., 2018; Whittle et al., 2002). The Cuban economy was kept afloat through their sugarcane trade with the Soviet Union as well as additional supportive economic measures. After the fall of the Soviet Union in 1989 Cuba underwent an economic crisis (1990s) called "Special Period in a Time of Peace" (Special Period) during which international tourism was promoted as a way to stimulate the economy (Rutty & Richardson, 2019; Salinas et al., 2018) and bring in much need foreign exchange. Its positioning between the Gulf of Mexico and the greater Caribbean makes it a jewel for tourism due in large part to its rich biodiversity (Simoni, 2016). This positioning also makes it vulnerable to climate change (Galford et al., 2018). Small island nations, especially in the Caribbean, will experience an increase in coastal flooding from sea-level rise of about 0.5-0.6m (between 2081-2100 compared to the change from 1986-2005) along with a decrease in overall precipitation (Nurse et al., 2014). The southern part of the island is considered one of the most vulnerable to coastal flooding with 24 communities projected to be at risk (UNDP, 2021).

Tourism and fishing policies in Cuba take into account the vulnerabilities the island faces due to climate change (Miller et al., 2018; Rutty & Richardson, 2019; Valle et al., 2011) which is demonstrated by their commitment to environmental policies the use of Marine Protected Areas (MPAs). Fisheries in Cuba can be categorized into four major groups: commercial (containing three subgroups), sport, recreational, and scientific. The Fishing Law 129 of 2019 (Ley de Pesca 129) describes commercial fishing as all fishing done with the motive of obtaining economic benefits and/or for subsistence; sport fishing is all fishing that is done with a competitive nature; recreational fishing is all fishing done with recreational motives; and scientific fishing is all fishing

that is done for investigative purposes (GOC-2020-111-O11, 2019). Much like in the U.S. and Mexico, Cuba uses permits and licenses to manage who fishes. Before Law 129 (2019) was passed there was a Decree Law 164 (1996) that outlined how fisheries were to be managed (Gerhartz et al., 2017).

4.1.3 Study Site Descriptions

Sites for this case study were chosen based on ease of access to the researcher due to existing research relationships between the Harte Research Institute for Gulf of Mexico Studies and several Cuban governmental entities. All field work done in Cuba must be conducted with a Cuban national present and the following two sites were identified with the help of Cuban colleagues pre-Covid pandemic. Both sites are within the National Parks system (Figure 22) and have communities that make use of the parks as part of their livelihoods.

Caguanes National Park

Caguanes National Park (CNP), located in the province of Sancti Spiritus just north of the municipality of Yaguajay spanning 20,490 ha with 11,990 ha being marine (López-Castañeda et al., 2021; Navarro-Martínez et al., 2020). It is part of the National Park System of Cuba, which has 211 protected areas (Galford et al., 2018). CNP has an extensive cave system, for which the area was named, that are of archeological importance and exhibit various pictographs (Acea & Vega, 2014). Also of note is the endemism of its vegetation with 27 types of endemic flora (Navarro-Martínez et al., 2020). In the surrounding municipality of Yaguajay, sugar cane, and more recently cattle, have been the biggest agricultural producers (Ramenzoni et al., 2020). There are no communities residing within CNP, but surrounding towns do make use of the park through fishing, forestry, and tourism (López-Castañeda et al., 2021). There are both state (non-

commercial) fishing operations as well as artisanal and sport fishing happening within the marine bounds of the park (López-Castañeda et al., 2020, 2021).

Ciénaga de Zapata

Ciénaga de Zapata (Zapata Swamp) is categorized as one of the most important swamps/wetlands in the Caribbean and is a RAMSAR and UNESCO Biosphere Reserve (González et al., 2014). The Ciénaga is the largest wetland in the Caribbean and is home to many of Cuba's endemic species (Galford et al., 2018). Part of the Matanzas province, the Ciénaga is one of the largest municipalities (areal extent) at 4,162.40 km² (Ferro Azcona et al., 2014) and one of the least populated with approximately 9,163 inhabitants (González et al., 2014; Moya et al., 2005). Economic activities are mainly extraction-based activities like forestry, fishing, apiculture, and tourism (non-extractive) (Durán Zarabozo et al., 2004; González et al., 2014; Moya et al., 2005). Recently, fly fishing has become a tourist activity that has developed in the area due in part to the abundance of bonefish found in the Ciénaga (Rennert et al., 2019; Valdez & Cotayo, 2007).

Figure 22
Map of Cuba



Note. Showing the two sites selected for future interviews. Parque Nacional Caguanes shapefile courtesy of José Alexis Rodríguez Gago. Ciénaga de Zapata shapefile courtesy of International Union for Conservation of Nature (IUCN) (2018) World Database on Protected Areas.

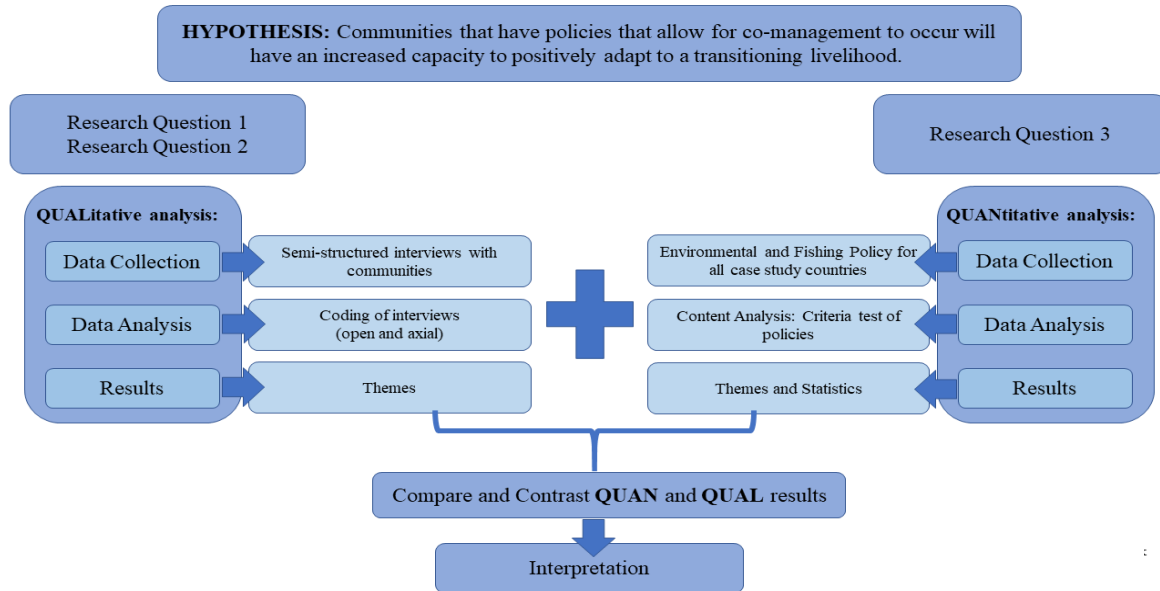
4.2 METHODOLOGY

This case study focused on addressing the hypothesis: Communities that have policies that allow for co-management to occur will have an increased capacity to positively adapt to a transitioning livelihood; by addressing how policy can play a role on the lives of coastal communities

Research Question 3 (RQ3): To what extent are adaptive co-management techniques or language present in existing policy documents, laws, or gray papers dealing with fishing policies?

Using RQ3 and the steps showing in the conceptual model a literature review was conducted on the most impactful fishing policies with environmental and tourism policies added if they were pertinent to fishing (Figure 23). Using the literature review a timeline was created and then a content analysis was completed looking at keywords of ACM in the policies identified.

Figure 23
Convergent Conceptual Model



Note. Conceptual model for the mixed methods convergent design showing how the hypothesis will be answered through research questions and how data will be collected and analyzed

4.2.3 TIMELINE

A timeline of federal fishing and/or tourism and environmental policies as well as important dates from literature on Cuban fishing policies and fisheries was created. Criteria for what policies were included were:

- Federal fishing, tourism, and environmental laws
- Amendments to federal fishing laws
- Decree Laws about fishing, tourism, and environment
- Amendments to state fishing laws

The timeline was adapted from Espinosa-Romero's (2020) and Alcalá's (2003) timelines. These same policies along with government organizations and university

reports from programs working with fisheries were used for the content analysis used to answer RQ3.

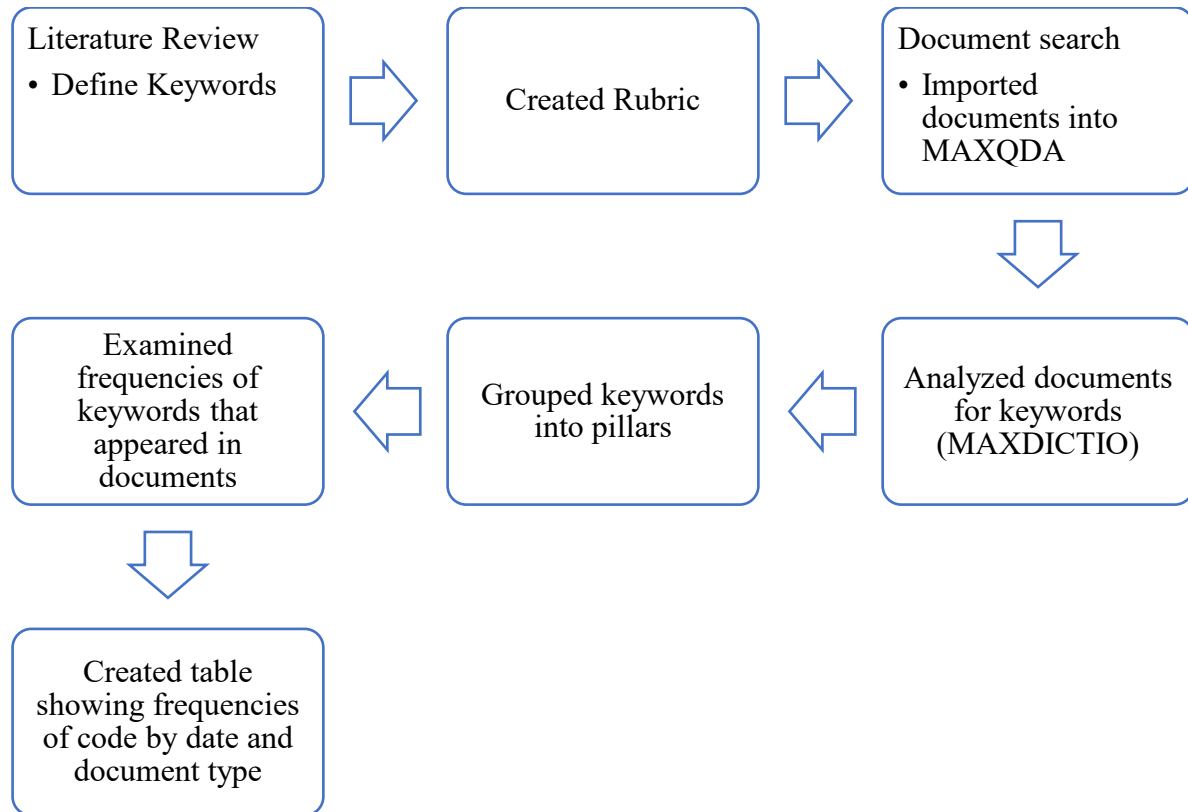
4.2.4 Content Analysis

To address RQ3, which looks at adaptive co-management language within fishing policy and reports, Krippendorff's (1989) classic content analysis process was used. This type of analysis follows a 6-step process described below:

- Design: Creation of RQ3.
- Unitizing: Using the rubric with criteria to identify policies that will be analyzed.
- Sampling: The policies and reports that will be analyzed.
- Coding: Using the criteria and existing themes from RQ 1 and RQ 2 to help find themes in the policies.
- Drawing Inferences: How the themes that arise from the codes answer RQ3.
- Validation: Cross-referencing the themes from RQ1 and RQ2 with those of RQ3 and comparing the results to accept or reject the project hypothesis.

A modified version of the above steps is shown in Figure 24. To illustrate how the process was carried out in MAXQDA.

Figure 24
Modified Content Analysis



4.3 RESULTS

4.3.1 Timeline

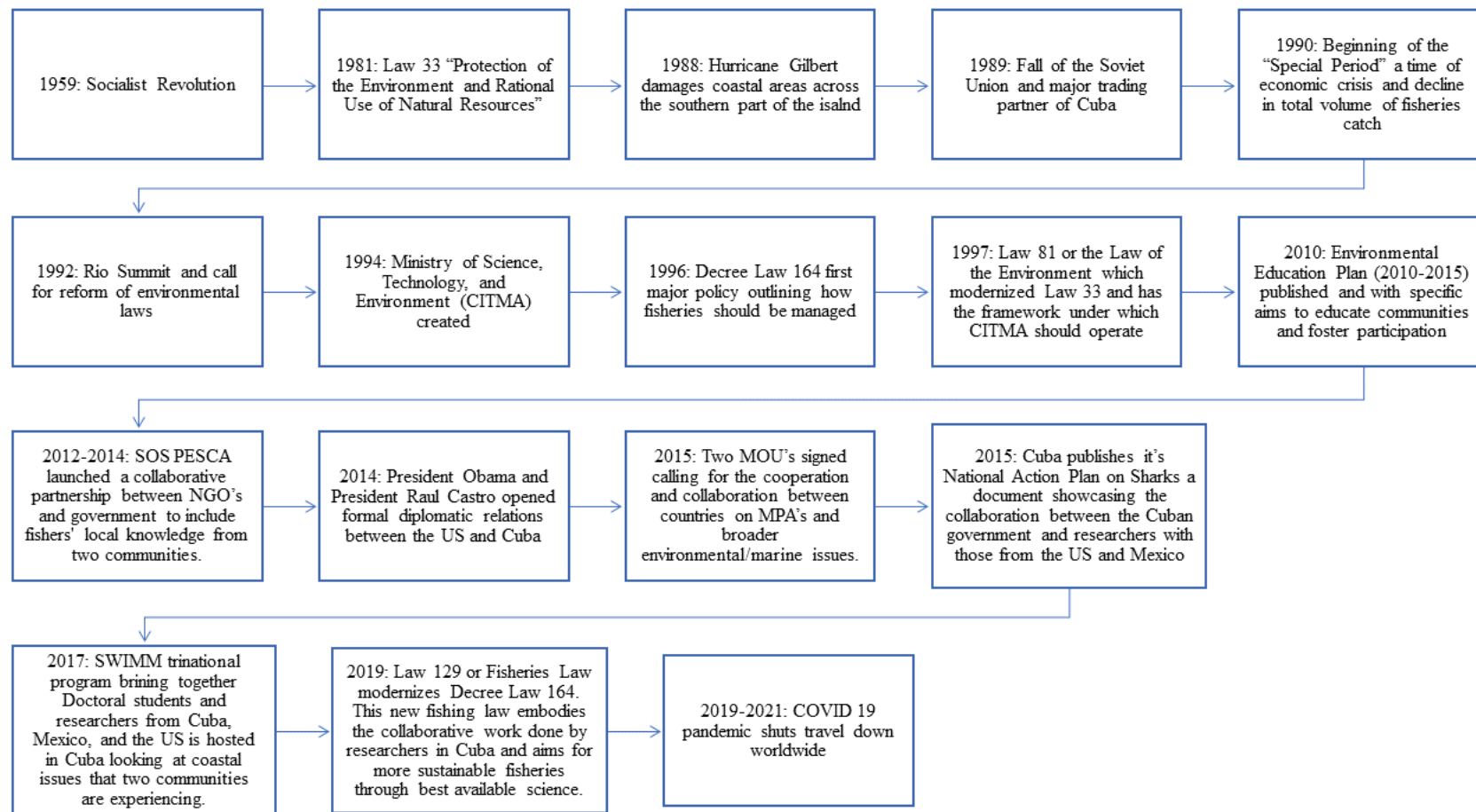
Outlined in the timeline shown in Figure 25 are events and policies that have shaped Cuba’s fishing and coastal communities. Since interviews were not conducted (due to COVID-19 restrictions), the information for the timeline was taken from the literature concerning fisheries management and coastal tourism and development in Cuba.

The timeline starts with the Socialist Revolution and the beginning of Cuba’s sugar cane economy due to their trade with the Soviet Union, and their subsequent fall, which initiated the “Special Period” of economic crisis (Adams, 2000; Goulart et al., 2018). Sandwiched between these three major events is the passing of Law 133 (1981) for the Protection of the Environment

and Rational Use of Natural Resources (name of law) which mandated a plan for structure and organization of the new environmental regulatory system (Whittle & Santos, 2006). In 1997, this law would be replaced by Law 81 which updated many of the mandates of Law 133 and also allowed for the general public to have larger role in environmental decision making (Whittle & Santos, 2006).

Other important events were the opening of diplomatic relations between the U.S. and Cuba in 2014 and the signing of Memorandums of Understanding (MOUs) in 2015 which directly mentioned collaboration and sharing of knowledge between the two countries (Baur et al., 2018). Not all the events were considered for the modified content analysis, however since input from fishers and local experts could not be included and therefore no consensus on which events/policies were perceived to have made an impact. The National Action Plan-Sharks (NAOP) and the Environmental Education Plan were included because they were part of a collaborative effort in their creation and implementation (Borroto-Escuela et al., 2021; Miller et al., 2018).

Figure 25
Timeline of Events and Policies Case Study 2



Note. Timeline of events and policies that the literature identified as having effects on the livelihoods of fishers and on the fisheries management as well as the environment.

4.3.2 Content Analysis

For the modified content analysis, documents were taken from Cuba's Ministry of Justice website Gaceta Oficial where all laws and policies are archived. Two major laws were included which are the Environmental Law of 1997 (Ley 81) and the new Fishing Law of 2019 (Ley 129). Some other resolutions and decree laws were also included with the criteria that they either dealt with fishing or fishing tourism. This narrow scope helped create a solid base for analyzing fishing related laws focused on fishers, fishing communities, or environmental education. Using the website also allowed for keywords to be used and other related documents to be found. Table 1 shows the final list of documents used for the analysis. A brief description of the type of document and the reasoning why it was chosen is also included. Due to the limited contact with the communities and Cuban resource managers (from COVID-19 related travel restrictions), Table 26 is not a complete list of laws and policies and can be revised when the qualitative portion of the project is completed. Of the 25 documents uploaded into MAXQDA, 16 were examined for analysis after meeting the criteria of directly dealing with fishing and/or tourism. Unless considered major laws or decree laws, all resolutions, agreements, and/or repealed policies were included under the Gaceta Oficial.

Table 26. Documents chosen for Content Analysis Case Study 3

| Document name | Year | Type of Document |
|----------------------|-------------|---|
| Decree Law 164 | 1996 | Decree Law that established fishing regulations and policies. |
| Gaceta Oficial 43 | 2008 | Established 1 resolution for tourism. |
| Gaceta Oficial 10 | 2009 | Repealed a resolution of the Ministry of Fishing Industry which had some prerequisites for Cuban nationals to apply for a Private Commercial fishing License. |
| Gaceta Oficial 48 | 2009 | Resolution from the Ministry of the Food Industry (MINAL) was established for a marine protected area |

| | | |
|----------------------------------|------|--|
| Gaceta Oficial 51 | 2010 | Resolution from the Ministry of the Food Industry (MINAL) that authorizes a season for <i>Isostichopus badionotus</i> . |
| Gaceta Oficial 19 | 2014 | Resolution from the Ministry of Tourism about recreational SCUBA diving. |
| Gaceta Oficial 57 | 2014 | Resolution from the Ministry of the Food Industry (MINAL) establishing firms that can fish for sea cucumbers and catch quotas. |
| CubasNationalPlanofAction-Sharks | 2015 | Cooperative endeavor to create a National Plan of Action showcasing knowledge exchange between the 3 Gulf of Mexico Nations. |
| Gaceta Oficial 36 | 2015 | Two decree laws about Zones with special regulations and two resolutions about management plans for natural protected areas and tourism use. |
| Fishing Law 2019 | 2019 | New fishing law that aims for more sustainable fisheries based on the best available science. |
| Gaceta Oficial 11 | 2020 | Several resolutions from the Ministry of the Food Industry and one from the Ministry of the Interior on fishing vessel specifics and how to monitor and manage these. |
| Gaceta Oficial 64 | 2020 | Established 3 resolutions for national parks systems and 1 resolution on illegal fishing. All resolutions were from the Ministry of Science, Technology and the Environment (CITMA) and the Council of Ministries. |
| Gaceta Oficial 77 | 2021 | Established 6 Accords on tourism from the Council of Ministries. |
| Gaceta Oficial 107 | 2021 | Established 1 resolution from the Ministry of Finance and Prices over how fishers would get taxed for social security. |
| Gaceta Oficial 109 | 2021 | Established an Agreement from the Council of Ministries for tourism. |
| Gaceta Oficial 38 | 2022 | Two resolutions from the Ministry of the Food Industry (MINAL) about landing large species the process for the granting of fishing authorization. |

Note. All documents that were identified during the content analysis as possessing language that is relevant to ACM. Each document has the year it was created and an explanation of the type of document it was along with a brief explanation of what policies were found in each one.

Presence and absence of the different Adaptive Co-Management (ACM) subthemes were found by using keywords much like in the Yucatan and Texas case studies (Figure 26). Of the 25

ACM keywords used, only eight were found in the documents. These keywords along with the documents in which they were found are shown in Table 27. Documents were quality controlled by checking the context in which the keywords were used to make sure that the sub-themes were accurately portrayed. The ACM keywords that were present in the most documents were coordination and programs. The keyword that appeared the least number of times was training. Subthemes that were present included public and government partnerships, working relationships, knowledge sharing and learning by doing. While the 2019 Fishing Law, the most comprehensive fishing law in Cuba, was created and written to showcase the country's strong commitment to fostering and maintaining sustainable fisheries (Puga & García, 2021), it did not have any explicit *Knowledge Sharing* vocabulary. Missing altogether from the list of "Presence/Absence" is the Environmental Law of 1997 (Law 81), this law allowed for CITMA to have more participation and communication with other ministries and within the government structure (Whittle & Santos, 2006). Its absence from the list is because it focused on how CITMA would participate but did not contain keywords from the ACM list. While there are several participatory research projects and programs that are occurring or have in the past, for example the project SOS PESCA, a deeper look into why this language is excluded from the documents is addressed in the discussion section.

Figure 26
Adaptive Co-Management Pillars and Keywords

Presence of Feedback Mechanism

- Comment
- Commentary Period
- Feedback
- Public Comment
- Public Commentary Period
- Public Hearing
- Public Review
- Written Comment
- Program
- Community
- Cooperation
- Workshops/Trainings

Presence of Local Responsibility Supported by Government

- Coordination
- Partnership
- Funding Source/Monetary
- Learning By Doing
- Shared Interests

Presence of Engagement between Government and Communities

- Educational Program
- Interviews
- Inclusion
- Workshops
- Education
- Fishery Engagement
- Participation

Presence of Local Empowerment (NA)

Note. All pillars from the ACM rubric and examples of keywords that were searched for in the modified content analysis.

Table 27. Content Analysis Presence/Absence and Document type Case Study 3

| -Subtheme | Word | Decree Law 164 | Gaceta Oficial 43 | Gaceta Oficial 10 | Gaceta Oficial 48 | Gaceta Oficial 51 | Gaceta Oficial 19 | Gaceta Oficial 57 | CubasNationalPlanofAction-Sharks | Gaceta Oficial 36 | FishingLaw_2019 | Gaceta Oficial 11 | Gaceta Oficial 64 | Gaceta Oficial 77 | Gaceta Oficial 107 | Gaceta Oficial 109 | Gaceta Oficial 38 | Total |
|------------------------------------|---------------|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|--------------------------|------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--------------|
| Learning by doing | Participation | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 5 |
| Knowledge Sharing | Trainings | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Knowledge Sharing | Workshops | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Public and Government Partnerships | Coordination | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 8 |
| Public and Government Partnerships | Monetary | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 3 |
| Working Relationships | Community | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 |
| Working Relationships | Cooperation | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 6 |
| Working Relationships | Programs | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 8 |

Note. All keywords of ACM and the sub-themes they were categorized into along with which documents from the modified content analysis they were found in.

Table 28. Pillars and sub-themes of Adaptive Co-Management Case Study 3

| Themes | Sub-Themes | n | % | Examples |
|---|------------------------------------|----|--------|---|
| Presence of Feedback Mechanism | Knowledge Sharing | 7 | 16.28% | Article 27.-Periodically there will be meetings, seminars, workshops, and other activities with the focus on training, exchange of experiences and recognizing the most outstanding tour guides (Gaceta Oficial 19 2014). |
| | Working Relationship | 20 | 46.51% | Training programs that included apprenticeships for young people or recently graduated students that are geared towards preparing them to become professionals (Gaceta Oficial 64, 2020). |
| | Public commentary Period | NA | NA | NA |
| Presence of Local Responsibility Supported by Government | Grant or fund application process | NA | NA | NA |
| | Public forum of communication | NA | NA | NA |
| Presence of Engagement between Government and Communities | Public and Government Partnerships | 11 | 25.58% | Article 25. The Ministry in coordination with universities and the entities from the Science, Technology and Innovation that are pertinent can develop science and innovation activities focused on the protection, conservation, management, cultivation and processing of aquatic organisms that will produce socioeconomic benefits (FishingLaw 2019). |
| | Learning by doing | 5 | 11.63% | Develop activities that maximize the participation and decision taking and self-management of local human capital and the satisfaction of their basic needs...(Gaceta Oficial 19, 2014). |

| | | | | |
|-------------------------------|----|----|----|----|
| Presence of Local Empowerment | NA | NA | NA | NA |
|-------------------------------|----|----|----|----|

Note. The final result of the modified content analysis. This table shows the quantitative portion of the convergence mixed methods joint display. Themes, subthemes, and the percentages of each that were found in the documents used along with examples of the context in which the subthemes were used in the documents.

Table 28 shows the results for the modified content analysis. Percentages of subthemes and the themes they correspond to are shown. Each theme that was present has a translated example cited with the document it was derived from. For the documents chosen with the narrow criteria, *Presence of Feedback Mechanism* was found the greatest number of times. It is important to look at subthemes in this case study because *Working Relationships* accounted for the greatest percentage of *Presence of Feedback Mechanism* with no occurrence of *Public Commentary Period*. This could also be due to the type of documents that were analyzed; more input from interviews will enable a more extensive content analysis.

There was one more theme that was present albeit not as strongly: *Presence of Engagement between Government and Communities*. This theme was present through the *Public and Government Partnership* subtheme and was mentioned several times via partnerships between communities (through programs with universities) and federal agencies. Much of the wording surrounding the partnership subtheme and engagement theme also centered on national parks and the outreach that the resource managers of these areas were tasked with doing. The programs and projects that these entities are facilitating reveal that there is more engagement of the coastal communities especially through environmental education (Borroto-Escuela et al., 2021; Miller et al., 2018; Navarro-Martínez et al., 2020).

4.4 DISCUSSION

Cuban scientific research has strong support from international collaborators and through these collaborations extensive work has been done to better understand the stressors to Cuba's ecosystems (Baur et al., 2018; Goulart et al., 2018; Machlis et al., 2012). Much of the degradation that has been seen along the coastline of the island is from anthropogenic sources (Gerhartz et al., 2017; Gerhartz-Abraham et al., 2016), not unlike the rest of the world, and which will only be exacerbated by climate change and the growing popularity of Cuba as a tourism destination (Cissell & Steinberg, 2019). Cuban policies on tourism, the environment, and fishing are centered around the best available science and striving for a sustainable and conservative use of their resources (Gerhartz et al., 2017; Puga & García, 2021). However, as shown in the Yucatan and Texas case studies from across the Gulf of Mexico, strong written policy is not always enough. There is a need for presence of local knowledge and sharing of power across the private-government-public sectors that needs to occur if the problems from a growing and changing economy are to be met head-on (Armitage et al., 2009; Olsson et al., 2004b).

Collaboration in Cuba in the sectors discussed in this case study is happening mostly at a top-down level. Memorandums of Understanding (MOUs) have been signed between the US and Cuba with specific hopes to coordinate, collaborate, and co-create knowledge about Marine Protected Areas from which Sister Sanctuary Programs have emerged (Baur et al., 2018). An example of this type of nexus between policy and researchers would be the trilateral workshop Student Workshop on International Coastal and Marine Management (SWIMM) which brings together doctoral students from all three nations surrounding the Gulf of Mexico along with researchers to case study a common marine-costal problem (López-Castañeda et al., 2020; Navarro-Martínez et

al., 2020). By bringing together students from each country to actively work together and learn from local fishers, agriculturalists, and resource managers, a model of knowledge sharing emerged.

A research effort that was reflected in the documents used for this modified case study was the Cuban National Plan of Action-Sharks (NPOA) which was the result of collaboration between the Cuban and US government. The NPOA was possible due to the efforts of a 4-year long program for collaboration called SOS PESCA which directly involved local fishers and communities to incorporate their knowledge with that of resource managers and researchers (López-Castañeda et al., 2020; Miller et al., 2018; Puga & García, 2021). Even though much of the policies revised in this case study did not contain many keywords or concepts for ACM, there are several examples of this type of work happening in Cuba. Mentioned extensively in this chapter are the collaborations of SOS PESCA and SWIMM but there is also continued collaboration with universities in the US such as the work done with the community La Picadora to study their agrotourism model (Moon et al., 2021).

A basic rule for ACM is the sharing of power and responsibility. Given Cuba's current political system, this sharing might at first seem difficult because of the centralized nature of their resource agencies. However, since the country has undergone an economic remodel, chances for decentralization are increasing and *Local Empowerment* has been seen through opportunities like *casas particulares* or rental houses, and agrotourism as seen in communities like those studied by SWIMM (Gerhartz-Abraham et al., 2016; Navarro-Martínez et al., 2020; Pérez, 2017; Wielgus et al., 2014).

Through science outreach and collaboration at a national level, communities can integrate their knowledge into management plans like the NPOA or those for natural protected areas. It is important to note that this case study only addressed RQ3, which asks: "To what extent are

adaptive co-management techniques or language present in existing policy documents, laws, or gray papers dealing with fishing and/or tourism policies?” The analysis is a work in progress since the community components from RQ1 & 2 are missing, which dealt with perceptions to adaptations and of relationships with the organizations that impart these policies on their livelihoods. Future work will integrate the first two research questions and revise both the timeline and the documents used in the modified content analysis to find the convergence between what the communities are living and what the policies hope to achieve.

4.5 LIMITATIONS

Unlike the Yucatan and Texas case studies which were both convergent mixed methods case studies, this case study was an in-depth policy review via the content analysis. Due to COVID-19 and travel restrictions it was not possible to conduct semi-structured interviews although through personal communications with colleagues that worked at different universities and resource management agencies, policies were selected to meet the criteria. Once the semi-structured interviews are completed and the events/policies that the community members view as having impacted them are incorporated, a more complete content analysis will be achieved.

CHAPTER V CONCLUSION

5.1 SUMMARY OF RESEARCH FINDINGS AND SUGGESTIONS FOR FUTURE WORK

The overarching goal of this dissertation was to gain a deeper understanding of the changes in livelihoods that coastal communities across the Gulf of Mexico (GoM) have been facing due to policies and climate change. Using the perspectives and the words of the community members from each of the select locations in Mexico, the U.S., and Cuban policies, a richer context was gleaned about the types of adaptations used during the different events and policies that communities felt affected their livelihoods. This work was conducted using a Convergent Mixed Methods approach that allowed for both qualitative and quantitative data to be generated, integrated, and interpreted creating a holistic view of the problems and possible recommendations. Using an adaptive co-management (ACM) framework helped hone what type of language to analyze in the policy and the supplemental documents. ACM was also used to tailor the qualitative research questions to focus on how respondents viewed their adaptations and their relationships with organizations that carry out the policy implementation. A timeline specific to each case study area was created to synthesize policies and events found in the literature that caused livelihood changes, but also included those events that the respondents found to be prominent. Results from each case study can be found in Table 29. These concluding ideas are further discussed along with recommendations for future work in the following sections.

Table 29. Concluding ideas about each case study based on the research questions.

| Research Questions | Yucatan | Texas | Cuba | Conclusion |
|--|--|---|---|--|
| RQ1: How do fishers describe adaptations that they have implemented throughout the different transitions that have affected their livelihoods? | <ul style="list-style-type: none"> •Changing fishing hours and locations. •Continuously learning •Collaboration •Lack of opportunities | <ul style="list-style-type: none"> •Nostalgia •Innovating •Frustration | NA | Both case studies have fishers describing adaptations as opportunities to learn and innovate but there are feelings that these livelihood changes are depleting opportunities and leading to frustrations. |
| RQ2: How, if at all, do the members of the coastal community explain the impact of relationships with organizations (NGOs, governmental, university) on their livelihoods? | <ul style="list-style-type: none"> •Disconnect between organizations and activities •Success of implementation •Negative impacts | <ul style="list-style-type: none"> •Frustration •Nostalgia | NA | Perceptions of relationships with organizations reflect feelings of frustration and negative impacts resulting from lack of communication and organizations not always being clear about expectations and outcomes. |
| RQ3: To what extent are adaptive co-management techniques or language present in existing policy documents, laws, or grey papers dealing with fishing policies? | <ul style="list-style-type: none"> •Knowledge Sharing •Grant application process •Partnerships | <ul style="list-style-type: none"> •Knowledge Sharing •Learning by doing | <ul style="list-style-type: none"> •Working Relationships •Partnerships •Learning by doing •Knowledge Sharing | All three case studies found knowledge sharing and to some extent partnerships. ACM is present in the policies and reports that were analyzed but given RQ 1 and RQ2 there needs to be more work on how to best implement these pillars. |

5.1.1 Chapter II: Yucatan Case Study

The Yucatan case study focused on small-scale fishers living in the towns of Sisal and San Felipe. Each town has had a different approach to wave after wave of livelihood transitions, the biggest being a set of policies during the late 1970s and early 1980s that moved entire agrarian

communities to the coast after the fall of the henequen fiber market. Other major livelihood transitions captured in the timeline are the changing of vedas (closing of fisheries) and government assistance programs. From the interviews addressing RQ1, it was found that through these livelihood transitions communities in Yucatan adapted by changing their fishing routines, learning new ways to fish (continuously learning). Sisal is sandwiched between the Gulf of Mexico and mangrove forests and has had an increasing difficulty dealing with growth. San Felipe, which sits west of Rio Lagartos Natural Protected Area and RAMSAR site, is proud of their small-town and has been known to combat growth. Both towns have been heavily studied by local researchers. Two local guides had written their previous dissertations about these sites which informed this research; for example, they advised on approaching fishers for interviews.

Sisal's physical placement between the Gulf and mangroves does not allow for much growth since mangroves are protected species (residents cannot develop/build within in mangrove habitat). There are several entities (organizations) that have worked with these communities to study and engage with them. There was notably less presence of NGOs in Sisal as well as a sometimes-trite relationship with the local university. From the results of RQ2, community perceptions leaned towards feelings of neglect or abuse of time when asked if they would participate in interviews. Similar perceptions were found in San Felipe. Although San Felipe has NGOs who work closely with locals on different town projects, locals are also weary of interviews because of perceptions that too many foreigners (anyone not of the town) came to do research and never returned or continued a relationship with the town. There are similar perceptions in both towns about government and local institutions that came to do workshops and never followed up.

The content analysis result show that several pillars of ACM are present in the policy text. Keywords associated with the pillars are knowledge sharing, partnership (public and private), and

grant application or fund application process. Lastly, from the convergence and divergence results of the combined RQ1, RQ2 and RQ3 results, the ACM elements of knowledge sharing, and partnership are present in the communities of the Yucatan case study, yet there is a weak sense of communication and distrust present. Knowing that both communities feel like they could influence and educate those organizations that come to their towns shows a strong sense of self. Future work in the Yucatan would be enhanced by incorporating local knowledge at every step of a project. Revisiting and rewriting the research questions for both the interviews and the modified content analysis with the new questions that arose from this case study could also lead to a deeper understanding of how policy is shaping the lives of these communities and how they are also shaping policy.

5.1.2 Chapter III: Texas Case Study

Each case study was structured in the same way following the convergent mixed methods case study conceptual model. In Texas, focus shifted to the Gulf shrimping industry which has been one of the most important seafood industries in the state but has seen several bottleneck effects that have shrunk the shrimping fleet down. The shrimping fleets of Palacios and Port Isabel/Port Brownsville were selected after several discussions with Texas Sea Grant agents who knew the fleets well and could help gain access to respondents and life stories. This is an industry that has seen several policy shifts as well as detrimental weather events in the last 40 years that have contributed to livelihood transitions

The event that was most noted, and also a policy shift, is the introduction of Turtle Excluder Devices (TEDs). Even after 32-years in place, TEDs were the most discussed topic by respondents when asked about events that had impacted their lives. Shrimping fleets in both locations perceived TEDs and the closing of the exclusive economic zone (EEZ) as negatively impacting them, and

perceptions about relationships with organizations also shifted after these events. Port Isabel/Port Brownsville share a common history and many in the Port of Brownsville still refer to themselves as if they were one fleet. This is because shrimpers and the families that own fleets have moved freely from one port to the other in the past. Major shifts that came up were the reduction of staff resulting from changes to H2B visas and how costly it has become to keep boats up to safety standards. Similar to Case Study 1, these shifts were also followed by shrimpers and boat owners having negative perceptions about relationships with organizations that implement policy changes. From the interviews addressing RQ1, it was found that through these livelihood transitions shrimpers in Texas adapted by innovating. In addition, there was a sense of frustration and nostalgia that reflects the idea that the industry had better days and that policy in combination with other economic drivers have made success difficult

From the results of RQ2, the only organization which was seen in a positive light was Texas Sea Grant, which the shrimpers feel has stood by them and helped them adapt to changes in livelihoods. Texas Sea Grant can be seen as a bridging organization in that they are a cooperative research, education, and extension organization with a mandate to translate coastal, ocean, and marine science and policy for the communities they serve.

The content analysis result show that several pillars of ACM are present in the policy text. Keyword found in the policy are knowledge sharing and learning by doing which were mentioned in the interviews from RQ 1 and RQ 2 as being facilitated and implemented by Texas Sea Grant. Divergence/convergence shows the mechanism are in place but there is a lack of efficient communication among government entities and between government entities and shrimpers.

Recommendations from this case study focus on using the strong differences between the shrimp industry and outside organizations as a starting point for new dialogue. All policies and

documents analyzed clearly showed that there are mechanisms in place for public commentary and that they are used, but improvements can be made in how the information is collected, understood, and used for policy development and enforcement. Including the newer generations of shrimpers in discussions about possible policy changes and integrating the local knowledge of those that are no longer in the industry would allow for some of the discord to be addressed.

5.1.3 Chapter IV: Cuba Case Study

The Cuban case chapter shifted focus yet again to how coastal communities are making use of the national parks in the country. This case study differed from the other two by exclusively looking at the third research question and exploring what if any presence there was of ACM language in policy, grey papers, and government reports that dealt with fishing and where possible where fishing intersected with tourism and environmental policies. Personal communication with resource managers and university professors allowed for a timeline to be created along with some documents to be collected for the modified content analysis. An extensive literature review completed the timeline with events that were thought to have impacted fisheries in Cuba and its coastal communities. Most notably from the Cuban policy scholarship, which is extensive, a lot of the laws and regulations in place are very forward thinking.

Results from RQ 3 showed ACM pillars found in the documents analyzed. The keywords associated with these are working relationships, partnerships (public and private), learning by doing, and knowledge sharing. That these keywords are found in written policy along with the research projects that are currently collaborating with communities are a positive indication that collaboration is occurring. Recommendations for the Cuban case study rely heavily on previous work carried out by tri-national research groups. Continuing the co-creation and exchange of knowledge between the three countries while also including the coastal Cuban communities would

help strengthen gaps in policy. Due to its top-down approach, Cuba can seem like a place of rigid policies, but collaborative efforts have influenced the latest Fishing Law which gives hope that more interactions and interchange will occur.

5.2 CLOSING THOUGHTS

Even though ACM is not occurring to its full potential across the GoM, a strong framework exists to help understand how collaboration and engagement is occurring in these coastal communities and how policy is shaping their livelihoods. Too often, policy can be seen as a hinderance because of how it is written (oftentimes leaving out key-insights and knowledge from communities) but understanding human perceptions and events that shape policy allows for wiggle room within even the most rigid policies. Coastal communities are a wealth of knowledge and practice waiting to be asked to join the research table in meaningful ways. To co-create, share knowledge, or even incorporate different ways of knowing into management plans or policies, conversations need to be had first. These conversations are in themselves a flow of information and data. Honoring that data is not always numbers. Understanding conversations as data opens the door for opportunities of innovation and strengthening the livelihoods of coastal communities and the environment and resources from which they live.

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APPENDIX A

CONSENT FORM (SPANISH AND ENGLISH)

CONSENTIMIENTO PARA PARTICIPAR EN UNA INVESTIGACIÓN
CIENTÍFICA EN Texas A&M University-Corpus Christi

CONSENT to Participate in a

Research STUDY AT Texas A&M University-Corpus Christi

Título del Estudio: Estrategias de vida en transición alrededor del golfo de México: Tres
Estudios de Caso

STUDY TITLE: LIVELIHOODS IN TRANSITION ACROSS THE GULF OF MEXICO: A 3
CASE STUDY APPROACH

¿Quién llevará a cabo el estudio?

Who will conduct the study?

Un equipo de investigación científica dirigido por el Dr. David Yoskowitz está haciendo este estudio.

A study team led by Dr. David Yoskowitz is doing this study.

Estamos pidiendo que usted tome parte en este estudio de investigación científica. Por favor lea la información en este documento y pregunte si hay alguna duda antes de tomar la decisión de

participar.

You are asked to participate in this scientific research study. Please read the information in this document and clarify any doubts before taking the decision of participating.

Antes de dar su permiso, el investigador debe explicarle el estudio.

Before you agree, the investigator must explain the study to you.

Propósito del estudio

Purpose of the study

El propósito de este estudio científico es entender cuáles son las percepciones que los pescadores tienen hacia las normas y leyes del medio ambiente y de pesca. A través de estas preguntas se verá cual rol tienen las ONGs y universidades en la adaptación y resiliencia comunitaria cuando hay cambios de vida.

The purpose of this scientific study is to understand fisherman perceptions towards environmental and fishing policies and laws. Through these questions we will see what role NGOs and universities have in community adaptation and resilience when there are life changes.

¿Quiénes pueden participar en el estudio?

Who can participate in this study?

Le estamos pidiendo que sea parte de este estudio porque usted o alguien en su familia es o fue un pescador.

We are asking you to be part of this study because you or someone in your family is or was a fisherman.

Para ser elegible para este estudio debes de:

- Ser mayor de edad (18+), y
- Ser o haber sido miembro de una cooperativa o ser parte de la tripulación de una embarcación con permiso, o
- Ser familia de un pescador

To be eligible to participate you must:

- Be of legal age (18+), and
 - Be or have been a member of a cooperative or part of the crew of a vessel with permission, or
 - Be a fisherman's family member
-

¿CUÁL SERÁ EL PROCEDIMIENTO DE ESTE ESTUDIO?

WHAT WILL BE THE PROCEDURE OF THIS STUDY?

La participación en esta investigación requiere que usted participe en una entrevista grabada.

Además, que nos deje tomarle una foto de su "log book" de pesca.

Participation in this research requires that you participate in a recorded interview. In addition, to let us take a picture of your fishing log book.

Si usted consiente en participar en la investigación, prestaras su tiempo por 1 hr.

If you agree to participate, you will give 1hr of your time.

Las siguientes cosas se pedirán de usted si participas en esta investigación:

- Se recolectará información sobre usted. Vea el Apéndice: APÉNDICE: PROCEDIMIENTO DEL STUDIO- COLECCIÓN DE INFORMACIÓN para aprender más.
- Tendrá que contestar algunas preguntas de una encuesta por medios de una entrevista que durará entre 25-35 minutos.

You will be asked the following if you participate in this study:

- Information about you will be collected. See Appendix: APPENDIX: STUDY PROCEDURE- INFORMATION COLLECTION to learn more.
- You will have to answer some questions by means of an interview that will last between 25-35 minutes.

¿CUÁLES SON LOS RIESGOS DE PARTICIPAR EN EL ESTUDIO?

WHAT ARE THE RISKS TO PARTICIPATE IN THE STUDY?

Hay algunos riesgos asociados con esta investigación. Riesgos como:

- Pérdida de confidencialidad: Hay un riesgo leve de pérdida de confidencialidad. Su confidencialidad será protegida lo más posible.
- Resultados de esta investigación pueden hacerse públicos: Si se abren al público usted no será identificado en las publicaciones o presentaciones.

There are some risks associated with this research as:

- Loss of confidentiality: There is a small risk of loss of confidentiality. Your confidentiality will be protected as much as possible.
- The results of this study could be made public: If they are opened to the public you will not be identified in the publications or presentations.

Si cambias de opinión de participar en esta investigación, debe de hablar con el investigador a la mayor brevedad.

If you change your opinion about participating in this study, you should talk with the researcher as soon as possible.

¿CUÁLES SON LOS BENEFICIOS PREVISIBLES DE ESTE ESTUDIO PARA LOS PARTICIPANTES?
WHAT ARE THE FORESEEABLE BENEFITS OF THIS STUDY TO THE PARTICIPANTS?

Tal vez no tendrás ningún beneficio directo por participar en esta investigación. Su participación podría ayudar a los investigadores a describir los procesos de “shocks” ambientales en las pesquerías de Yucatán.

There may be no direct benefit to you from being in this research study. By being in this study, you may help researcher describe the processes of environmental shocks in the Yucatan fisheries.

¿QUÉ ME COSTARÁ PARTICIPAR EN ESTE ESTUDIO?
WHAT WILL BE THE COST OF PARTICIPATING IN THIS STUDY?

No habrá ningún costo al participante. La participación en este estudio no resultará en un costo extra para usted.

There will be no cost to the participant. Participation in this study will not result in an extra cost to you.

¿QUÉ RECIBIRÉ POR PARTICIPAR EN ESTE ESTUDIO?
WHAT I WILL RECEIVE FOR PARTICIPATING IN THIS STUDY?

Usted no recibirá ningún pago por participar en este estudio.

You will not be payed for participating in this study.

¿CUÁLES SON LAS ALTERNATIVAS AL PARTICIPAR EN ESTE ESTUDIO?

WHICH ARE THE ALTERNATIVES WHEN PARTICIPATING IN THIS STUDY?

En vez de participar en el estudio usted puede decidir no participar.

Instead of participating in the study, you can choose not to participate.

¿CUÁLES SON MIS DERECHOS COMO PARTICIPANTE DEL ESTUDIO?

WHAT ARE MY RIGHTS AS A STUDY PARTICIPANT?

Participar en este estudio es completamente voluntario.

Participating in this study is completely voluntary.

¿Qué pasa si cambio mi decisión?

What happens if I change my decision?

No habrá ningún castigo ni pérdida de beneficios si usted se niega a participar o decide dejar de participar.

If you choose not to participate, there will be no penalty or loss of benefits to which you are otherwise entitled.

Todos los datos que sean considerados como identificadores serán borrados y los investigadores solo se quedaran con la información no identificadora que en dado caso se podrá hacer disponible a otro investigador en un futuro y usado para futuros proyectos sin algún consentimiento adicional.

Identifiers might be removed from identifiable private information or biospecimens and that, after such removal, the information or biospecimens could be used for future research or distributed to another investigator for future research studies without additional informed consent.

¿QUIÉN DEBO LLAMAR SI TENGO PREGUNTAS O PROBLEMAS?

WHO SHOULD I CALL IF I HAVE QUESTIONS OR PROBLEMS?

La Biol. Coral Lozada está a cargo de este estudio de investigación. Puede llamar a Biol. Coral Lozada al +01 7132035301 con preguntas en cualquier momento durante el estudio.
Coral Lozada is in charge of this research study. You may call Coral Lozada at 713-203-5301 with questions at any time during the study.

También puede llamar a la Junta de Revisión Institucional (IRB) de Texas A & M University-Corpus Christi con preguntas o quejas sobre este estudio en irb@tamucc.edu o 361-825-2497. El IRB es un comité de miembros de la facultad, estadísticos, investigadores, defensores de la comunidad y otros que aseguran que un estudio de investigación sea ético y que los derechos de los participantes del estudio estén protegidos.
You may also call Texas A&M University-Corpus Christi Institutional Review Board (IRB) with questions or complaints about this study at irb@tamucc.edu or 361-825-2497. The IRB is a committee of faculty members, statisticians, researchers, community advocates, and others that ensures that a research study is ethical and that the rights of study participants are protected.

Si usted está de acuerdo en participar, usted recibirá una copia firmada de este documento y un resumen por escrito de la investigación científica.

If you agree to participate, you should be provided a signed copy of this document and a written summary of the investigation.

CONSENTIMIENTO DEL SUJETO/CONSENT OF SUBJECT

Los propósitos, procedimientos y riesgos de este estudio científico se me han explicado. He tenido la oportunidad de leer este formulario y hacer preguntas sobre el estudio. He tenido oportunidad de preguntar sobre este estudio. Cualquier pregunta que tuviese, ha sido contestada de manera satisfactoria. Doy mi permiso y consentimiento para participar en esta investigación científica. Una copia firmada de este formulario y otra en inglés se entregarán.

The purposes, procedures, and risks of this scientific research study have been explained to me.

I have had a chance to read this form and ask questions about the study. Any questions I had have been answered to my satisfaction. I give my permission and consent to be in this research study. A copy of this signed form and one in English will be given to me.

| | | |
|---|-------|------------------------------|
| Firma del Sujeto / Representante Legal Autorizado | Fecha | Relación con el Participante |
| Signature of Subject/ Legally Authorized Representative | Date | Relationship to Participant |

TESTIGO/WITNESS

He presenciado el proceso del permiso/consentimiento y firma(s) para esta investigación científica.
I have witnessed the permission/assent process and signature(s) for this research study:

| | |
|----------------------|-------|
| Firma del Testigo | Fecha |
| Signature of Witness | Date |

Escriba el nombre del Testigo/Print Name of Witness _____

(También debe firmar el documento traducido/Must also sign the translated document)

INTÉRPRETE/INTERPRETER

Intérprete Utilizado

Interpreter Used

Personal del Estudio Bilingüe y Cualificado Utilizado

Qualified Bilingual Study Staff Used

Yo estuve presente y presté servicios de interpretación durante la firma de este documento.

I was present and provided interpretation services during the signing of this document.

Firma del Intérprete

Fecha

Signature of Interpreter

Date

Nombre del Intérprete en Letra de Molde/ Printed Name of Interpreter:

(También debe firmar el documento traducido/Must also sign the translated document)

Relación del intérprete con el Sujeto, Padre/Madre o Representante Legal:

Relationship of Interpreter to Subject, Father/Mother or Legally Authorized Representative.

APÉNDICE: PARTICIPANTES DEL ESTUDIO

APPENDIX: PARTICIPANTS OF THE STUDY

El mínimo número de participantes en el estudio sería 15 y el máximo 60 participantes durante el curso del estudio.

The minimum number of participants in the study would be 15 and the maximum 60 participants during the course of the study.

APÉNDICE: PROCEDIMIENTO DEL STUDIO- COLECCIÓN DE INFORMACIÓN

APPENDIX: STUDY PROCEDURE- INFORMATION COLLECTION

Su participación implicará la colección de información descrita en este documento.

Your participation will involve the collection of information described in this document.

La información será la siguiente:

- Usted no tiene que darnos ninguna información que usted no quiere dar. Con su firma en este documento nos está dando autorización de coleccionar la información ya descrita.
- Les pediremos su información de contacto, incluyendo su número de teléfono, para poder contactarle para entrevistas en un futuro.
- La información colectada para este estudio se compartirá con el Dr. David Yoskowitz.

The information will be the following:

- You do not have to give us any information that you do not want to give. With your signature on this document you are giving us the authorization to collect the information already described.
- We will ask for your contact information, including your phone number, in order to contact you for future interviews.
- The information collected for this study will be shared with Dr. David Yoskowitz.

APÉNDICE: PROCEDIMIENTO DEL ESTUDIO- CUESTIONARIO

APPENDIX: STUDY PROCEDURE- QUESTIONNAIRE

Se le preguntará sobre: el equipo de pesca y su seguridad, restricciones/dudas que tuvo cuando uso el equipo de pesca por primera vez, especies de objetivo, tiempo que toma preparar la especie, duración de pesca, tiempo en la marina o puerto, tiempo en la bodega, quien prepara los pescados, cual ha sido la mejor y peor temporada. Un ejemplo de una pregunta:

- ¿Como aprendiste a usar el equipo de pesca?

You will be asked about: the fishing gear and its safety, restrictions/doubts you had when using the fishing gear for the first time, target species, time it takes to prepare the species, fishing duration, time in the marina or port, time in the warehouse, who prepares de fish, which has been the best and worst season. An example of a question:

- How did you learn to use the fishing gear?

Alguna de estas preguntas puede resultar ser incómodas para contestar. Usted no tiene que contestar ninguna pregunta que no se sienta cómodo contestando. Puedes parar la entrevista en cualquier momento.

Any of these questions may turn out to be uncomfortable to answer. You do not have to answer any questions that you are not comfortable answering. You can stop the interview at any time.

APÉNDICE: CONFIDENCIALIDAD

APPENDIX: CONFIDENTIALITY

La participación en este estudio puede implicar que se colecte información confidencial. Esta información puede ser la siguiente

- Nombre
- Dirección
- Números de teléfono

The participation in this study may involve the collection of confidential information, as:

- Name

- Address
- Phone numbers

Un documento codificado con el récord de investigación será creado y se mantendrá en el Harte Research Institute for Gulf of Mexico Studies en la laptop de Coral Lozada. Este récord incluye su:

- Nombre
- Un número de identificación único para el estudio
- Fecha de nacimiento
- Número de teléfono

An encrypted document with the research record will be created and maintained at the Harte Research Institute for Gulf of Mexico Studies in the laptop of Coral Lozada. This record includes your:

- Name
- Unique identification number for the study
- Birthdate
- Phone number

Los récords de investigación serán mantenidos en una manera confidencial. Solo compartiremos su información cuando sea necesarios, solo la información necesaria, y les pediremos a los recipientes que protegen su privacidad.

The research records will be maintained in a confidential manner. We will only share your information when necessary, only the necessary information, and we will ask the recipient to protect your privacy.

APÉNDICE: RETIRARSE

APPENDIX: WITHDRAW

Si usted decide retirarse del estudio antes de que termine, la información ya recolectada será usada para el estudio e incluida en el análisis de datos. No se recolectará información nueva.

If you decide to withdraw from the study before it ends, the information already collected will be used for the study and included in the data analysis. No new information will be collected.

La información ya recolectada será despersonalizada (para que no se asocie a usted). Usted no será identificado por la información y no habrá riesgo a su privacidad. Esta información ya recolectada se seguirá usando aunque usted se retire.

The information already collected will be de-identified (so that it does not associate with you).

You will not be identified by the information and there will be no risk to your privacy. This information already collected will continue to be used even if you withdraw.

APPENDIX B

INTERVIEW GUIDE

Fecha:

Date:

Lugar:

Place

Hora:

Time:

Fecha de nacimiento:

Date of birth:

Lea la forma de consentimiento, recuerde al participante firmar, y que diga que consiente a la entrevista (grábalo). Él/ella puede tener una copia del consentimiento informado.

Read the consent form, remind the participant to sign, and ask them to say that he/she consents to the interview (record that). He/she can have a copy of the informed consent.

Introductory Questions:

1. ¿Cuánto tiempo ha vivido en ____?

How long have you lived in _____?

2. ¿Cómo fue que llegó a ser pescador?

How did you become a fisherman?

3. ¿Cómo fue que se incorporó al grupo de pesca en ____?

How did you join the fishing group in _____?

4. ¿Desde cuándo pesca en el mar de ____?

Since when do you fished in the _____?

5. ¿Cuántas generaciones de su familia han sido pescadores? ¿En ____? (¿padre, abuelo, bisabuelo?)

How many generations of your family have been fishermen? In _____? (Father, grandfather, great-grandfather?)

Questions about gear and safety

6. ¿Qué equipo de pesca usan para la temporada de escama/mero?

What fishing gear do you use for the finfish/grouper season?

7. ¿Usan este mismo equipo para otras temporadas?

Do you use the same equipment for other seasons?

8. ¿Cuál ha sido el mejor año de pesca de escama/mero que usted recuerda? ¿Por qué considera que fue el mejor año?

What has been the best year of finfish/ grouper fishing that you remember? Why do you think it was the best year?

9. ¿Cuáles son las restricciones o limitaciones que tiene usted para usar el equipo de pesca?

What are the restrictions or limitations that you have for the use of fishing gear?

10. Cómo aprendió usted a usar los diferentes equipos de pesca/ hubo algún tiempo durante el cual le enseñaron cómo usarlo?

How did you learn to use the different fishing equipment? Was there a time when they showed you how to use it?

11. ¿Hay diferencia entre equipos de pesca según los peces que van a capturar en las temporadas?

Is there a difference between the fishing equipment according to the fish that will be caught in the seasons?

12. Cómo varían las temporadas de pesca en cuanto a esfuerzo personal (¿tiempo en la embarcación, tiempo pescando, preparando el producto, y en el uso de gasolina?

How do fishing seasons vary in terms of personal effort (time on the boat, time fishing, preparing the product, and the use of gasoline)?

13. ¿Cuéntame de la mejor temporada que recuerda? (¿por qué fue la mejor?) ¿y la peor? ¿por qué considera que fue la peor?

Tell me about the best season you remember? (Why was it the best?) and the worst? Why do you think it was the worst?

14. ¿Qué especies pescan que no necesariamente sean para vender?

What species do you fish that are not necessarily for sale?

Questions about fishing structure in town

15. ¿Hay pescadoras? ¿Salen ellas con ustedes en las diferentes temporadas?

Are there female fisherman? Do they go out with you during the different seasons?

16. ¿Cuándo fue la primera vez que vio o recuerda a una pescadora?

When was the first time that you saw a female fisherman or that you remember one?

17. ¿Cuántos años tenías cuando empezó a trabajar en las embarcaciones? ¿Cómo fue su primera experiencia trabajando ya como pescador o haciendo alguna otra actividad en las embarcaciones?

How old were you when you started working on the boats? What type of experience did you have when you began?

18. ¿Cómo usted se sintiera si su esposa o hija tuvieran interés en pescar como una profesión??

19. How would you feel if your daughter or wife expressed an interest in being a fisherman? ¿Además de la pesca, existe alguna otra fuente para obtener dinero que usted sepa?

In addition to fishing, what other sources of income do you have, if any??

Policies and laws questions:

20. ¿Puedes explicar cómo ha cambiado las normas o leyes de pesca en ____ desde que usted empezó a pescar?

Can you explain how the fishing policies and laws have changed in ____ since you started fishing?

21. ¿De qué manera las vedas más recientes (últimos 3 años) le han afectado a usted?

In which way the more recent (last 3 years) fishing closures have affected you?

22. ¿Cómo sabes cuándo hay vedas o cambios en las normas de pesca?

How you know when there are fishing closures or changes in fishing policies?

23. ¿Cómo ha cambiado la rutina de pesca de la tripulación de su barco a causa de los cambios en las normas de pesca?

How has the fishing routine of the crew of your boat changed because of changes in fishing regulations?

24. ¿Describe alguna norma o política que les ha ayudado o hecho más difícil su vida como pescador?

Describe any policy or law that have helped or made more difficult your life as a fisherman?

NGOs and universities work:

25. ¿Cuáles ONGs o universidades han trabajado o están trabajando en ____?

Which NGOs or universities have worked or are working in ____?

26. ¿En su cooperativa han trabajado con ONGs? ¿Cómo ha sido esta experiencia?

In your cooperative have you worked with NGOs? How has this experience been?

27. ¿Algún biólogo de una universidad ha trabajado con su cooperativa? ¿Cómo ha sido esta experiencia?

Has any biologist from a university worked with your cooperative? How has this experience been?

28. ¿Cuáles proyectos piensa usted que deben ser realizados por una ONG?

What projects do you think need to happen??

29. ¿Cuáles son las oportunidades que usted piensa que han traído o traerían las ONGs o universidades a ____?

Which are the opportunities that you think the NGOs or universities have brought or would bring to ____?

APPENDIX C

INTERACTIVE QUOTE MATRIX: YUCATAN RESEARCH QUESTION 1

| | San Felipe Interviews (N=15) | Sisal Interviews (N=15) |
|-----------------------|---|-------------------------|
| Continuously learning | <p>Y fue en que vine aca y empece a dar lo bueno que lo necesitas rapido aprende uno. La necesidad hace que uno aprenda.</p> <p>San Felipe Interviews\San_Fe_3: 12 - 12 (0)</p> <p>Pues es las tecnicas pues el pescador se va haciendo un poco mas cada, cada temporada aprende cosas diferentes, no</p> <p>San Felipe Interviews\San_Fe_7: 26 - 26 (0)</p> <p>caso pues entre compañeros se andan pasando informacion experiencia y uno le dice al otro como se puede hacer</p> <p>San Felipe Interviews\San_Fe_7: 26 - 26 (0)</p> <p>Como los señuelos que se trabajan ahorita. En ese epoca no se trabajaban los señuelos con pura carnada pescabamos, no.</p> <p>San Felipe Interviews\San_Fe_8: 10 - 10 (0)</p> | |

No no no. Vinieron otras personas o tambien hubieron unos que fueron a pescar en otros lugares y vieron otros que vinieron.

San Felipe Interviews\San_Fe_8: 14 - 14 (0)

ya sabes a prueba y error empeze a pues a hacer las cosas bien y hasta cierto punto con otra persona cuando estas trabajando y sabes el trabajo le inspiras confianza y empiezas no tomar una rutina al compañerismo y te empieza a ir bien, no

San Felipe Interviews\San_Fe_9: 32 - 32 (0)

Pero en que me dedique asi a pescar carnada para la gente Doña Morre me dijo que si no queria yo ir.

San Felipe Interviews\San_Fe_10: 4 - 4 (0)

Ese yo maneje mucha red de fondo y me di cuenta que la red de fondo acaba con las especies. Acaba. Y yo tuve mucha red tuve 70 paños de red y era o una de las personas se prohíben la red de fondo estoy de acuerdo. No la vuelvo ni yo a meter porque acaban con las especies

San Felipe Interviews\San_Fe_12: 26 - 26 (0)

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| | <p>Nada no le habiamos buscar la vuelta como se pescaba de ahí vinieron unos Campechanos nos mostraron como se mostraron como se pesca el pulpo.</p> <p>San Felipe Interviews\San_Fe_13: 34 - 34 (0)</p> <p>De otros pescadores. Esa especie no porque el pulpo estaba una cosa terrible. Jalabas tu piedra que botaba para garretiar y ahí se pegaban los pulpos.</p> <p>San Felipe Interviews\San_Fe_13: 36 - 36 (0)</p> <p>Empezo a enseñar a las señoras poquito a poquito</p> <p>San Felipe Interviews\San_Fe_14: 28 - 28 (0)</p> | |
| Assistance | <p>Pues, si. Si porque tambien este en lo bueno del gobierno es que tambien ha dado este apoyos economicos a los que en realidad han cuidado las vedas</p> <p>San Felipe Interviews\San_Fe_1: 24 - 24 (0)</p> <p>Los vales. Bueno ese primero de los vales ya tiene haber ya tiene como 10 años o 12 años algo así. Que empezaron las veda. Como 12 años. Pero de los vales fue todamente este año que te dan vales porque antiguamente nos daban dinero. Nos daban 350 pesos y una dispensa.</p> <p>San Felipe Interviews\San_Fe_2: 44 - 44 (0)</p> | <p>El gobierno te regala eso. Por que segun ellos decia que costaba como 16mil pesos por persona ese curso. A la cual a nosotros no nos costo ni un peso mas que nuestro tiempo.</p> <p>Sisal Interviews\Sisal_1: 27 - 27 (0)</p> <p>Por ejemplo en la veda del mero a nosotros nos dan 700 pesos cada 15 días. Que no es que digas es un chingo. Pero si te aliviana.</p> <p>Sisal Interviews\Sisal_1: 29 - 29 (0)</p> |

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| | <p>bueno mayormente se ha estado controlando. Eh si tu eres pescador y tu tienes permiso de pesca si cuentas con la matricula de pescas seguro maritimo. Todo lo que tiene una lancha puedes obtener eso. Si tu no lo tienes podias ser si eres chalan y no tienes eso podrias ser pero yo te tengo que dar como respaldarte</p> <p>San Felipe Interviews\San_Fe_2: 48 - 48 (0)</p> <p>Nos dieron apoyo de nevera tambien. Si, nos dan apoyo de nevera. Del mismo gobierno. Damos un 50% y el 50% lo dan ellos. Por el apoyo que nos dan.</p> <p>San Felipe Interviews\San_Fe_2: 56 - 56 (0)</p> <p>Pero eso hay meses lo que es trabajo temporal. Ese que vamos hacer mañana es trabajo temporal la veda del mero.</p> <p>San Felipe Interviews\San_Fe_3: 74 - 74 (0)</p> <p>Eh ya no por la veda del pulpo. Si se da un dinerito alla eh cada mes. Se da un dinerito hay que ir a cobrarlo en Panapa o en Sucilar (other towns).</p> <p>San Felipe Interviews\San_Fe_3: 86 - 86 (0)</p> | <p>Total, total [extra emphasis] pero total. Asi como que no solo es que al, al pescador bueno si yo te voy a dar tu responsabilidades pero tambien te voy a dar algo para que tu digas bueno no vas a ir a bucear como te comento no los 700 que me sigas dando a la quincena.</p> <p>Sisal Interviews\Sisal_1: 31 - 31 (0)</p> <p>R: De donde venga. Yo digo de donde venga y primero que nada hacer que caiga en concencia el pescador. De donde venga el apoyo yo creo que el pescador lo va a recibir bien.</p> <p>Sisal Interviews\Sisal_1: 49 - 49 (0)</p> <p>El gobierno este te da un curso creo por tres horas por un dia y te viene pagando 7mil pesos</p> <p>Sisal Interviews\Sisal_4: 38 - 38 (0)</p> <p>Igual esta lo de la veda que en la veda tambien te pagan ese te creo que semanal te vienen dando como 350 mas una mercancia.</p> <p>Sisal Interviews\Sisal_4: 38 - 38 (0)</p> <p>Traemos deuda y lo que da el apoyo del gobierno pues no es mucho.</p> |
|--|---|--|

| | | |
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| | <p>Porque agarra el gobierno y para quitarle peso al campo empieza abrir como alternativa la pesca. Y empiezan a empujar a la gente que baje a los puertos a pescar. La estrategia cual es que arman pequeños permisionarios personas que se van equipando y van comprando lanchas y todo.</p> <p>San Felipe Interviews\San_Fe_4: 12 - 12 (0)</p> <p>Entonces esta, esta veda el gobierno del estado te da un apoyo.</p> <p>San Felipe Interviews\San_Fe_4: 30 - 30 (0)</p> <p>Creo que el gobierno lo manda creo anual o cada dos años y llega 7mil pos (pesos) por pescador</p> <p>San Felipe Interviews\San_Fe_5: 36 - 36 (0)</p> <p>I: Estos cursos son dados por gente del gobierno o?</p> <p>R: Si.</p> <p>I: Hablame un poquito de los cursos.</p> <p>San Felipe Interviews\San_Fe_6: 23 - 25 (0)</p> <p>Es que se llama el Empleo de la veda del mero.</p> | <p>Sisal Interviews\Sisal_6: 34 - 34 (0)</p> <p>Hacemos un trabajo por decir nosotros hacemos talacha. Por decir si esta sucio por aca juntamos un grupo y limpiamos y se hace una lista y se entrega ya sea al comisario o al comite nautico. Bueno le llaman jornada de trabajo se da la lista se apuntan y todo y para que nos puedan dar este una mercancia y 350 pesos a la semana</p> <p>Sisal Interviews\Sisal_6: 36 - 36 (0)</p> <p>O sea no los que les llegaron sus motores esta vez tienen ese problema Te ayudan y por eso [unintelligible] al ayudarte el vivo es el que ve el papeleo. [continues talking about lending with the government].....</p> <p>Sisal Interviews\Sisal_8: 30 - 30 (0)</p> <p>Es que el programa eso es lo dificil que le estoy platicando. Programas, por todos lados vienen los programs de apoyo pero aqui le llamamos apoyo al que dice me vas ayudar con 20 mil pesos te tengo que devolver 60 que ayuda es esa eso no es una ayuda</p> <p>Sisal Interviews\Sisal_8: 32 - 32 (0)</p> |
|--|--|---|

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| | <p>San Felipe Interviews\San_Fe_6: 60 - 60 (0)</p> <p>Los vales. Al mes son 2400 (pesos) lo que dan</p> <p>San Felipe Interviews\San_Fe_6: 62 - 62 (0)</p> <p>Bueno los otros talleres que nos han dado ha sido sobre una organizacion insitucion aqui que se llama CINACIQUA sobre buenas practicas de manejo de producto.</p> <p>San Felipe Interviews\San_Fe_7: 32 - 32 (0)</p> <p>Pues si estos momentos si hay un apoyo del gobierno creo que si es del gobierno de lo que es la veda. Ahora nos estan dando unos vales de despensa.</p> <p>San Felipe Interviews\San_Fe_9: 44 - 44 (0)</p> <p>Nos quitaron ya no no se porque razon ya no no los dieron. Pero si vamos a trabajar con los señores en las escuelas donde nos mandaba.</p> <p>San Felipe Interviews\San_Fe_10: 36 - 36 (0)</p> <p>Si esa vez no se como estuvo pero si tuve que ver el gobierno. Pero teniamos una cooperativa. En cooperativas si les dan en libres no.</p> | <p>De dinero todos te vienen a ofrecer pero en esa forma o sea con que idea de que tu trabajes para el porque tu estas pague pague y pague y no termina de pagar y despues no va ser tuyo el barco.</p> <p>Sisal Interviews\Sisal_8: 32 - 32 (0)</p> <p>gobierno del estado apoyo a los pescadores en esos dos meses de veda.</p> <p>Sisal Interviews\Sisal_11: 19 - 19 (0)</p> <p>recurso 300 pesos a la quincena</p> <p>Sisal Interviews\Sisal_11: 19 - 19 (0)</p> <p>R: Si pero, si te dice bueno vamos a comenzar la veda del mero pero no te dicen en base a que lo estan aplicando.</p> <p>I: No?</p> <p>R: No, solo te dice bueno va a comenzar la veda del mero de tal fecha a tal fecha.</p> <p>I: Entonces no hay como comunicacion?</p> <p>R: Asi es. Mas bien entre el gobierno y el pescador.</p> |
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| | <p>San Felipe Interviews\San_Fe_14: 42 - 42 (0)</p> <p>Pues ahorita ahorita por decir esta la veda del mero que es un apoyo que da el gobierno para que se respete igual la veda.</p> <p>San Felipe Interviews\San_Fe_15: 28 - 28 (0)</p> <p>Si. Si dan apoyos pero es esa.</p> <p>San Felipe Interviews\San_Fe_15: 32 - 32 (0)</p> | <p>Sisal Interviews\Sisal_13: 76 - 80 (0)</p> <p>R: Pues. Pues aca el que tiene que poner un fin como digo es el como se llama ese es el gobierno que pues tienen..[got confused where he was going] Como ellos ayormente tienen el poder para hacer la vigilancia y todo y ellos son los que pueden hacer todo.</p> <p>I: Entonces el gobierno. Como mas vigilancia?</p> <p>R: Mas vigilancia.</p> <p>Sisal Interviews\Sisal_14: 59 - 61 (0)</p> <p>Nos daban una despensa y como 400 pesos en efectivo. Ahorita en la actualidad no estan dando vales.</p> <p>Sisal Interviews\Sisal_15: 36 - 36 (0)</p> <p>eso nos estan dando y supuestamente salio a relucir de que en vez de que nos estan pagando 600 pesos como estan ya deberian ser 1500 y e un en el decreto del diaro oficial deberia hacer 750 semanales que le deberian de entregar al pescador y nadamas etregan 600.</p> |
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| | | <p>Sisal Interviews\Sisal_15: 36 - 36 (0)</p> <p>ahora un año el gobernador vino a, aquí, a inagu- o sea a proporcionar eh información turística publicación turística al puerto para que tengamos otra alternativa o sea me refiero a que si no puedes ir a pescar mero</p> <p>Sisal Interviews\Sisal_15: 44 - 44 (0)</p> <p>Pero ellos como hicieron, impusieron la veda pero tambien en mi opinion deberian haber tomado en cuenta la opinion de cada pescador en todo su litoral, no. No me refiero solo aqui en el Puerto de Sisal sino en todo el litoral para que vean ellos si daña o no daña la economia.</p> <p>Sisal Interviews\Sisal_15: 44 - 44 (0)</p> <p>Se arriesgan a ir a buscar mas dinero por decir para la familia. Porque de apoyo, de apoyo, de apoyo asi realmente no hay no existe.</p> <p>Sisal Interviews\Sisal_15: 56 - 56 (0)</p> |
| Olden things | Pero, entonces mi papa tenia una idea de diez años ya nos culco la pesca pero a mi no me gusto porque me vomitaba mucho y calentoso y no me regreso para Hunumca para trabajar la albeneria (albañeria). | <p>Conforme a los años, a los años. Y practica con otras personas ya mayores de edad.</p> <p>Sisal Interviews\Sisal_3: 16 - 16 (0)</p> |

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| | <p>San Felipe Interviews\San_Fe_2: 8 - 8 (0)</p> <p>Entonces pues ahi culco mi papa por ejemplo vino a pescar y depues nos trajo a nosotros y ya nos culco a mi papa la pesca, no, la pesca.</p> <p>San Felipe Interviews\San_Fe_2: 10 - 10 (0)</p> <p>" Le digo "No se ni amarrar un anzuelo como voy a ir" le digo. "Vamos alla aprendes".</p> <p>San Felipe Interviews\San_Fe_3: 12 - 12 (0)</p> <p>: Ha carga uno gasolina para llevar, suficiente como para 3-4 días. Se lleva uno su lunch y llevas este masa no, o sea en la lancha no se puede tortillar e llevas este barras. Llevas este barras alla. Este haces un ceviche alla en la lancha, tu pescado y con galletas soda.</p> <p>San Felipe Interviews\San_Fe_3: 36 - 36 (0)</p> <p>Si pues asi la vida del pescador.</p> <p>San Felipe Interviews\San_Fe_3: 100 - 100 (0)</p> <p>Pues yo creo que no. No, yo nunca quize que mi hijo sea pescador, no</p> | <p>De pescador empeze como empece con mi papa ha la sardinera como a los 12 años empezo a llevar.</p> <p>Sisal Interviews\Sisal_4: 6 - 6 (0)</p> <p>R: Eso depende, eso depende como este tu familia. A mi me gusto la pesca y me quede. Aye ese como mi hermano no de hecho mi hermano el mas grande igual es pescador que yo. Solo el que esta entre nosotros no, no le gusto la pesca y el esudtio por su parte.</p> <p>I: Y ha que se dedica el?</p> <p>R: El es creo que es gerente en un restuaran.</p> <p>I: Y aqui bueno por ejemplo en caso de tu familia tu papa era pescador tu abuelo tu bisabuelo? O sea son familia de como cuantas generaciones.</p> <p>R: Si, si son de como 3 generaciones.</p> <p>Sisal Interviews\Sisal_4: 8 - 12 (0)</p> <p>Si, en si de hecho mi papa es de indiera viajero pero dejo de ir y agarro la red con la sardina. Si ya despues me sali de la escuela y yo empece a trabajar con el. Dos años estuve trabajando con el</p> |
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| | <p>San Felipe Interviews\San_Fe_3: 116 - 116 (0)</p> <p>Por herencia digamos. Lo que pasa es que mi papa es pescador, mi hermana es pescador, y en aquel entonces la educacion no era tan digamos prioritaria.</p> <p>San Felipe Interviews\San_Fe_4: 4 - 4 (0)</p> <p>Practicamente son como enseñanzas que te van dando. O sea asi como yo les enseñe a mis hijos que en vacaciones se van a pescar conmigo o un fin de semana los llevo a pescar para que vayan aprendiendo a bucear.</p> <p>San Felipe Interviews\San_Fe_4: 8 - 8 (0)</p> <p>Porque toda mi familia a sido pescadora. Mi papa fue pescador mis hermanos son pescadores yo tambien soy pescador. Mi abuelito es pescador mi bisabuelo es pescador. Todos si muchas generaciones de mi familia son pescadores. Tengo cuatro hermanos mas y todos son pescadores.</p> <p>San Felipe Interviews\San_Fe_5: 4 - 4 (0)</p> <p>Pero es que para ese tipo de pesca tienen que haber viento. Si no hay viento no pescas</p> <p>San Felipe Interviews\San_Fe_5: 26 - 26 (0)</p> | <p>Sisal Interviews\Sisal_7: 10 - 10 (0)</p> <p>Es que de trabajar de verdad si se puede trabajar. Si se puede trabajar o sea si va a ver siempre para ellos.</p> <p>Sisal Interviews\Sisal_8: 22 - 22 (0)</p> <p>Entonces nuestra esperanza ahorita viene en la pulpiada. O sea esa estamos esperando a ver.</p> <p>Sisal Interviews\Sisal_9: 34 - 34 (0)</p> <p>Porque le habia yo comentado. Como pues toda la familia de mi papa y todos vienen de raiz que son pescadores o sea de años pues a mi me llamaba mucho la atencion me gustaba, me gustaba ir o sea a veces cuando estaba estudiando a veces decia yo apenas ha acabar las clases y venir las vacaciones yo me iba yo a pescar. Y a veces hasta fin de semana o sea entre que iba yo a la escuela o sea fines de semana que tenia la oportunidad me iba porque me llamaba la atencion. Me gustaba. Y de alla fue en que me fui. Y ya cuando pues deje la escuela ya como a los 19 años fue cuando ya me fui de lleno a la pesca.</p> <p>Sisal Interviews\Sisal_9: 46 - 46 (0)</p> |
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| | <p>Ehm pues claro nosotros ya sabiamos, sabemos como se trabaja en el mar pues ya sabemos, no.</p> <p>San Felipe Interviews\San_Fe_6: 26 - 26 (0)</p> <p>Podria ser por tradicion podria decirce</p> <p>San Felipe Interviews\San_Fe_7: 4 - 4 (0)</p> <p>Mi papa es pescador este yo de niño iba yo a pescar</p> <p>San Felipe Interviews\San_Fe_8: 8 - 8 (0)</p> <p>esde que sali de la escuela este mi papa compra lo que es aca en esta planta bueno compraba y me invitaban a pescar.</p> <p>San Felipe Interviews\San_Fe_9: 4 - 4 (0)</p> <p>empece a ir a trabajar me inivtaban tios a ir a pescar. Me iba yo a pescar, no</p> <p>San Felipe Interviews\San_Fe_9: 32 - 32 (0)</p> <p>Pues nosotras desde chamaquitas nos ibamos aca en la orilla a pescar y pescabamos y regresabamos</p> | <p>Ah entonces cuanto scabamos al dia. Pues como hemos dicho siempre el pescador va y asi como tiene suerte puede salir bien hay veces que no hay.</p> <p>Sisal Interviews\Sisal_14: 21 - 21 (0)</p> |
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| | <p>San Felipe Interviews\San_Fe_10: 4 - 4 (0)</p> <p>Pues hasta donde yo se solo somos nosotras. Si. De hecho teniamos formado una cooperativa que se llamaba "Mujeres Trabajadoras del Mar".</p> <p>San Felipe Interviews\San_Fe_11: 16 - 16 (0)</p> <p>Yo tengo 55 años cuando mi papa me llevaba a pescar desde los 7 años comence a ir con el mi papa nos crecio con pura tarralla. El vivia de la tallarada. De eso vivia. Nos ibamos de las 11 de la noche atarrayaba la liset o la rayalla y nos ibamos a islas Cerritos a planca no habia motor.</p> <p>San Felipe Interviews\San_Fe_12: 6 - 6 (0)</p> <p>Desde la edad de 8 años me llevaban mis hermanos.</p> <p>San Felipe Interviews\San_Fe_13: 2 - 2 (0)</p> <p>A si. Porque buscan que se defiende ellas como mujeres se defienden de la pesca. En la carnada pa'l pulpo cuando el pulpo ganan su buena lana. Si.</p> <p>San Felipe Interviews\San_Fe_13: 54 - 54 (0)</p> | |
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| | <p>Pues por mi mama. Mi mama eh como es la primera pescadora de San Felipe entonces ella empezamos a crecer y a mi no me gustaba estudiar. En segundo de secundaria yo pedia decia que estaba enferma con tal de ir a pescar con ella.</p> <p>San Felipe Interviews\San_Fe_14: 4 - 4 (0)</p> <p>Si. Todo me decia cuando estaba yo como tengo un niño de 10 años y empiezo a ir con el entonces mi mama empezaba a ir conmigo y me decia aqui te vas a balizar aqui hay piedras aqui hay esto esto es tal terreno se llama tal y como fui creciendo fui aprendiendo. Asi me. Se tiraba a bucear ella y para que yo como se llama aprenda algo me decia te voy a tirar y tu vas a recoger las langostas y cuando no llegaba con una palanca me ponía en la espalda y claro que ella sabia medir el tiempo hacia que yo llegue asi nos enseñó a todas nosotras.</p> <p>San Felipe Interviews\San_Fe_14: 10 - 10 (0)</p> <p>Mi abuelo. Mi abuelo es y ahorita ya fallecio pero igual casi uno de los primeros pescadores de aca de San Felipe. El de todo hacia redes todo maxquil todo todo.</p> <p>San Felipe Interviews\San_Fe_14: 16 - 16 (0)</p> | |
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| | <p>Pues porque pues mi mama toda la vida a trabajado de eso y este pues me lo enseño y desde que deje de estudiar pues me dedique a la pesca.</p> <p>San Felipe Interviews\San_Fe_15: 4 - 4 (0)</p> | |
| Lack of opportunity | <p>Pues llega a ser pescadora por la necesidad y por pues por que era lo único que yo podía hacer acá</p> <p>San Felipe Interviews\San_Fe_1: 4 - 4 (0)</p> <p>No, no,no. Te da para sobrevivir pero no es, no es.</p> <p>San Felipe Interviews\San_Fe_2: 42 - 42 (0)</p> <p>Realmente la necesidad me trajo aca. Por que yo me case y me fui a Chetumal a trabajar de albañil.</p> <p>San Felipe Interviews\San_Fe_3: 12 - 12 (0)</p> <p>mhmm por lo de la veda del mero. Porque si hay veda realmente la gente ya no sale a pescar.</p> <p>San Felipe Interviews\San_Fe_3: 82 - 82 (0)</p> <p>Andale un equipo asi es. El otro ahora poco se recibio se graduo en Valladolid y se fue a Merida. Esta en Merida el. Es licenciando de administracion. Andale. Esta trabajando en un este super (grocery store) o algo asi.</p> | <p>Por que pues no me gustaba la escuela y busque la parte mas, mas facil no.</p> <p>Sisal Interviews\Sisal_1: 7 - 7 (0)</p> <p>Ya no hay otra fuente de trabajo aqui que digas pues voy hacer esto.</p> <p>Sisal Interviews\Sisal_1: 27 - 27 (0)</p> <p>Por ejemplo la vedas de langosta son 4 meses nadie lo espera. Todo el mundo sigue buceando. La veda del pulpo, todo el mundo sigue pescando. La veda del mero la siguen pescando entonces ahorita pescar un mero de 2 kilos eres un rey. Ya no existen ya no hay</p> <p>Sisal Interviews\Sisal_1: 27 - 27 (0)</p> <p>Claro que si la hay. Si la hay. Pero le tienes que dar alternativas a la gente.</p> <p>Sisal Interviews\Sisal_1: 29 - 29 (0)</p> |

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| | <p>Mientras ya metio sus papeles a ver donde le va a salir. Cuando el sale pues.</p> <p>San Felipe Interviews\San_Fe_3: 112 - 112 (0)</p> <p>Pero como ahorita que estamos en veda igual estamos en veda de febrero hasta abril pues no hay nada que hacer estamos asi en ehstop. Y sobreviviendo de lo que hay</p> <p>San Felipe Interviews\San_Fe_4: 14 - 14 (0)</p> <p>. Te tienes que buscar dos o tres alternativas pa que hagas porque solo de la pesca, no.</p> <p>San Felipe Interviews\San_Fe_4: 16 - 16 (0)</p> <p>No es porque nos guste la pesca sino es por la necesidad que tuvimos</p> <p>San Felipe Interviews\San_Fe_5: 8 - 8 (0)</p> <p>Bueno pues seguro seguro no estamos de que podemos vivir todo el tiempo de la pesca.</p> <p>San Felipe Interviews\San_Fe_5: 52 - 52 (0)</p> | <p>Entonces durante ese tiempo empiezan los nortes. Entonces cuando ya no pescas que hace el pescador, realmente, des pues de. No hace nada. Hay mal tiempo no puede salir al mar. Que opcion le tienes tu, gobierno, empresas, colegios o lo que quieras para que pueda vivir. Que me das a mi. Entonces busco la manera busco mi escopeta y me voy. Estoy mal siempre. Me estoy llendo a casar un venando. Siempre este chueco.</p> <p>Sisal Interviews\Sisal_1: 39 - 39 (0)</p> <p>[starts to talk about veda for different land animals that can't be hunted] Entonces empezamos a, que hacen, a pues me contrataron para hacer una palapa. Pero yo que es lo que queiro, que es lo quiero hacer. Bueno voy hacer la palapa si ya me dieron dinero para la madera yo la compro, pero me quiero ahorrar ese dinero cabeza chueca, a la talo en el monte y me la chingo...Pero quien los investiga. Bueno no te voy a multar ya te descubri cortaste 20 arboles vas a sembrar 200 y vas a ver que crezca. Esa es tu multa. Ahi podemos ayudar a las autoridades pero y como pues a quien te diriges. Tenemos las vedas de las tortugas en el mar. Ahorita estan subiendo las tortugas a ovar es su temporada. Esta es la temporada y la gente la sale a buscar para que se las chingue y se las coma. Por que no les das alternativas. Es facil al que bucea te repito tu vas a ir hoy a investigar que</p> |
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| | <p>Se enfermo mi papa y pues mi mama pues no trabajaba. Estuvo pues mucho tiempo en el hospital y pues tuve que dejar de estudiar para poder trabajar y ayudarlos</p> <p>San Felipe Interviews\San_Fe_6: 6 - 6 (0)</p> <p>Debido igual a las necesidades de otros de otras personas a venir a pescar aqui, no.</p> <p>San Felipe Interviews\San_Fe_8: 10 - 10 (0)</p> <p>Como le decia tambien hay que entender que pues el trabajo de campo es muy cansado y asi como el dia de hoy el que estamos en veda te das cuenta que noy hay absolutamente nadie cuando hay temporada buena por ejemplo la langosta en aquel entonces se daba el pepino el pulpo el buceo hay un derrame economico enorme dentro del mismo puerto y aveces las personas se quedan con la mentalidad de que pues todo el año hay que ir y que hay fuentes de ingreso cuando en realidad no es asi.</p> <p>San Felipe Interviews\San_Fe_9: 38 - 38 (0)</p> <p>Pues es un es una cadena tienen que trabajar para que sobrevivan ellos tambien asi es la vida de aca del puerto. Como no les gusto el estudio pues tienen que ir a bucear.</p> <p>San Felipe Interviews\San_Fe_10: 28 - 28 (0)</p> | <p>nadie toque esas tortugas. Su trabajo por los 700 que te doy.</p> <p>Sisal Interviews\Sisal_1: 41 - 41 (0)</p> <p>Yo no se lo recomiendo a nadie. Hasta a mis sobrinos les digo yo, estudien. Vayan se de Sisal aqui solo es pesca.</p> <p>Sisal Interviews\Sisal_1: 47 - 47 (0)</p> <p>Este trabajando en la empresa camaronera. Aquel entonces se llamaba Peces. Entonces ya dio el momento de que se vino a separar pa' bajo la empresa y ya pues fue que empezamos a trabajar de la pesca.</p> <p>Sisal Interviews\Sisal_2: 5 - 5 (0)</p> <p>Pero igual no, no resluta ya no, ya no resulta, ya no alcanza.</p> <p>Sisal Interviews\Sisal_4: 38 - 38 (0)</p> <p>Pues primero empecé a la sardina ese era mi rol y luego deje la sardina me fui a bucear, no, y ya. Siempre he sido hasta ahorita mi buceo.</p> <p>Sisal Interviews\Sisal_5: 10 - 10 (0)</p> |
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| | <p>No. Pues lo de la veda del mero que les dan sus vales de la despensa cada semana es lo unico pa ellos.</p> <p>San Felipe Interviews\San_Fe_10: 30 - 30 (0)</p> <p>Y eso pues nos perjudica porque no gano nada. Gano 1600 (pesos) a la quincena. Y pos no me da.</p> <p>San Felipe Interviews\San_Fe_11: 28 - 28 (0)</p> <p>Si. Vienen nos ilusionan y despues uuu nos caemos otra vez. Y para sacar permiso de turismo es caro. Y para tener las lanchas adecuadas tambien.</p> <p>San Felipe Interviews\San_Fe_11: 40 - 40 (0)</p> <p>Pues nos llevaba porque habia necesidad de trabajar todos en la casa. Nosotros fuimos 7 hermanos mas mi papa mi mama. Pues habia que mantener en esa epoca teniamos que mantener la casa. Ver como la manteniamos porque no habia como ganar dinero.</p> <p>San Felipe Interviews\San_Fe_13: 6 - 6 (0)</p> <p>Si y llego un momento que le dije "Ya no quiero la escuela" ya me dice pues "Esta bien" y empece a enseñarme poco a poco y por eso me gusta.</p> <p>San Felipe Interviews\San_Fe_14: 6 - 6 (0)</p> | <p>Para una pulpeada. Por la economia eh es cuando hay mas dinero en la pulpeada. Y ya de alla me. Termine la pulpeada y empezamos a ir de viaje y todo. Me dedique a la escama igual.</p> <p>Sisal Interviews\Sisal_6: 8 - 8 (0)</p> <p>ues no hacemos nada. No podemos salir a trabajar por ejemplo asi dias despues que pase el nortes se trepan las redes y ya se puede ir a trabajar las redes. Pero durante un norte pues al menos que tengas otro trabajito. Solo asi se puede ayudar pues.</p> <p>Sisal Interviews\Sisal_6: 22 - 22 (0)</p> <p>Pues decimos que habia un poco la necesidad no de que los papas en ese tiempo si habia mucho producto porque habia mucha pesca pero muy barato eran por centavos se pagaba en ese tiempo o sea no como ahorita que si quieres por un pescado te cuesta por decir 200 pesos.</p> <p>Sisal Interviews\Sisal_8: 6 - 6 (0)</p> <p>O sea pues que no habia otro o sea no termine estudios donde podia ir solo la pesca y de ahi pues comence a trabajar de un promedio de un 40-45 años en la pescador.</p> |
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| | <p>Yo vivo de la pesca realmente yo si vivo de la pesca pues mis planes es igual independisarme de la pesca pero pues poco a poco.</p> <p>San Felipe Interviews\San_Fe_15: 56 - 56 (0)</p> | <p>Sisal Interviews\Sisal_8: 6 - 6 (0)</p> <p>El año pasado pues estuvo buena no le voy a decir que estuvo mal. Hubo pescado hubo pulpo pero este año en que comenzamos la pasca o sea bajo bastante. A estado muy complicado este año</p> <p>Sisal Interviews\Sisal_9: 34 - 34 (0)</p> <p>En el turismo si. O sea en otros años he trabajado en la caseria de patos o sea porque aca se practica la casa deportiva. Pero pues buscando otra opcion en este año pues ya me incorpore con ellos.</p> <p>Sisal Interviews\Sisal_9: 44 - 44 (0)</p> <p>Pero como hay poco ya la gente pues como es su fuente de ingreso ya la gente opto por hacer hasta lo ilegal por tal de que tenga el sustento de su familia. Por que es una actividad o sea es su trabajo, es su trabajo</p> <p>Sisal Interviews\Sisal_9: 48 - 48 (0)</p> <p>Pues aqui como toda las cosas no hay que buscar la forma de como empezar a ganar dinero y este pues esa era una de las ocupaciones que mas hay aqui en el puerto, no, por ser puerto y pues mas que nada ya cuando pues busque mi mujer que se convirtio en mi</p> |
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| | | <p>esposa yo dije pues hay que buscar el dinero para el susteno, no.</p> <p>Sisal Interviews\Sisal_13: 6 - 6 (0)</p> <p>Exacto. Mis padres, nuestros padres si eran campesinos o sea se dedicaban a lo que es el campo en ese entonces pues aqui habia muchas casas de paja y entonces a eso se dedicaba el, no, a sacar la paja la maderas que componen las casas o hacer unas nuevas.</p> <p>Sisal Interviews\Sisal_13: 24 - 24 (0)</p> <p>R: Bueno, con la primera que empezo a pescar era una de mis primas entonces era una muchacha en ese tiempo pues igual por la misma necesidad de no hay trabajo ella esta sola tuve creo que un su primer hijo. Entonces la misma precion de lo economico hizo que vaya a pescar. La unica diferencia que entre ella que su hermanitos si tenian una embarcacion. Entonces no habia problema ellos la llevaban y asi pescaba, no.</p> <p>Sisal Interviews\Sisal_13: 90 - 90 (0)</p> <p>I: Entonces llegaron de osea fueron agricultores los que llegaron gente campesina.</p> |
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| | | <p>R: Si, si exactamente. Porque les cortaron asi de pango les cortaron sus, sus ingresos. Entonces el gobierno se lavo las manos y ve ya entonces lo que hizo el gobierno en este caso es incentivar dar, dar los, as facilidades para que ellos fueran adquieriendo sus lanchas o algo programas asi, no. Pero el problema fue que ibamos a dar una atorre al pescado no busco alternativas mas, mas este no tan agresivas.</p> <p>Sisal Interviews\Sisal_13: 120 - 121 (0)</p> <p>I: Y como fue que llego a ser pescador?</p> <p>R: Por necesidad.</p> <p>I: En tu familia hay otros?</p> <p>R: Son somos familia grande. Tenemos cinco hermanos y cuatro hermanas. Y entonces por cuestiones económicas no me permitieron a estudiar. Y ya desde eso a raíz de eso desde chico empece a trabajar en el mar.</p> <p>Sisal Interviews\Sisal_15: 5 - 8 (0)</p> <p>En cambio la vida de aca es el mar sino hay pesca en el mar pues no hay otra cosa no hay actividad no tenemos rio no tenemos nada de eso.</p> <p>Sisal Interviews\Sisal_15: 34 - 34 (0)</p> |
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| | | <p>Si. Creo que ya son dos meses que no puedes pescar mero y el fuerte de esta zona es el mero el negrillo pero no lo puedes traer ahorita muchas cosas que se, que se estan cerrando.</p> <p>Sisal Interviews\Sisal_15: 38 - 38 (0)</p> <p>Entonces baja el ritmo de vida de todo los pescadores la economia por cuanto se lastima. Las familias salen perjudicadas.</p> <p>Sisal Interviews\Sisal_15: 44 - 44 (0)</p> <p>Entonces practicamente si eramos por ejemplo vamos hacerlo asi antes 500 y ahorita son 1mil 2mil entre todos en todas en toda la comunidad o sea Sisal, Hunucma y su comiseria entonces practicamente por logico que se divide. Todos van a pescar menos.</p> <p>Sisal Interviews\Sisal_15: 52 - 52 (0)</p> <p>Entonces practicamente el la gente la necesidad de la gente mas que pues anteriormente la gente no venia a pescar por ejemplo la gente de Hunucma por que tenian lo del henequen.</p> <p>Sisal Interviews\Sisal_15: 56 - 56 (0)</p> |
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| <p>Part-time jobs</p> | <p>no me regreso para Hunumca para trabajar la albeneria (albañeria)</p> <p>San Felipe Interviews\San_Fe_2: 8 - 8 (0)</p> <p>Como yo so guia tambien hay otros que son (que son) por ejemplo ganaderos que se dedican por ejemplo al ganadero hay otros que se dedican por ejemplo a la agricultura hay otro que son albañiles, si, entonces hay otros que tienen sus fonda.</p> <p>San Felipe Interviews\San_Fe_2: 28 - 28 (0)</p> <p>Este pues los que tienen ranchos se van a sus ranchos. Los que no se quedan aca ir a cimbrar. A buscar que hacer.</p> <p>San Felipe Interviews\San_Fe_3: 72 - 72 (0)</p> <p>disminuyido tanto la pesca a tal grado que vas y no pescas no traes entonces la gente se va a sus pueblos al campo a lo que siempre han hecho habitualmente. Y se alejan del mar un poco.</p> <p>San Felipe Interviews\San_Fe_4: 14 - 14 (0)</p> <p>por ejemplo yo me dedico al turismo al rancho y asi voy alternando mi, mis dias</p> | <p>El 97% es pesca 3% es el resto. Asi de sensillo. Una empresa hay de camarones esta ahi [points just east of town] y tiene pura gente de Hunucma ni uno de Sisal.</p> <p>Sisal Interviews\Sisal_1: 43 - 43 (0)</p> <p>Yo me dedico a la pesca con anzuelo cordel al turismo y al buceo.</p> <p>Sisal Interviews\Sisal_3: 18 - 18 (0)</p> <p>Si es otro tipo de ingreso. Es pesca recreativa.</p> <p>Sisal Interviews\Sisal_3: 20 - 20 (0)</p> <p>Pues ahorita esta lo del [stumbles over words] lo de eso de los motoventures que llevan eso turistas y todo. Hay mucha gente que es pescador y tiene taxi [mototaxi] pues ya se dedica a eso. Ya cuanda ya mejora la pesca ya regresan.</p> <p>Sisal Interviews\Sisal_4: 42 - 42 (0)</p> <p>Es la pesca y la fibra y vidrio. Por asi Sisal no se otra cosita de albañeria o algo asi pues tambien voy.</p> <p>Sisal Interviews\Sisal_6: 24 - 24 (0)</p> |
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| | <p>San Felipe Interviews\San_Fe_4: 16 - 16 (0)</p> <p>Bueno mi abuelito no tiene mucho que murio pero el dejo la pesca pues porque le gustaba mas el campo.</p> <p>San Felipe Interviews\San_Fe_5: 8 - 8 (0)</p> <p>Entonces seguro seguro no estamos de que estamos de que podamos vivir de la pesca. Pero tal vez si o tal vez no segun como sigue como si nosotros seguimos.</p> <p>San Felipe Interviews\San_Fe_5: 52 - 52 (0)</p> <p>O sea yo creo que si deja de a ver pesca pues yo haria todo pues lo que yo ya aprendido en estos años</p> <p>San Felipe Interviews\San_Fe_5: 56 - 56 (0)</p> <p>Trabaje alla eh cocina en varios hoteles despues trabaje de operador de maquinaria pesada en Calcias Industriales del Carmen eh para Vulcan.</p> <p>San Felipe Interviews\San_Fe_8: 6 - 6 (0)</p> <p>Alejarnos mas este buscar otras alternativas</p> <p>San Felipe Interviews\San_Fe_8: 10 - 10 (0)</p> | <p>Otro empleo aha (affirmative)</p> <p>Sisal Interviews\Sisal_6: 26 - 26 (0)</p> <p>Muy poquito lo trabajo entre sus estudios porque neccestaba algo y no me alcanzaba pues el iba a la pesca lo ganaba y ya se volvia a ir. O sea ellos estan en el turismo ahorita no se si te dijo.</p> <p>Sisal Interviews\Sisal_8: 10 - 10 (0)</p> <p>ues en este caso eh este año me incorpore a la empresa a la Descubre Sisal. Eh ellos que tienen hecho este pues en forma turistica para ofrecer al turismo este los ojos de agua que tenemos aca y con ellos he estado trabajando y ellos me han dado este me han dado trabajo o sea es una fuente de ingreso que ya no es solo la pesca sino ya es otro opcion para lo que es.</p> <p>Sisal Interviews\Sisal_9: 42 - 42 (0)</p> <p>Pero, pero pues no es gente mayormente que no depende de la pesca.</p> <p>Sisal Interviews\Sisal_10: 40 - 40 (0)</p> |
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| | <p>Entonces si tenemos que buscar otra solucion por nuestro bien estar no.</p> <p>San Felipe Interviews\San_Fe_8: 32 - 32 (0)</p> <p>Ahorita en la planta, si este es de mi papa.</p> <p>San Felipe Interviews\San_Fe_9: 48 - 48 (0)</p> <p>eh policia. Yo demañana voy a trabajar de noche si puedo yo ir a pescar pero asi de mañana si quisiera pero. Tengo otro trabaja</p> <p>San Felipe Interviews\San_Fe_11: 28 - 28 (0)</p> <p>Turismo vemos a ver que hacemos.</p> <p>San Felipe Interviews\San_Fe_11: 38 - 38 (0)</p> <p>Pa'nosotras? Ir a simbrar.</p> <p>San Felipe Interviews\San_Fe_14: 34 - 34 (0)</p> <p>Yo aveces voy de noche porque como ahorita estoy con el y tengo el taller mayormente me quedo aca a flojear.</p> <p>San Felipe Interviews\San_Fe_14: 34 - 34 (0)</p> | <p>on por ejemplo personas que tienen mototaxi o trabajan en otra cosa pero no presisamente son pescadores.</p> <p>Sisal Interviews\Sisal_10: 40 - 40 (0)</p> <p>la gran mayoria de Hunucma se regresen se dedican a otra actividad basicamente albañeria tricitaxis y alguno que otro pues busca de velador o de otro tipo de empleo</p> <p>Sisal Interviews\Sisal_11: 27 - 27 (0)</p> <p>cuando viene la temporada de la veda del mero la gente de Hunucma la gente que migra para aca a pescar se regresa y buscan fuentes de como entrarle.</p> <p>Sisal Interviews\Sisal_11: 43 - 43 (0)</p> <p>Anteriorment habia la caseria de patos que era una actividad que tambien sustentava mucho al puerto</p> <p>Sisal Interviews\Sisal_11: 43 - 43 (0)</p> <p>Exactamente no se porque te digo lo alternaba con, con bueno una temporada de pesca del año otra temporada trabajaba de mesero en el Club de Patos y asi igual con la sastreria o sea epocas que habia mucha costura me dedicaba exclusivamente a eso.</p> |
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| | <p>pues por decir como te digo vas en las redes hace tu trabajito y sale. Te ayudas tambien con eso</p> <p>San Felipe Interviews\San_Fe_15: 28 - 28 (0)</p> | <p>Sisal Interviews\Sisal_13: 8 - 8 (0)</p> <p>laro, eso del turismo ya tiene estamos como unos 10 años cuando mucho que empezo el auje ahorita ya se esta asetuando mucho mas por la difusion que se le esta dando y todo eso, no.</p> <p>Sisal Interviews\Sisal_13: 44 - 44 (0)</p> <p>Asi fue llendo mi tiempo y fui creciendo ya atreves del tiempo yo dijo no puedo seguir asi. Lo que tengo que salir es adelante. Pues agarre y primero compre un botesito y pues ahi estuve llendo.</p> <p>Sisal Interviews\Sisal_14: 9 - 9 (0)</p> <p>Entonces logico que habia mucho no para todo. Ahorita pues estamos hablando solamenta ahorita en la acutalidad estamos hablando puah facil viniendo los de Hunucma solo Hunucma vienen como mil pescadores para la pulpeada.</p> <p>Sisal Interviews\Sisal_15: 30 - 30 (0)</p> <p>Muchos son taxistas muchos se dedican a taxiar ahorita que esta mala la pesca pues vienen se dedican albañil a otras cosas.</p> |
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| | | Sisal Interviews\Sisal_15: 34 - 34 (0) |
| Changes in technology | <p>De pesca artesanal por que pues antes el buceo era a pulmon la, la pesca era pues nada mas con cordel. Bueno ahorita hay otros tipos de red pero antes era muy como que un poco dificil que los pescadores obtengan sus redes mayormente pues era pues era las cosas eran manuales no, ni siquiera tenian motores todos iban a vela.</p> <p>San Felipe Interviews\San_Fe_1: 4 - 4 (0)</p> <p>Este es una de las pescas que se hacian primero era con anzuelo bicheriado buceado pero luego ya pusieron esa tecnica. Empezaron con esa tecnica de la jimba ya con cuando se pescaba el pulpo.</p> <p>San Felipe Interviews\San_Fe_1: 14 - 14 (0)</p> <p>O sea porque era un barco despacio (tuk a tuk a tuk) un motor disel o sea cuando mucho te vas unos 7-8 nudos es lo mas que vas,mm, entonces teniamos que ir de viaje unos viajes de 2-3 dias para que pueda ser rectodible la pesca mm. Ese aquel entonces en barquitos despues de ese (cough) pues ya la gente pues la juventud se dio cuenta de que es muy riesgoso ir de viaje. Tienes que dormir 2-3 noches alla pues a toda la gente por vender los barquitos todos vendieron sus barquitos si hubo atlantes y obtuvieron por comprar lanchas, o sea mas rapido. Tu vas a pescar y vienes.</p> | <p>A la pesca antes ha ahorita era super bien. Dicen que sin hielo podian pescar. No tardaban solo salean y ya dos tres horas ya llenaban ya agarraban 300-400 kilos</p> <p>Sisal Interviews\Sisal_4: 14 - 14 (0)</p> <p>Era a las vela tienes que poner la velas eran de madera las embarcaciones entonces cuando empezabas a ganar igual que ellos? Cuando podias para un palo de vela pues si mayor y podias sisal la vela quitar la. Ese tiempo diario se tenia que ir bueno eran motores pequeños no de 25 caballos pero diario lo tenias que llevar a la casa y diario al otro día tenias que sacar las velas todo te tienas que llevar a casa.</p> <p>Sisal Interviews\Sisal_8: 8 - 8 (0)</p> <p>esos tiempos eran botes. Que se manejaban con vela</p> <p>Sisal Interviews\Sisal_9: 20 - 20 (0)</p> <p>Y ahora no ahora vino a cambiar de que ahora son lanchas son lanchas rapidas o sea que puro motor con gasolina.</p> <p>Sisal Interviews\Sisal_9: 22 - 22 (0)</p> |

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| | <p>San Felipe Interviews\San_Fe_2: 20 - 20 (0)</p> <p>No este motores mas chicos esa vez. De 25 caballos de 30 caballos ahora pues ya hay motores mas grandes de 50 caballos</p> <p>San Felipe Interviews\San_Fe_3: 14 - 14 (0)</p> <p>No es con compresora. Aca no usa ni tanque la gente porque el tanque no te da resultado. Porque tardas abajo hay gente que tarda 3 horas abajo trabajando. Con la bocquilla con la manguera alla arriba se da el aire con compresor y abajo estas trabajando. Pistiolando pescado engancho pescado. El tanque no te va aguantar el aire.</p> <p>San Felipe Interviews\San_Fe_3: 104 - 104 (0)</p> <p>Porque estas lanchas son ribereñas son pequeñas.</p> <p>San Felipe Interviews\San_Fe_4: 20 - 20 (0)</p> <p>La pesca del carito la siera y todo ese producto pues casi todo el año pues no lo puedes pescar. Hasta que empezaron los malos tiempos los nortes los frentes de frio es cuando el producto baja y lo puedes atrapar con las redes.</p> <p>San Felipe Interviews\San_Fe_4: 34 - 34 (0)</p> | <p>ea motores de cuatro tiempos que consumen menos gasolina</p> <p>Sisal Interviews\Sisal_9: 32 - 32 (0)</p> <p>Ah pues solamente el unico que ha cambiando es el palandre por que en ese tiempo cuando yo empeze solamente era lo que es este-m la rubia</p> <p>Sisal Interviews\Sisal_10: 20 - 20 (0)</p> <p>de hecho aca ya se esta este estinguendo la bolsa el plastico todo eso el unicel ahorita les dan cajas y todo lo que llevan al mar ellos lo tienen que regresar.</p> <p>Sisal Interviews\Sisal_10: 30 - 30 (0)</p> <p>No habia motor no habia nada de eso de que tienen que llevar gps o videosonda como ahora.</p> <p>Sisal Interviews\Sisal_10: 38 - 38 (0)</p> <p>De hecho mis abuelos cuando empezaron la pesca no habia hielo entonces ello lo azaban al pescado.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> |
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| | <p>A veces no porque nosotros no lo hagamos bien en el fondo aunque trabajemos bien sino es por eso, por eso que por esos, por esa toxicidad que jala la compresora pues nosotros llegamos a tener intoxicaciones</p> <p>San Felipe Interviews\San_Fe_5: 20 - 20 (0)</p> <p>osotros vamos al mar tenemos numerado con el GPS las cuevas las piedras entonces vamos nosotros de noche vamos.</p> <p>San Felipe Interviews\San_Fe_6: 34 - 34 (0)</p> <p>Bueno siempre esta activo no pero nosotros los podemos pescar con las artes de pesca que teniamos.</p> <p>San Felipe Interviews\San_Fe_7: 12 - 12 (0)</p> <p>Claro con el tiempo se cambiaron las artes de pesca empezo a entrar la tecnologia.</p> <p>San Felipe Interviews\San_Fe_7: 14 - 14 (0)</p> <p>R: Pues en cuestion de la tecnologia estamos hablando del GPS y no se manejaba el GPS solamente se usaban brujulas.</p> | <p>Ya cuando nostotros empezamos ir a pescar pue ya habia el hielo</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>esos años como le digo no habia este no habia motores marinos fuera del bordo sino que puro vela puras velas que usabamos</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>El combustible es mas caro ya esta tipo de embarcacion requiere afuerza el combustible ya no se usa la vela o el viento como se usaba en antaño.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>Si no que ahorita se sube y se arranca y se estan llendo</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>Atraves del tiempo la verdad yo tambien ya los botes ya se empezaron a desaparecer ya cuando el huracan Gilberto todo ya todos los botes ya desaparecieron en plano entonces entraron las lanchas.</p> <p>Sisal Interviews\Sisal_14: 9 - 9 (0)</p> |
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| | <p>San Felipe Interviews\San_Fe_7: 22 - 22 (0)</p> <p>Si bueno eso es otra de las cosas que cambiaron las maquinas los motores de las lanchas</p> <p>San Felipe Interviews\San_Fe_7: 56 - 56 (0)</p> <p>Habia langosta chernas y en ese entonces no habia ni hielo salado hacian todo.</p> <p>San Felipe Interviews\San_Fe_10: 6 - 6 (0)</p> <p>n una chalana grande de madera. Grande mas grande que las normales. Y el planquiando el nos ibamos a las yerbas secas del cerro que se llama y a simbrar corvina. Despues bajabamos nos pasban habia un crew de corvina blanca. Cordeliabamos y las 11 del dia estabamos de vuelta aca. No existia hielo para llevar.</p> <p>San Felipe Interviews\San_Fe_12: 8 - 8 (0)</p> <p>Cuando tenia 11 años ya empece comenze a bucear yo con compresor. Con compresor.</p> <p>San Felipe Interviews\San_Fe_12: 10 - 10 (0)</p> <p>Ahorita ya no hay. Ya no hay. Tanto ruido de motor que ya no pega, tanto ruido de motor.</p> | <p>Ay son botes con velas. Y nosotros asi pescamos con botes con velas pero ya habia motor. Ya habia su motorcito y aparte la vela no para ayudarse.</p> <p>Sisal Interviews\Sisal_14: 11 - 11 (0)</p> <p>Para marbotera no pues asi tener algo hacimos la casa, esta casita de ahi ya adqueri una lanchita que me dieron para trabajar y conseguí un motor y asi segui llendo y llendo hasta la fecha</p> <p>Sisal Interviews\Sisal_14: 11 - 11 (0)</p> <p>I: El buceo?</p> <p>R: Si.</p> <p>I: Me hablas de eso.</p> <p>R: Si los buceos estan alla bajo. Ellos tiran pescados que ya pues hemos dicho que el pescado esta tu cordel alla y no te guinda pues no lo vas a jalar. Pero el buceo si lo ve alla lo saca.</p> <p>Sisal Interviews\Sisal_14: 48 - 51 (0)</p> <p>Cuando yo empece este no habían no existían las lanchas de fibra y vidrio eh pura botes de madera y</p> |
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| | <p>San Felipe Interviews\San_Fe_12: 16 - 16 (0)</p> <p>De madera. De madera este los poquitos poquitos poquitos motores que habian eran de bas bistrato yamaha.</p> <p>San Felipe Interviews\San_Fe_12: 18 - 18 (0)</p> <p>Todo era como se llama no teniamos ni una comunicacion los pescadores con otras personas que para vender bien el producto. Sino habia un señor de la tienda aca que tenia una tienda, dos tiendas habian, que tenia que comprarnos el pescado para poderle comprar a el. Pa tener dinero para comprarle a el.</p> <p>San Felipe Interviews\San_Fe_13: 6 - 6 (0)</p> <p>Eran unas cayucones asi pequeñas de dos proas. Dos proas es son asi y otra. Igual que la popa. Cayucones les deciamos.</p> <p>San Felipe Interviews\San_Fe_13: 8 - 8 (0)</p> <p>A vela. Cuando habia viento poniamos la vela pa que nos lleve. Cuando no habia calma remo hasta llegar a donde ibamos a pescar.</p> <p>San Felipe Interviews\San_Fe_13: 10 - 10 (0)</p> | <p>no había motores marinos o sea motores de gasolina casi no, no, no había. Se trabajaba pura vela a compas del viento entonces te guiabas con una brújula no existía gps entonces tenias que guiarte por las estrellas y cuando estaba nublado por el viento por las olas el sol, si. Entonces con eso nos enseñaron tienes que aprender para que seas pescador tenias que aprender a manejar lo que el la vela el compas del viento tenias</p> <p>Sisal Interviews\Sisal_15: 18 - 18 (0)</p> |
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| | <p>Pues esa vez asi harponiado. Carne para sacar la carne se secaba igual que el mero. Habia unos como se llama teneros que le llamabamos de madera y alla despues de los salarlos y resalarlos porque otra vez lo metiamos al secadero.</p> <p>San Felipe Interviews\San_Fe_13: 20 - 20 (0)</p> <p>Si era la unica. Por tierra no habia vehiculos que entren aqui no habia forma.</p> <p>San Felipe Interviews\San_Fe_13: 22 - 22 (0)</p> | |
| <p>Forced change in occupation</p> | <p>Pero vio que no era muy rectuible por sustento para una familia entonces opto por la pesca. Fue como nosotros nos quedamos por aca a San Felipe.</p> <p>San Felipe Interviews\San_Fe_2: 12 - 12 (0)</p> <p>A la epoca de, de este Miguel de la Madrid se cambio Miguel de la Madrid entro otro presidente entonces las cosas decayeron.</p> <p>San Felipe Interviews\San_Fe_3: 12 - 12 (0)</p> | <p>Entonces ahorita muchos o sea varios pescadores jovenes por decir pues ya estan en lo que ves ahi lo del turismo. Ya lo que es en tierra y todo pues como dicen, a ver no hay pesca pero con uno o dos que te toque por decir a la semana pues mas o menos vas llevando en modelidad</p> <p>Sisal Interviews\Sisal_8: 14 - 14 (0)</p> <p>Por ejemplo aca estan haciendo lo del ahorita lo del turismo ese de que estan haciendolos este-m los kayaks las este-m llevan a la gente al los cenotes.</p> <p>Sisal Interviews\Sisal_10: 40 - 40 (0)</p> |

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| | | <p>a raíz de que se quita la aduana que estaba aca se lleva a progreso y desde eso el puerto empieza a desaparecer los pocos que se quedaron empezaron a dedicarse a la pesca pero como le digo lo lo asado llevaban el pescado de aqui para los pueblos.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>etapa que fue teniendo las especies y pues el puerto se empezó a evolucionar pues a tener mas gente y muchos este se dedicaron a la pesca.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>empeza a decaer la fibra el henequen y mucha gente que estaba en los campos de henequen de La Cabezera y de otras comunidades aledanas al puerto se empeizan a ya no tener empleo se vienen para la costa y se empiezan a dedicar a la pesca</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>están medio queriendo iniciar el turismo ecologico que es el que mas o menos está pegando</p> <p>Sisal Interviews\Sisal_11: 43 - 43 (0)</p> <p>I: Entonces llegaron de osea fueron agricultores los que llegaron gente campesina.</p> |
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| | | <p>R: Si, si exactamente. Porque les cortaron asi de pango les cortaron sus, sus ingresos. Entonces el gobierno se lavo las manos y ve ya entonces lo que hizo el gobierno en este caso es incentivar dar, dar los, as facilidades para que ellos fueran adquieriendo sus lanchas o algo programas asi, no. Pero el problema fue que ibamos a dar una atorre al pescado no busco alternativas mas, mas este no tan agresivas.</p> <p>Sisal Interviews\Sisal_13: 120 - 121 (0)</p> <p>ahora un año el gobernador vino a, aquí, a inagu- o sea a proporcionar eh información turística publicación turística al puerto para que tengamos otra alternativa o sea me refiero a que si no puedes ir a pescar mero</p> <p>Sisal Interviews\Sisal_15: 44 - 44 (0)</p> <p>En este caso, sienten los pescadores, sentimos los pescadores de que nos estan dañando en el sentido de que nos imponen la veda, no puedes trabajar,</p> <p>Sisal Interviews\Sisal_15: 44 - 44 (0)</p> |
| Change in routine | Si! Como digo muchas veces este tuve que salir con mi abuelo tuve que salir incluso con mi papa a pescar este y pues venciendo pues las crencias no de que las crencias de que no era muy habitual de que las mujeres salgan al mar. | <p>Y no hay el mismo pez que hay. Y hay que irlo a bucear un poco mas lejos de lo que esa ahora</p> <p>Sisal Interviews\Sisal_1: 21 - 21 (0)</p> |

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| | <p>San Felipe Interviews\San_Fe_1: 6 - 6 (0)</p> <p>El pescaba tiburón pero él sí tenía unas redes que él mismo había hecho unas redes con hilo de seda gruesa y me acuerdo que él llevaba carnada llevaba pedazos de pescado que tenía salado y yo veía que se iba y mi abuelo venía y traía estos tiburones traía mantarayas en ese entonces pues traía a veces incluso hasta una tortuga que caía pero era para consumo pues de la casa no porque no casi no había carne de puerco de res ni pollo muy este muy escasa la comida.</p> <p>San Felipe Interviews\San_Fe_1: 6 - 6 (0)</p> <p>Si tres días. No, ahorita ya es otro sistema de vida. O sea sistema de pesca. Ahorita si la gente te digo voy de viaje ya no lo va hacer ya no lo va hacer ya no está como para esos flotes para ir de viaje</p> <p>San Felipe Interviews\San_Fe_2: 50 - 50 (0)</p> <p>Como acá en 6 millas 7 millas se pescaba esa vez. Ahora hay que, hay que jalar más en 25 millas 30 millas. Ya es muy afuera.</p> <p>San Felipe Interviews\San_Fe_3: 24 - 24 (0)</p> | <p>Si, porque antes no por decir un patrón de lancha agarraba y se iba de una noche. Ahorita agarran 3-4 noches.</p> <p>Sisal Interviews\Sisal_4: 26 - 26 (0)</p> <p>R: Ahorita ese antes llevabas 50-60 litros de gasolina ahorita se van de 180-200 kilómetros llevan 400-500 litros. Llevan como de gasto como 20,000 pesos llevando.</p> <p>Sisal Interviews\Sisal_4: 30 - 30 (0)</p> <p>Si, porque cuando yo empecé a ir a pescar la veda del mero le daban un mes y este ahora le dan dos meses y a nosotros si nos perjudica BUENO no que nos perjudique sino que es que la, la, en lo económico. Nosotros vamos a la rubia y a veces no hay.</p> <p>Sisal Interviews\Sisal_6: 34 - 34 (0)</p> <p>mmhm y como ya cambiaron los tiempos del pescado. Ya el pescado no como de día come de noche nosotros trabajamos de noche por eso vamos de viaje. La pesca se hace de noche todo en la noche no hemos dormido nada. Toda la noche estuvimos despiertos buscando [garbled] pusimos marcas puntos y así checándoles revisando a ver si tienen pescados.</p> |
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| | <p>A si, se llama hacer rancho. Porque te quedas 4-5 dias alla. Ya cuando vegas pues un poco pescas hoy un poco mañana un poco pasado y ya se completa la pesca. Pero el tiempo lo decide. Si esta bueno el tiempo si queda para varios dias cuando esta mal el tiempo los corretea el viento y tienen que bajar.</p> <p>San Felipe Interviews\San_Fe_3: 34 - 34 (0)</p> <p>Pero actualmente ya no es la pesca como era antes ahorita la pesca ya es mas complicada.</p> <p>San Felipe Interviews\San_Fe_4: 8 - 8 (0)</p> <p>O sea que ya se empiezan alejar mas o menos por las Acantiladas que ya es otra historia ya es mas peligroso.</p> <p>San Felipe Interviews\San_Fe_4: 20 - 20 (0)</p> <p>tu punto de pesca trabajas y regresas a tierra pero corres 15 millas 20 millas 10 millas 8 millas dependiendo, no. Ahorita no, ahorita te alejas 30-40 millas 45 millas, hay gente que sale hasta 50 millas mar adentro para pescar.</p> <p>San Felipe Interviews\San_Fe_4: 22 - 22 (0)</p> <p>Ha disminuido demasiado. Todo los años nos damos cuenta nosotros los mismos los pescadores por tanta depredacion que hay.</p> | <p>Sisal Interviews\Sisal_6: 42 - 42 (0)</p> <p>Que decayo la pesca en mar y todo te puedo hablar un promedio lo menos, lo menos de unos 10 años para aca es donde ya o sea bajo bastante porque, porque si hablamos del tratado del libre comercio por decir en parte te ayuda y en parte te perjudica, si.</p> <p>Sisal Interviews\Sisal_8: 16 - 16 (0)</p> <p>Antes. Bueno le estoy hablando antes de Gilberto, del huracan Gilberto, si. Gilberto vino a darle cambio a rotundo a todo.</p> <p>Sisal Interviews\Sisal_8: 18 - 18 (0)</p> <p>antes de Gilberto lo haciamos aqui en Punta Palmara hay un faro alla. Entonces nosotros le llamamos como era la mayoria en ese tiempo eran embarcaciones de madera pues de aqui a ese palmar solo en la orilla para ir durabamos 3-4 horas llendo a la vela, la vela, la vela si claro.</p> <p>Sisal Interviews\Sisal_8: 20 - 20 (0)</p> <p>si iban a veces a pescar de noche pero mayormente iban y regresaban. Y ahora pues para buscar el</p> |
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| | <p>San Felipe Interviews\San_Fe_5: 10 - 10 (0)</p> <p>Ya el primer mes de julio podemos pescar aca cerca pero ya despues tenemos que ir alejandonos.</p> <p>San Felipe Interviews\San_Fe_5: 46 - 46 (0)</p> <p>de la gente me ha contado personas antiguas me han dicho que esta que estos pescadores no se alejaban tanto como nosotros.</p> <p>San Felipe Interviews\San_Fe_5: 48 - 48 (0)</p> <p>Ahora. Ahora vamos que, aveces cuando vamos a pescar mero vas de 4 de la mañana hasta 4 de la tarde. Un día es bastante cuando antes ibamos esa hora y cuando diga de las 12 ya regresamos. Estoy hablando de como hace 7 años.</p> <p>San Felipe Interviews\San_Fe_6: 14 - 14 (0)</p> <p>Logicamente en años anteriores o hablando de hace unos 20 años para atras si era mas abundante. Eso si te lo puedo decir que era mas abundante.</p> <p>San Felipe Interviews\San_Fe_7: 6 - 6 (0)</p> | <p>sustento tienes que ir hasta una o dos noches te tienes que ir al mar.</p> <p>Sisal Interviews\Sisal_9: 24 - 24 (0)</p> <p>El mero entra en veda en febrero y termina en marz en abril perdon. Por que era un mes pero ahorita ya se ya son dos este dos meses.</p> <p>Sisal Interviews\Sisal_10: 14 - 14 (0)</p> <p>Se va pescar de viaje y retorna el día siguiente o a los dos días depende como este la caputra. Si hay producto pues vienen pero si no pues se tienen que quedar un día más.</p> <p>Sisal Interviews\Sisal_10: 16 - 16 (0)</p> <p>Ahora se quedan dos noches tres noches depende como este la pesca.</p> <p>Sisal Interviews\Sisal_10: 22 - 22 (0)</p> <p>ponerle hace 20 años por ahi. Ese fue el porque te digo era menos el tiempo habia un poco mas de de pesca y era menos del tiempo que se hacian.</p> <p>Sisal Interviews\Sisal_10: 26 - 26 (0)</p> |
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| | <p>No, no, ha cambiado por mucho.</p> <p>San Felipe Interviews\San_Fe_7: 30 - 30 (0)</p> <p>Menos deficil porque pues es un poco menos la cantidad de producto pero tiene mayor valor. Entonces lo que hacemos pues que podemos venir mas temprano no tenemos que hacer tantas horas en el mar no tenemos que hacer tanto esfuerzo eh nos han ayudado las tecnicas.</p> <p>San Felipe Interviews\San_Fe_7: 30 - 30 (0)</p> <p>Ehm pues este 80-100 kilometros. Si para las embarcaciones es bastante lejano. Y es algo que no se trabajaba</p> <p>San Felipe Interviews\San_Fe_7: 50 - 50 (0)</p> <p>Y como te decia pues el producto hay que ir a buscarlo cada vez mas lejos entonces las embarcaciones ya empezaron ha ubicar lugares donde tratar de ubicar lugares donde pudiera ver mejor producto y si se estan encontrando pero es mucho el desgaste tanto de todo del equipo como de las personas.</p> <p>San Felipe Interviews\San_Fe_7: 52 - 52 (0)</p> | <p>Habia mucha pesca no tenian que irse muy lejos la pesca era aqui cerca y en bueno cuando yo era yo me acuerdo que mi papa de antes no llevaba ni si quiera era de antes pura vela</p> <p>Sisal Interviews\Sisal_10: 38 - 38 (0)</p> <p>n vela nos ibamos con el viento que era el que venia de tierra y regresabamos en la tarde con viento del mar que venia del mar. Esa era nuestra rutina diaria.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>Entonces ahorita que ha pasado que hace 20-30 años podiamos capturar 50-60 kilos a 10-15 kilometros de la costa.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>Ahorita los compas se van hasta 70-80 kilometros te traen 20-30 kilos de especies. O sea se alejado complemente.</p> <p>Sisal Interviews\Sisal_11: 15 - 15 (0)</p> <p>De entrada no vamos a pescar dos meses.</p> |
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| | <p>Ahora el precio del pescado era mas barato igual el precio de la gasolina era mas barata y este no te tenias que alejar tanto para pescar.</p> <p>San Felipe Interviews\San_Fe_8: 10 - 10 (0)</p> <p>Para que se llene este muelle de aqui con lanchas solo se llenaba este lado igual el otro muelle no habian muchos muelles no habian muchas embarcaciones llego aca y veo que no hay ni donde poner lanchas.</p> <p>San Felipe Interviews\San_Fe_8: 10 - 10 (0)</p> <p>En ese entonces habia abundancia. El precio estaba este muy bajo pero habia abundancia.</p> <p>San Felipe Interviews\San_Fe_9: 12 - 12 (0)</p> <p>Siii muchisisimo. De antes en un ratito ibas aqui en frente y llenabas tu chalanita verdad cuando venia Don Faizal a comprar. Cuando daba ya las 9 y llegaba gente hasta 120 130 de maxiquil por persona iban bastante personas. Eran bastante.</p> <p>San Felipe Interviews\San_Fe_10: 12 - 12 (0)</p> <p>Porque cuando vaya a empezar la temproada ya lo sacaron todo ya no hay. Pero es para el servicio de aca</p> | <p>Sisal Interviews\Sisal_11: 19 - 19 (0)</p> <p>Y este año estaba programado tambien que se aumenten los dias de veda los dias de veda del mero</p> <p>Sisal Interviews\Sisal_11: 19 - 19 (0)</p> <p>Entonces cuando entra en veda el mero se prohíbe esa arte</p> <p>Sisal Interviews\Sisal_11: 23 - 23 (0)</p> <p>No antes, cuando, cuando estabamos alla pues eran pescadores podriamos decir libres, no, o que algunos dependian de algun permisionario o del equipo que ellos podian compra y el pescador no tenia ese poder adquisitivo. Y asi pues igual si necesitas trabajo pues sales a ver con quien puede ir y afortunadamente pues se busca y ahi te llevan.</p> <p>I: Y era algo de que llegaba la temporada de yo no se pulpo en donde se incorporabas y era con el mismo patron o el mismo equipo?</p> <p>R: Casi siempre si. O sea a lo largo del tiempo que pesque asi solo estuve con 4 si, con 4 gente sabe distente.</p> <p>Sisal Interviews\Sisal_13: 16 - 18 (0)</p> |
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| | <p>no no lo sacamos para vender afuera nada es para el servicio de la gente si.</p> <p>San Felipe Interviews\San_Fe_10: 14 - 14 (0)</p> <p>No, no yo en chalanita iba en aljios palanquiando.</p> <p>San Felipe Interviews\San_Fe_10: 26 - 26 (0)</p> <p>Pues antes nadamas nosotras ibamos verdad. Puro mujer iba a pescar de uno en uno. De uno en uno pero. Con jamos son unos jamitos asi que tienen su copitas asi largos y los tapas y cuando lo tapas brincar el camaron se va perdido y tu lo haces asi y a la orilla de alarlo queda colgado asi el camaron ya no se va. Tiene su truco.</p> <p>San Felipe Interviews\San_Fe_10: 32 - 32 (0)</p> <p>Porque de antes como dice ella de antes no mas ibas un ratito rapido hacia tu pesca y cuando digas las 9-10 de la noche y a veniste ahorita te tienes que alejar bueno en mi caso yo me tengo que alejar yo me acompaño con otra.</p> <p>San Felipe Interviews\San_Fe_11: 10 - 10 (0)</p> | <p>Bueno realmente era pura, pura linea nosotros le llamamos cordel a mano o sea es manual la pesca igual tanto en la pesca de escama como pesca del, del pulpo. Algunas veces bueno un tiempo si cai con otro muchacho que igual por una temporada nos dedicamos a tirar redes en la orilla o sea si en la orilla porque ese tipo de pesca se llama lanzeo. Es lanzeo porque vamos a lanzear hoy y ahi nos ibamos a subiamos la red y peces de la playa. Si podemos estar hablando de unos 100 metros de la orilla.</p> <p>Sisal Interviews\Sisal_13: 28 - 28 (0)</p> <p>Mhm, si a cambiado mucho. Porque antes eran embarcaciones de madera y el pescador tenia que levantarse digamos a las 3 de la mañana en ese tiempo todos los aperos iban y venian diario. Entonces habia que cargar todo a la playa no habia puerto de abrigo no en la playa se nosotros le decimos este ya se me olvido (laughing) bueno subiamos la embarcacion sobre la arena y este al otro dia la bajabamos y ahi nos ibamos a pescar a la vela.</p> <p>Sisal Interviews\Sisal_13: 38 - 38 (0)</p> <p>R: Si eran de vela. Pero igual osea la pesca aqui te alejabas que te dire como, pss que cuanto, como cuatro kilometro y ahi pescabas mero de calidad.</p> |
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| | <p>Todo. Todo. Todo. De antes ibamos a pescar corvina. Por la explotacion hay mucha gente de otro lado o de los Dzilam.</p> <p>San Felipe Interviews\San_Fe_11: 24 - 24 (0)</p> <p>No, la pesca de ante era una belleza. Era una belleza porque habia de todo. Habia de todo. Te ibas aca a Los Barriles. Me iba con mi tio. Con mi tio y simbrabamos carito, simbrabamos sierra. El carito lo pescabamos a tres brazos de aca pero bastante.</p> <p>San Felipe Interviews\San_Fe_12: 16 - 16 (0)</p> <p>Puro mero. Mero. Asi cordeleado. Con puro cordel ibamos de 3-4 en un cayucon de esos. Y cada quien jalaba lo que jalaba era para el. Habia que estar marcando.</p> <p>San Felipe Interviews\San_Fe_13: 14 - 14 (0)</p> <p>Cambio. Si, cambio la cosa seguido en el pueblo. Y ya empezo a venir gente de otros lados del pacifico a bucear y todo..A patir de la langosta. A puro pulmon o sea yo mayormente yo bucea 15 años. Cuando metieron lo de la compresora yo no pude o sea no me gusto porque sentia que me repulsaba el pulmon. Era mejor asi libre con el esnorkel.</p> <p>San Felipe Interviews\San_Fe_13: 48 - 48 (0)</p> | <p>I: Y hoy en dia no es asi?</p> <p>R: No ahorita hay que alejarse 20-40 km hacia dentro</p> <p>Sisal Interviews\Sisal_13: 46 - 48 (0)</p> <p>R: No aca no se pescaba. No pescaba y inclusive ni el pulpo se pescaba antes. Nada.</p> <p>I: Tu dices antes como?</p> <p>R: Estamos hablando de unos que 40-45 años atras.</p> <p>I: Recientemente entonces?</p> <p>R: Pues si porque cuando yo me empece a en los recuerdos que tengo el pescador por decir si se pescaba o sea el pulpo lo enganchaba y los subias, no. Pero pues no se compraba pues pa' comer. Pues entonces eran pulpos grandes, no. Y me acuerdo que aveces salia y la manera de conservar el pulpo era colgandolos para que vaya escuriendo el agua y al otro dia pues esta fresco esta osea no se hechaba a perder. Y este como por, no ya tiene mas, estaba yo en quinto sies once años como 50 años que empezo lo que es la pulp.. lo que es la pesca de pulpo.</p> <p>Sisal Interviews\Sisal_13: 62 - 66 (0)</p> |
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| | <p>Habia crisis y las empezo a enseñar y pero si habia mucho mas antes.</p> <p>San Felipe Interviews\San_Fe_14: 28 - 28 (0)</p> <p>No lo que pasa es que nosotros no trabajamos mayormente no trabajamos mar abierto es por aca (close to shore). Entonces si avances cuando no halla aca cerca te vas hasta 2-3-4 kilometros en lanchas de motor de 15 caballas te duras 2 horas hora 1/2 para que llegues al pesquero. Entonces pero es por alla pero si nos alejamos iguala arecia el viento y las lanchas son pequeñas y si tienen un poquito dificultad...</p> <p>San Felipe Interviews\San_Fe_14: 46 - 46 (0)</p> <p>Depende. La garreteada por decirle me voy yo a las 3 de la tarde y regreso hasta mañana a las 9-8 de la mañana solo es un día. Mayormente nuestro trabajo es de ida y vuelta solo la garreteada pues porque te tiene que quedar a dormir por la oscura.</p> <p>San Felipe Interviews\San_Fe_15: 16 - 16 (0)</p> <p>Nada no hubo. El mero muy escaso este hubo por decir 15 dias y de pronto nada. El pulpo para que haiga aparte de la temporada tambien depende los precios. Este año el pulpo estuvo por los suelos. Estuvo muy escaso. El</p> | <p>R: Si. Inclusive para el pescador no tiempo mas que nada porque se va temprano bueno hasta ahora no tan tempreno estan saliendo como a las 8-830 de la mañana, no. Pero igual osea mientras se levantan se preparan toman su desayuno van a pescar regresa uno medio cansado o mas bien asoliado solo tiene uno ganas de comer bañarse y *whoosh* y descansar un rato. Entonces no hay tiempo para decir ah pues voy a ver como me preparo para que yo no cometa tal delito,no.</p> <p>Sisal Interviews\Sisal_13: 74 - 74 (0)</p> <p>: Ahora si van y en la noche no pescaron tienen que esperar al otro dia osea se quedan alla y duermen. Inicialmente en las bancas, en las bancas que tiene la lancha pues ahi te acomodas pues viendo que no te vas a caer, no. *laughs* Y ahi pasabas la noche porque aveces iba bien riego el viento y el pescado no pica o simplemente esa noche no se le antojo comer y ya no pescas. Entonces tienes que esperar que amanezca para que en el dia pesques algo del fondo pescado del fondo y sacar para los gastos que uno hace.</p> <p>Sisal Interviews\Sisal_13: 102 - 102 (0)</p> <p>No, no con mis papas casi no. Con otros señores que mas grandes que yo entonces yo ahi fue iniciando mi vida en la pesca. Cada dia pues yo salia y yo me comendaba un día con uno a veces iba con otro asi</p> |
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| | <p>2018 llego hasta 120 (pesos) el kilo y esta vez creo que cuando mucho llego 60 pesos.</p> <p>San Felipe Interviews\San_Fe_15: 24 - 24 (0)</p> | <p>estaba. Asi fue llendo mi tiempo y fui creciendo ya atreves del tiempo yo dijo no puedo seguir asi.</p> <p>Sisal Interviews\Sisal_14: 9 - 9 (0)</p> <p>De ahi vendi el botecito por que ya no tenia compañero le digo a mi esposa ya me habia casado le digo nos vamos a voy a vender el bote y compramos bloques para hacer la casa le digo</p> <p>Sisal Interviews\Sisal_14: 11 - 11 (0)</p> <p>De escama es desde enero hasta 15 de agosto. No al dia primero de agosto que es cuando empieza la pesca ya de pulpo. La pesca de pulpo son 4 meses y sigue despues se puede seguir a pescar escama.</p> <p>Sisal Interviews\Sisal_14: 19 - 19 (0)</p> <p>No, no. La veda hace como 15 años que se empezo lo de la veda.</p> <p>Sisal Interviews\Sisal_14: 35 - 35 (0)</p> <p>R: Si hay cambios. Hay muchos cambios ahorita. Mucha exigencia ya porque como le dijimos desde el incio. Pues en el incio no te exigian que te llevemos hielo como venia el pescado por ejemplo el pulpo lo pescabamos y los insartamos y los poniamos ahi al</p> |
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| | | <p>sol que amorren negros todos pero te lo compran no ahi ningun problema. Entonces atraves del tiempo ya nos empezaron a exigir. Ya tenemos un poco mas de exigencia mas como mas cuidado. Hoy hay que traer el pescado asi entre hielo por ejemplos lo acabas de pescar y lo pones en la nevera pero tienes otros en ese hielo ahi es que se mueren. Entonces el pescado ya viene mas fresco menos asoliado. Eso es lo que a cambiado mucho en esa era de como le digo.</p> <p>Sisal Interviews\Sisal_14: 65 - 65 (0)</p> <p>Era pues era bastante. Era bastante y aquí cerca. Cerca me refiero a aquí a 3-4 brazas había abundancia langosta peces grandes eh hay unas piedras aca que nosotros tenemos aquí a la orilla a la altura del muelle como a la distancia del muelle eh lo conocemos por punta piedra eh allí con mi papa. Mi papa con lampara de carbura y con fisca una palanca con una madera clavaba los pescados grandes.</p> <p>Sisal Interviews\Sisal_15: 24 - 24 (0)</p> <p>pusieron lo de la veda del mero. No, entonces la veda del mero hace aproximadamente como 5 años atras era un mes nos ponían un mes de veda de que no podías trabajar no podías traer mero ni negrilla nada de eso lo puedes traer.</p> <p>Sisal Interviews\Sisal_15: 36 - 36 (0)</p> |
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| | | <p>Vales nos estan dando pero ya nos ponen dos meses de veda.</p> <p>Sisal Interviews\Sisal_15: 36 - 36 (0)</p> <p>Si. Creo que ya son dos meses que no puedes pescar mero y el fuerte de esta zona es el mero el negrillo pero no lo puedes traer ahorita muchas cosas que se, que se estan cerrando.</p> <p>Sisal Interviews\Sisal_15: 38 - 38 (0)</p> <p>Dos tres dias cuatro dias. Pero eso tambien no creas que al ir hasta alla le va ir bien. Alla hay rachas que si pero tambien, tambien hay dias que vienen mal por ejemplo si les agarra un norte o recalca la marejada entonces todo eso a veces es quiebra es de uda.</p> <p>Sisal Interviews\Sisal_15: 54 - 54 (0)</p> <p>ntonces practicamente el la gente la necesidad de la gente mas que pues anteriormente la gente no venia a pescar</p> <p>Sisal Interviews\Sisal_15: 56 - 56 (0)</p> |
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Interactive Quote Matrix Texas Research Question 1

| Code | Port Isabel/Brownsville (N=22) | Palacios (N=17) |
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| Setting a standard | | <p>And then as the years went on a few started doing it , a few started doing it and it just made people mad that we would start in August 15 till through back then it was through December 15th and we'd catch shrimp all the way up till we got a strong northern.</p> <p>Palacios\Pal_3: 12 - 12 (0)</p> <p>I thought the size as far as economics cuz of more stuff you pull in the more fuel you're burning on the engines that we had so I found a happy medium that was standard to all my boats and I stopped at 50 foot and we are pulling 9 foot doors and rigs been the same for about 10 years.</p> <p>Palacios\Pal_10: 12 - 12 (0)</p> <p>o you gotta gotta find a happy medium how much money are you willing to spend on your webbing when you are talking taking putting something on the bottom of the gulf and dragging it bad bottom wrecks. So is the production more than what you got out of the plastic say fuel you have to compensate for losing uh you know a 5-6,000 dollar net instead of a 3,000 dollar net, you know.</p> |

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| | | <p>Palacios\Pal_10: 14 - 14 (0)</p> <p>..A que voy miya a la pregunta que tu me hicistes si tu cuidas a toda esta gente y a toda esta gente le das modo de sobre llevar entonces toda esta gente viene con ganas para trabajar para ti y con ganas de seguirle echando...Y ellos siguen haciendo dinero para que tu compania tu industria siga manteniendose y sigan manteniendo a los que trabajamos a los patrones a ellos a sus familias a sus familias de ellos y se hace una generacion grandecicima.</p> <p>Palacios\Pal_14: 30 - 30 (0)</p> <p>uh I guess what I would say though is that uh you know people have to uh it's one of those things that is in your blood I guess and you just keep doing it you know and it's one of those deals and I know it is for me.</p> <p>Palacios\Pal_15: 10 - 10 (0)</p> |
| Aging fleet | I bought second one in 74 and 76 I bought the next one. 77 I bought three two brand new ones and mee and ___ were partners on those. Yea we the guy who owned Marine Mart ___ he came to me one day and asked me how many boats I want. He wanted to go partners with me. He asked me brand new boats how many I wanted he would build them for me...But one time 12 boats at one time all the years I've had | To me it look kinda they still the same I mean yea we've been servicing uh you know like more or less 30 boats you seeing back then *sighs* till now still the same. And uh I don't see any increase on well maybe yea a little bit like ___ over there they um they increasing their fleet but it's the old places right here that still the same. |

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| <p>22. We bought 3 in 77 and I think in 79 we bought two or three moree.</p> <p>Port Isabel/Brownsville\P&B_4: 10 - 10 (0)</p> <p>Like on a boat your talking about we have boats that are almost 50 years old.</p> <p>Port Isabel/Brownsville\P&B_11: 16 - 16 (0)</p> <p>Well back in the early 70s a brand new boat would probably be about a quarter of a million dollars right now it's probably \$1.2-\$1.3 million to build the same boat. You just can't catch enough shrimp to pay that debt. That's why our youngest boat out there is 21 years old.</p> <p>Port Isabel/Brownsville\P&B_12: 30 - 30 (0)</p> <p>Yes, we just gone through we have 14 we used to have 25 we're down to 14 and all well 13 of those boats we've just gone through major renovation we put new engine and then from top to bottom just went through the boat and try to make a new boat out of it.</p> <p>Port Isabel/Brownsville\P&B_12: 32 - 32 (0)</p> | <p>Palacios\Pal_6: 38 - 38 (0)</p> <p>And so you had to figure out what you could afford to pay after you'd made your trips you know. And I did that all my life and in 2000, I'd saved uh 150 thousand dollars cuz all our boats were getting old an I said "You know I need to build another boat". Well I went to go check on that and it's 550 thousand (dollars) for a boat in 2000 and so we built two boats and put the money we'd saved in what they call a capital construction fund you could divert some of your taxes save and uh, but then your depreciation wasn't as much.</p> <p>Palacios\Pal_11: 27 - 27 (0)</p> <p>So anyway we did that, well now after 20 years we got boats that are even older yet. We got boats built in 1973,'79,'80,'82,'87 (points to which boats out on the dockside).</p> <p>Palacios\Pal_11: 27 - 27 (0)</p> <p>they started this business in '79 so they bought this facility here in '79 it was in an auction type deal uh sale. They bought that and then they uh ended up uh just trying to build a gulf shrimp fleet from there. Uh bought several new boats uh from uh St. Augustine trawlers from off the coast of St. Augustine</p> |
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| | | <p>Palacios\Pal_15: 4 - 4 (0)</p> <p>So those boats are 21 years old umm and uh you know and you get to a point where you either in a business you either continue to buy new or your kinda stagnate there and uh and so you know you like at that and you look at what your rreturn on something like that and you know you bought a you know a new vessel just like the one that is sitting out there right now you know you're looking at about \$1.3 million now.</p> <p>Palacios\Pal_15: 6 - 6 (0)</p> |
| Faith | <p>But I don't like to think of sad times you know I like to continue and I'm a very optiomistic person I like to stay optomistic and I like to work so if God gives me life for many many moons many years we plan to stay in the business you know.</p> <p>Port Isabel/Brownsville\P&B_14: 12 - 12 (0)</p> | <p>So and then they take it and I say you know Don't gripe just try to do it I mean I say God will manage for you you know I mean yea. It may start losing you know 10% 15% of your you know income but then eventually you will know how to you know things will it seems like it will all work out. It's hard at first but you know they don't give up though.</p> <p>Palacios\Pal_7: 26 - 26 (0)</p> |
| Longer work days | <p>Pues depende porque aveces como ahorita la corrida es corto el tiempo abordo. Pero aveces el tiempo abordo dura hasta 40 dias 50 dias.</p> <p>Port Isabel/Brownsville\P&B_5: 46 - 46 (0)</p> | <p>Bueno mira cuando yo empece los barcos todos eran de hielo no eran de refrigeracion entonces nomas podias hacer los viejes de 20 dias porque el camaron se mancha. Los barcos no traean luz blanca era luz amarilla no, no estaba muy iluminado no traean aire acondicionando no traea</p> |

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| | <p>I mean know we have freezer boats back then it was ice boats which was better because you come home every 2 to 3 weeks. Now you gotta spend 40 to 50 days out there.</p> <p>Port Isabel/Brownsville\P&B_8: 8 - 8 (0)</p> <p>Like I said when I started it was ice boats we didn't have no freezer boats so we used to go for 15-20 days and now we go for 35-40 days. That's the rule here in this company cuz there are other companies that go for even 60 days or more.</p> <p>Port Isabel/Brownsville\P&B_9: 18 - 18 (0)</p> <p>. To me you know you had more shrimp boats out there so less shrimp so the trips started extending and then they'd became freezer boats in the late 70's and with the freezer now you can be out there as long as your fuel your fuel'll last you. These boats the smallest one carries about 17500 gallons so 45-50 days whether you fill the freezer or not you're out of fuel you come home.</p> <p>Port Isabel/Brownsville\P&B_13: 26 - 26 (0)</p> <p>Habia que hacer mas dias habia que habia camaron habia no era tan matado el vieja porque se conseguia el camaron mas pronto en la actualidad eso a mermado ahora tenemos que hacer viajes de 60 dias *laughs* otra mentalidad!</p> | <p>television o sea era muy diferente a como estan ahorita. Ahorita todo los barcos ya son de refrigeracion y ya puedes hacer viajes de 50-60 dias.</p> <p>Palacios\Pal_4: 16 - 16 (0)</p> <p>Oh no not as long as the American or Hispanic boat um. I remember back then my longest trip is 34 days. But mostly like about month 3 weeks.</p> <p>Palacios\Pal_6: 16 - 16 (0)</p> <p>Well our boats got the capacity for right at 50 days, got enough fuel and thats what these guys do they go till the fuel runs out</p> <p>Palacios\Pal_11: 5 - 5 (0)</p> <p>In the 70s and in the 80s with ice boats and a good quality shrimp on an ice boat was 14-18 days, you know. And then as time went on expenses started going up</p> <p>Palacios\Pal_11: 7 - 7 (0)</p> <p>They would last 18 days and then now uh average shrimp is about 50-60 days.</p> |
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| | <p>[This captain says this forced the fishers to adapt or change their mental state.]</p> <p>Port Isabel/Brownsville\P&B_15: 14 - 14 (0)</p> | <p>Palacios\Pal_12: 10 - 10 (0)</p> |
| <p>Sense of community</p> | <p>Just the amount of people that started out you know like (lists serveral)the unloading docks that existed the heading facility. Back in the day if the boat came in with head on you the would head it on the docks. That's not allowed anymore</p> <p>Port Isabel/Brownsville\P&B_3: 40 - 40 (0)</p> <p>Like right over here where the fuels out they used to head they used to take the head off. The women would be and the kids would be in there you know maybe a 100 people in there heading shrimp.</p> <p>Port Isabel/Brownsville\P&B_4: 2 - 2 (0)</p> <p>The stop uh when they went to freezer boats. When they used to bring shrimp with heads on it was more fish for all the dogs the mullet the catfish and snapper.</p> <p>Port Isabel/Brownsville\P&B_4: 4 - 4 (0)</p> <p>Bueno uno llega porque tiene aveces conocidos y yo tengo ahorita 34 años trabajando con esta compañía.</p> <p>Port Isabel/Brownsville\P&B_5: 10 - 10 (0)</p> | <p>Well they know that the shrimp industry cashes up even though there is industry they are depending on the shrimp industry to survive if there wasn't any shrimp boat left here Palacios would be a dead town.</p> <p>Palacios\Pal_7: 30 - 30 (0)</p> <p>So you find that you have that and you gotta hope that everybody communicates with one another and then you know do that.</p> <p>Palacios\Pal_10: 16 - 16 (0)</p> |

No they brought it to eat it chop it down and you know and whatchumacallit share it.

Port Isabel/Brownsville\P&B_8: 20 - 20 (0)

Yea, for the family or you know yea. Pero now there's a lot of new law we can't bring everything has a limit, yea.

Port Isabel/Brownsville\P&B_9: 28 - 28 (0)

Which remember back then if you couldn't handle it yes we could put it down with the heads on and we'll bring it in here and all these fish houses on the docks here would get headers I mean grandma's and grandpa's and in between and young ones everyone would come down to head shrimp. That was the big thing to go down to the docks to head shrimp in summer.

Port Isabel/Brownsville\P&B_10: 10 - 10 (0)

Well yes, yes. Port Isabel I mean it's main source that supported it's economy was shrimp period there was 400 boats in Port Isabel probably the something in Brownsville back in the early 60s and 70s and uh that's all pretty much gone by the wayside. Port Isabel used to be basically shrimp people and they're just not there now.

Port Isabel/Brownsville\P&B_12: 24 - 24 (0)

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| <p>Selling out</p> | <p>It probably was right after that when these boats started you know yea people just started selling boats.</p> <p>[In the Port Isabel/Brownsville it was after the 200 mi limit was put into place and shrimpers couldn't go into Mexican waters anymore]</p> <p>Port Isabel/Brownsville\P&B_3: 18 - 18 (0)</p> <p>(Long pause) I just had a guy ask if he could come look at a boat for sale (trying to sell all his boats). He only wants it for \$30k.</p> <p>Port Isabel/Brownsville\P&B_4: 22 - 22 (0)</p> <p>A guy came in here one day and bought 4 shrimp boats from me in one day. And he took of to El Salvador. Oh yea they leave (shrimp boats) they went to Honduras, Nicaragua you know Salvador a lot went into Mexico. A lot of the boats went into Mexico.</p> <p>Port Isabel/Brownsville\P&B_4: 28 - 28 (0)</p> <p>I mean there's not as many boats in Gulf as there used to be it's far from it back in those days it was like about 200 boats here Port Isabel there's probably like 4-5 (hundred) in Brownsville and then Aransas oh man they had I don't know they had like a bunch of boats in Aransas.</p> <p>Port Isabel/Brownsville\P&B_6: 18 - 18 (0)</p> | <p>A lot of them was sold went different places but most of them most all of them it was original boats back then were gone.</p> <p>Palacios\Pal_3: 10 - 10 (0)</p> <p>There was more and more the bay fishermen switched over to the gulf and stuff I mean I can say I had 50ft 48ft glass boat when I got out of highschool which that was in 77 78 I had for 7 years and I traded it the guy that was one of the owners here and well his son was married to my sister and they was having problems anyway make a long story short they wanted out of the gulf so I traded him my bay boat for and that's how I got the ___ which is down here on the end and I shrimped it for 20-somthin years or whatever and then I got off and then being ___ he got off his boats the year before and we went together and bought his brother's bo</p> <p>Palacios\Pal_3: 14 - 14 (0)</p> <p>Yea, yes mhmm and then that will be their retirement (selling the boat) yes. None of them nobody have no you know 401k or anything like that. The boat is their 401K. Mhmm. Yea so.</p> <p>Palacios\Pal_7: 6 - 6 (0)</p> |
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| | <p>No! And I'm getting to a point was talking to my friend here I don't know two more years of this I don't see it happening. It' gonna be hard unless something changes.</p> <p>Port Isabel/Brownsville\P&B_6: 38 - 38 (0)</p> <p>Right, I mean cost of diesel went up all of a sudden one year. And everybody goes chaos and half the industry BOOM falls. Only the strong survived.</p> <p>Port Isabel/Brownsville\P&B_8: 26 - 26 (0)</p> <p>fuel went real high and prices went real low so a lot of owners started selling their boats cuz they couldn't afford the fuel cuz the price was so low they couldn't afford it.</p> <p>Port Isabel/Brownsville\P&B_9: 20 - 20 (0)</p> <p>When the shrimp prices of shrimp went down a lot of people quit shrimping they went to like oil rigs oil companies and stuff like that you know. Cruise boats tug boats.</p> <p>Port Isabel/Brownsville\P&B_9: 44 - 44 (0)</p> <p>This company used to have 11 boats so they had to sell they only stayed with 4. Cuz they had to sell the other ones cuz they couldn't afford it.</p> | <p>So a lot of people just get out.</p> <p>Palacios\Pal_7: 24 - 24 (0)</p> <p>but the good part is there's less and less boats which means the demand is going to be higher and the price of shrimp will be driven up.</p> <p>Palacios\Pal_12: 40 - 40 (0)</p> <p>And, I think that just has to do with generations not wanting to do it and the generation before them ends up selling out or you know something like that</p> <p>Palacios\Pal_12: 40 - 40 (0)</p> <p>Oh yea. You know if someone is getting out of the business or whatever or they might have an extra license they sell it. That's the only way to get a license is to purchase it a Texas license.</p> <p>Palacios\Pal_13: 18 - 18 (0)</p> <p>I don't know if I can answer that really you know as far as why there's definitely some uh thoughts out there but you also don't want to sell a business at a low point</p> <p>Palacios\Pal_15: 10 - 10 (0)</p> |
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| | <p>Port Isabel/Brownsville\P&B_9: 46 - 46 (0)</p> | <p>I think there was I call it the big purge it was in the '80s when you know it was right before like everybody got into the shrimp industry.</p> <p>Palacios\Pal_16: 18 - 18 (0)</p> <p>Like there were all these boats purchased people that had never uh had never been producers prior and then I guess within a 10 year period I guess and you would have to verify these numbers this is just off of my understanding or remembering, all of these people went out of buisnes and that was about,</p> <p>Palacios\Pal_16: 18 - 18 (0)</p> |
| <p>Family</p> | <p>You know they like to call home they are able to call their uh families home with the uh satelite phone that they have on there. Where you couldn't do it off of sideband before because it's pretty much just a two way radio.</p> <p>[Specifically, upgraded technology on these boats (expensive) allows for shrimpers to not feel as isolated and they are able to talk to their families.]</p> <p>Port Isabel/Brownsville\P&B_2: 46 - 46 (0)</p> <p>Es lo que pasa es que uno quiere lo mejor para la familia. Y aunque uno sufre o batalle lo hace por la familia por que no</p> | <p>Si, yo he traído a mi esposa como por 5 años. Y he sabido de otras que han salido [with their husbands].</p> <p>Palacios\Pal_4: 44 - 44 (0)</p> <p>Oh yea actually it not hard working out there it's just the hardest thing is you stay away your family too long that's it</p> <p>Palacios\Pal_6: 8 - 8 (0)</p> |

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| <p>sufren. Que tenga lo mejor para ella para que no este battallando.</p> <p>Port Isabel/Brownsville\P&B_5: 68 - 68 (0)</p> <p>Very much so because he would bring me with him as a little kid you know just unloading with him just being in the environment of the industry, shrimping industry it was different then it is right now</p> <p>Port Isabel/Brownsville\P&B_8: 6 - 6 (0)</p> <p>I missed all that. That's what hurts. I never got to see them I always see my kids just watching them on videos; birthdays, parties I was never there. I just provide.</p> <p>Port Isabel/Brownsville\P&B_8: 26 - 26 (0)</p> <p>Well call them we have a phone you know call your family. Check with your family and then they start feeling like a lot better.</p> <p>Port Isabel/Brownsville\P&B_9: 58 - 58 (0)</p> <p>Uh my wife's parents were in the fishing industry so.</p> <p>Port Isabel/Brownsville\P&B_12: 8 - 8 (0)</p> | <p>o we started building from there and there was enough that you could make a living so we bought this place in bankruptcy and that's how we kinda got started.</p> <p>Palacios\Pal_10: 8 - 8 (0)</p> <p>Um, I shrimped for probably 3 years after highschool and then I started staying back to help my dad on his end because he's retiring.</p> <p>Palacios\Pal_12: 12 - 12 (0)</p> <p>And then you know as my children got older you know I just got off the boat and put a captain on it.</p> <p>Palacios\Pal_13: 20 - 20 (0)</p> <p>Y de alla me vine para aca. Me vine para aca mija porque aqui estaba toda la familia. Mi papa mi hermanos mis tios todos.</p> <p>Palacios\Pal_14: 10 - 10 (0)</p> <p>Cunado yo me vine para aca se emepzaro a venir todos mi mama mis hermanas mis otros hermanos aqui en Palacios.</p> <p>Palacios\Pal_14: 10 - 10 (0)</p> |
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| <p>Uh. It's a hard life too you gotta give these guys a lot of respect for the sacrifices they make not only on themselves but their families being without without a father or husband for 35-55 days it's a tough life.</p> <p>Port Isabel/Brownsville\P&B_12: 26 - 26 (0)</p> <p>I mean if he did I'd be good with it but being away from home so many days you know kinda destroys families.</p> <p>Port Isabel/Brownsville\P&B_13: 24 - 24 (0)</p> <p>Dicen los americanos "homesick" vez ese ayyy quiero estar en casa mami en fin eso es un enemigo para nosotros los pescadores mental y sentimental.</p> <p>Port Isabel/Brownsville\P&B_15: 14 - 14 (0)</p> <p>Ahora hay cosas que yo e perdido en mi vida mis hijos que que que no lo vi muchas veces en su cumpleaños. Mis hijos que no los vi graduarse porque estaba trabajando</p> <p>Port Isabel/Brownsville\P&B_15: 16 - 16 (0)</p> <p>Afuertonadamente tenemos servicio de telefono de satelite. Asi que yo todos los días hablo a casa...todo los días no hay un día que no le llamo a mi mujer....Eso me da tranquilidad.</p> <p>Port Isabel/Brownsville\P&B_15: 18 - 18 (0)</p> | <p>I did although uh I guess we were I don't know 10-11 (years old) my dad was picking up a boat in Freeport and so he took all the cousins we got on the boat took our big sack lunches with our powdered donuts and we *laughs* went on and it was horrible *loud* it was horrible we were all throwing up.</p> <p>Palacios\Pal_16: 8 - 8 (0)</p> <p>They spend 3 months with their families and then they come again and they will work 30, 40, some 70 days they just they are all about the work.</p> <p>Palacios\Pal_16: 30 - 30 (0)</p> |
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| <p>Skilled workforce</p> | <p>Not a lot of people do this you know what I mean there's only a handful of people that you can get to do this you know what I mean those guys do come into play and you need them when that time comes uh so they play a big part um in the shrimping industry here.</p> <p>[Specifically, depending on skilled labor from out of the US because it can't be found in enough numbers here.]</p> <p>Port Isabel/Brownsville\P&B_2: 22 - 22 (0)</p> <p>but these guys are all experienced whether they have families or they work they are usually coming from Tampico, Nicaragua uh stuff like that so they all live off the coast.</p> <p>Port Isabel/Brownsville\P&B_2: 24 - 24 (0)</p> <p>So not a lot of people make it and trust me becuaes I've gotten a lot of people from around here just from people that I know here or a friend of a friend of a friend 'Hey this guy wants to try and go shrimping', Alright well lets go. Uh like I said 1 out of 10. Yea well anyway that might turn out good, so.</p> <p>Port Isabel/Brownsville\P&B_2: 24 - 24 (0)</p> <p>I told ___ we have to advertise every year so this year I had 150 applicants. 150 for 16 positions of headers. 150 one qualified.</p> | <p>Claro cada persona es diferente yo en comparacion a los demas pues si soy mas lenta por supuesto. Pero porque se calienta el camaron si no lo hacemos rapido.</p> <p>Palacios\Pal_8: 14 - 14 (0)</p> <p>Todos empiezan por descabezador y van escalando marinero y despues de marinero capitan. Si es una escala.</p> <p>Palacios\Pal_8: 88 - 88 (0)</p> <p>And these guys are very good you know. They come course they're making more here than they can make down in Mexico and so when they come here they count on that job.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> |
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| | <p>Port Isabel/Brownsville\P&B_3: 22 - 22 (0)</p> <p>hey guy had experience as being a header aboard a shrimp boat cuz that's what the experience has to be. 30 days to 1 month of continuous sea time experience aboard a shrimp boat it's what we looked for.</p> <p>Port Isabel/Brownsville\P&B_3: 24 - 24 (0)</p> <p>No, en este ramo comienza uno desde abajo. Descabezador winchero y asi va uno subiendo poco a poco.</p> <p>Port Isabel/Brownsville\P&B_5: 14 - 14 (0)</p> <p>La gente que viene ya sabe el trabajo.</p> <p>Port Isabel/Brownsville\P&B_5: 38 - 38 (0)</p> <p>No, yo me comence (was trained) alla en Tampico.</p> <p>Port Isabel/Brownsville\P&B_5: 40 - 40 (0)</p> <p>Oh these guys come and they got it their. Yes , they are real good.</p> <p>Port Isabel/Brownsville\P&B_8: 44 - 44 (0)</p> <p>Yes, they were shrimpers all of them</p> | |
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| | <p>Port Isabel/Brownsville\P&B_9: 52 - 52 (0)</p> <p>Yes, yea they know the job and everything. Yes.</p> <p>Port Isabel/Brownsville\P&B_9: 54 - 54 (0)</p> <p>Oh yea defintely because these guys that come from over there have been shrimping since they were 10 years old they've been out shrimping since they were 10 and they know their way around a boat. Definetly, more than our guys probably yea they know these boats pretty well. They were raised doing this since they were kids.</p> <p>Port Isabel/Brownsville\P&B_13: 34 - 34 (0)</p> | |
| <p>H2B visa workers</p> | <p>And that hurts a little bit because um you're counting on these people so now you know we're a small fleet we only have 4 vessles right now.</p> <p>Port Isabel/Brownsville\P&B_2: 22 - 22 (0)</p> <p>ome of them are young guys some of them and of course mostly all of them are experienced. They live on the coast. So they've done it before whether it's been overthere or some of these guys have been coming over here for years.</p> <p>Port Isabel/Brownsville\P&B_2: 24 - 24 (0)</p> | <p>Ah un tio mio era capitan aqui y el me envito a venir a trabajar</p> <p>Palacios\Pal_4: 8 - 8 (0)</p> <p>sinceramente no se como funciona eso por ejemplo aqui en esta compañía tienen como 15 o 20 años no se cuanto que estan sacando permisos y siempre son los mismos.</p> <p>Palacios\Pal_4: 68 - 68 (0)</p> |

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| <p>We're allowed well with the H2B workers were allowed two headers per boat when we have our visa workers but at any other time you can get two visa workers they can take 3-4 header whatever they want to take.</p> <p>Port Isabel/Brownsville\P&B_3: 32 - 32 (0)</p> <p>Yes. Like right now oh you mean like the H2B workers yea they start gettting their relatives they'll bring the brothers or the nephew. Even some of them they want to bring their kids they want to bring their sons to come work in the industry</p> <p>Port Isabel/Brownsville\P&B_3: 58 - 58 (0)</p> <p>No son de afuera. Pues dan permisos para.</p> <p>Port Isabel/Brownsville\P&B_5: 28 - 28 (0)</p> <p>Uh we have people with permits from uh Mexico or from Central America, visa permits. And that's whats honestly bottom line their helping the industry right now because of them.</p> <p>Port Isabel/Brownsville\P&B_8: 38 - 38 (0)</p> <p>Uh there from um Mexico there from Nicaragua. From Mexico their from Tampico or Veracruz and people from Nicaragu</p> | <p>Ah por conocidos de alla mismo de donde somos. Me llemo la atencion.</p> <p>Palacios\Pal_5: 6 - 6 (0)</p> <p>Y tambien los permisos de trabajo estan limitados nadamas es un cierto bueno hay muchas personas por ejemplo en Mexico que quieren trabajar. Pero no no, estan limitados los permisos</p> <p>Palacios\Pal_8: 72 - 72 (0)</p> <p>Pos mira igual la gente es lo mismo. Como aqui llegan con permisos son los mismos que llegan aqui.</p> <p>Palacios\Pal_9: 46 - 46 (0)</p> <p>But now the keep dragging their feet on my permit workers from Mexico it's getting to be more and more red tape and uh last year we got them in August the year before we got them in September</p> <p>Palacios\Pal_11: 3 - 3 (0)</p> <p>So, that's why it's so good to have those boys from Mexico becuase they are so fast and they do it,</p> <p>Palacios\Pal_11: 17 - 17 (0)</p> |
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| | <p>Port Isabel/Brownsville\P&B_9: 50 - 50 (0)</p> <p>Well, most of the guys that come here to our fleet are from Veracruz from the state of Veracruz and I think that's probably 60, 40 percent</p> <p>Port Isabel/Brownsville\P&B_13: 28 - 28 (0)</p> <p>And down there the price of shrimp is at about that so they are breaking even so a lot of them have to run away and come find you know greener pastures and it's unfortunate because they have big fleets down there but..</p> <p>Port Isabel/Brownsville\P&B_13: 32 - 32 (0)</p> | <p>Mhmm (affirmative) yea so like most of our captains uh come from Mexico and they earn their citizenship and then the visa workers we allow them to pick who they want to take on the boat.</p> <p>Palacios\Pal_12: 50 - 50 (0)</p> <p>Well if we can get them (chuckle). We didn't get ours this year. Well, actually the last two years it's a lottery system now so like ___ us and some more guys around here we go with the same guy and we didn't picked, two years in a row.</p> <p>Palacios\Pal_13: 22 - 22 (0)</p> <p>And those guys are great workers. Can't beat them.</p> <p>Palacios\Pal_13: 22 - 22 (0)</p> <p>instead we have a struggle with the with immigration and all that stuff in order to get our uh I'll say our permit workers that we get.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> <p>Like we applied and go our permits the guys would come over it was never an issue um these last I'll</p> |
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| | | <p>say these last 5 -7 years it's been extremely difficult.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> <p>Cuz see everybody the permit workers they go back the end of December and then uh we're basically applying again annually for them to then get back uh we apply to have them here May 1st and here we are we're still waiting on them right now.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> <p>That I think in the next 5 to 10 years there's gonna be another, and depending on what happens with our visa program at least for us in Texas that's a huge thing well at least for Palacios to Brownsville that's a huge thing for us</p> <p>Palacios\Pal_16: 18 - 18 (0)</p> <p>I think I started hearing about it 4 years between 4 and 5 years ago when we stopped getting them on the regular. You know when ___ (shrimping company) may have gotten them but ___ (shrimping company) didn't get all of them.</p> <p>Palacios\Pal_16: 26 - 26 (0)</p> |
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| | | <p>So those are the we have some real real reall issues and if they don't get corrected we are gonna lose our industry at least my understanding from Palacios south cuz Brownsville uses visas as well.</p> <p>Palacios\Pal_16: 26 - 26 (0)</p> |
| <p>Creating relationships</p> | <p>We have not had any major breakdowns it's all been a litle stuff where you get we've uh established a little relationship with a company over there where they have their mechanics.</p> <p>[Because they fish so far away from home port they need to have people who can help the crew out if there is a breakdown.]</p> <p>Port Isabel/Brownsville\P&B_2: 20 - 20 (0)</p> | <p>Anyway uh uh the Catepillar company had offered him at that time was experimental engine which was a 3412 okay well they had offered it to him to put in my boat just tie it up and change the engine.</p> <p>Palacios\Pal_2: 14 - 14 (0)</p> <p>And even when we started this company here which it was a co-op back in 72-73 I was stil in high school my dad and a bunch of fishermen started because they wanted to have control of what to do with their shrimp.</p> <p>Palacios\Pal_3: 8 - 8 (0)</p> <p>: Si,si entre los amigos se hablan y estoy agarrando cinco cajas o sies cajas o diez vente para aca y se van.</p> <p>Palacios\Pal_8: 62 - 62 (0)</p> |

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| <p>Is it worth it?</p> | <p>So um you gotta kinda think about all that is it worth it if you have a major breakdown um you know how many boxes of shrimp are you catching, you know what I mean.</p> <p>[Are they catching enough shrimp to justify the fuel cost since fuel is going up]</p> <p>Port Isabel/Brownsville\P&B_2: 18 - 18 (0)</p> <p>Uh so it keeps us from running up there and of course the expenses.</p> <p>Port Isabel/Brownsville\P&B_2: 20 - 20 (0)</p> <p>I guess uh the pink vs the brown yea so um. You know in that sense pricing stuff like that uh it's been a little bit more consistant here lately in Florida. Yea \$6 average. Down here whatever size up there you're getting \$6 you might be getting \$4 down here.</p> <p>Port Isabel/Brownsville\P&B_2: 36 - 36 (0)</p> <p>By the time you tear up cable there's 2 nets per side looking at TED the whole rigging you're looking at about \$10 thousand just one side yea so.</p> <p>Port Isabel/Brownsville\P&B_2: 42 - 42 (0)</p> | <p>Well, and I really regret not doing it now. Ooo this past year honey I wanted to cry everytime I thought about it because and I know you probably been up enough there the production that they had this year no body in my range can ever remember. That much production in a years time or you know all it the whole season</p> <p>Palacios\Pal_2: 18 - 18 (0)</p> <p>We lost you know some money back when the industry the shrimp I don't know if you remember I think 2001 or 2002 it was a big collaspe in shrimping.</p> <p>Palacios\Pal_7: 34 - 34 (0)</p> <p>So, gear can't be you can't be, you can't do that you gotta just kinda be it's out there it's part of the game and uh you gonna lose stuff you are gonna tear up stuff.</p> <p>Palacios\Pal_10: 14 - 14 (0)</p> <p>But, just by them coming in and out a lot you do burn fuel but I mean that's just one thing you gotta do because if they were to stay out there the boat would you know sink or possibly damage. It'd be worse.</p> |
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| <p>now it's a little bit smaller because the net is a lot lighter and stuff like that so. Saves fuel so yea...Yea you go to the smaller doors an it cuts through it's supposed to cut through the water.</p> <p>Port Isabel/Brownsville\P&B_2: 48 - 48 (0)</p> <p>Probably just the income of it you know the money that they would bring. I mean the shrimp that they would bring from down in Mexico.</p> <p>Port Isabel/Brownsville\P&B_3: 10 - 10 (0)</p> <p>No, no. You're talking about \$20 a year \$20k a year for boat insurance average. Yes.</p> <p>Port Isabel/Brownsville\P&B_3: 36 - 36 (0)</p> <p>It's always been like that. No back in 197-something they used to be employees back in the late 70's all everybody used to be employees and so social security medicare were deducted from these crew memebers and then like 78 maybe 79 I can't remember the IRS came back and said they are considered self-employed, so they are self-employed.</p> <p>Port Isabel/Brownsville\P&B_3: 62 - 62 (0)</p> <p>Ooh sure they start putting in the traps that hurt fishing the shrimp. You have the turtle traps and the fish traps you losing production when you do that so.</p> | <p>Palacios\Pal_12: 38 - 38 (0)</p> <p>And the gulf they don't have a buyback but its a you can't purchase anymore gulf license you have to buy it from someone else.</p> <p>Palacios\Pal_13: 16 - 16 (0)</p> <p>But then with all of that then the rising cost of supplies continue to go up and if you look at the commodity price of uh shrimp it has stayed fairly flat if you look at it over the last really 30 years.</p> <p>Palacios\Pal_15: 4 - 4 (0)</p> <p>This business really doesn't have that it's either we we make it or we don't *laughs* we put we put money into these boats you know we'll dump you know \$35 grand into fuel for the boat to make a trip you know and you are betting on a you're betting on a haul each time.</p> <p>Palacios\Pal_15: 6 - 6 (0)</p> <p>So then you look at the return on investment on something like that and you know quite frankly you know guy like myself 42 years old you know I'd be better than you know halfway through retirement before I'd probably pay for another new one so you</p> |
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| | <p>Port Isabel/Brownsville\P&B_4: 20 - 20 (0)</p> <p>Oh right now it's been pretty good (price of shrimp) last year it wasn't too bad. It really hasn't been too bad. It was like oh what was it 5 years ago it was bad we getting no money. You got \$3.15 for the shrimp big shrimp! That's not good.</p> <p>Port Isabel/Brownsville\P&B_6: 32 - 32 (0)</p> <p>It's terrible the price of fuel went up price of shrimp kinda went down um but the biggest thing was that ther just enough catch.</p> <p>Port Isabel/Brownsville\P&B_7: 26 - 26 (0)</p> <p>Oh my god it's been awhile. Before that it was 1.20 a dollar and that hurts more expenses you gotta catch more. If there no catch [shoulder shrug].</p> <p>Port Isabel/Brownsville\P&B_8: 28 - 28 (0)</p> <p>So it's tough it's been really tough. I mean the price of shrimp is 20 dollars a pound and you know we deal with those regulations no big deal but we don't.</p> <p>Port Isabel/Brownsville\P&B_13: 38 - 38 (0)</p> | <p>gotta kinda look at stuff like that and you know what's the return how's that gonna go.</p> <p>Palacios\Pal_15: 6 - 6 (0)</p> <p>It was like I want to say a \$2-\$3 price drop in product that was already in inventory and it was just I don't remember what caused that because I was very new in system. I</p> <p>Palacios\Pal_16: 18 - 18 (0)</p> |
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| | <p>his is what we know this is what we grew up into and to see it die. I don't know if could live through that so we are gonna fight fight fight and we fight through so many regulations every year and so many restrictions but here we are.</p> <p>Port Isabel/Brownsville\P&B_13: 42 - 42 (0)</p> <p>Nosotros los que dependemos de este negocio yo recuerdo que hace muchos años los precios eran buenos \$12 el mas grande \$10 el camaron unos 40 años 45 si era buen precio. Eh buscabamos camaraon ahora buscamos camaron bueno y camaron bueno no pasa de \$5. Del que era antes (size)...</p> <p>Port Isabel/Brownsville\P&B_15: 34 - 34 (0)</p> <p>tumbaron el precio y nosotros que culpa teniamos cuando estamos pescando el camaron que cuesta la produccion de \$700 por noche de produccion de costo cuando a ellos no le cuesta nada mas que tirar ahi no se comida para gatos o yo no se. Era una desvenaja terriblemente desigual.</p> <p>Port Isabel/Brownsville\P&B_15: 34 - 34 (0)</p> | |
| <p>Move to where the shrimp is at</p> | <p>as far as the fishing out here goes it's seems like it's slowed down um a little bit here in Texas it slowed down a little bit so we've been doing we've been running up to Florida and they've been doing okay up there a little bit better than you know. If you look at 4-5 years back what they're saying is that there hasn't been fishing like that years and years over there so uh when ___ (owner) was still alive we decided to send the</p> | <p>Shrimping? Uh in '86. We used to go to Campeche in the winter time and we'd make that one long trip</p> <p>Palacios\Pal_2: 16 - 16 (0)</p> <p>Oh yea it'll. I mean they are going to have to shrimp and you know for. I mean as long as people</p> |

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| <p>boats up there and they managed to do pretty good and in my opinion probably better than they did here in Texas.</p> <p>[Specifically said that fishing in Texas has slowed down so their boats go to Florida to fish.</p> <p>*Florida shrimping is pink shrimp]</p> <p>Port Isabel/Brownsville\P&B_2: 16 - 16 (0)</p> <p>So as far as change goes yea maybe something like that where we had to go where the shrimp is at.</p> <p>Port Isabel/Brownsville\P&B_2: 18 - 18 (0)</p> <p>Yea it was late 70's when they stopped going to Mexico yea the boats would go over there 2-3 months at a time and then one boat would come back in and they'd take them groceries take them the necesites that they needed back to the area that they were shrimping. They would bring their catch back (that one boat)</p> <p>Port Isabel/Brownsville\P&B_3: 6 - 6 (0)</p> <p>Yes. But look at it now right now you know. But then again like right now look at the shrimp coming in right now it's white shrimp. Can get any brown shrimp we have all these buyers looking for brown shrimp. Yes, there is no brown shrimp right now in the Gulf of Mexico. Well from here.</p> <p>Port Isabel/Brownsville\P&B_3: 14 - 14 (0)</p> | <p>want shrimp it's gonna be around. And it's a food product so you know you gotta produce food for people.</p> <p>Palacios\Pal_12: 42 - 42 (0)</p> <p>Well, when my grandpa he was uh probably 8 or 10 years old they came from Alabama like on sailboats and they were like some of the first ones to catch any shrimp out of this bay.</p> <p>Palacios\Pal_13: 8 - 8 (0)</p> <p>It just, more opportunity. You know, bigger catches and just bigger area to you know you have Alabama, Florida, Texas you know up and down.</p> <p>Palacios\Pal_13: 12 - 12 (0)</p> <p>Some of the guys back in the 70s they would go to Campeche and thats where they worked down there.</p> <p>Palacios\Pal_13: 48 - 48 (0)</p> |
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Uh we were here in Louisiana you know the boats stopped going to Campeche. We had to work on this side.

Port Isabel/Brownsville\P&B_4: 12 - 12 (0)

Oh, back in Florida costal season we were up in the beach here from Port Mansfield to Corpus we were fishing the white shrimp it was it was uh every drag.

Port Isabel/Brownsville\P&B_6: 26 - 26 (0)

So that's probably why the Louisiana fleet started migrating down here so they can fish further down into Mexico.

Port Isabel/Brownsville\P&B_7: 10 - 10 (0)

And it's like anything it's seasonal. So it's maybe during the wintertime our fleet from here goes to Key West and fishes the western portion of Florida same thing during the winter months they may go down further south where the water is warmer temperature the shrimp are still thriving

Port Isabel/Brownsville\P&B_7: 16 - 16 (0)

So all those boats that used to fish during January February and went to Campeche Bay they can't do that anymore so that's another thing that kinda put this cuz a lot of these boats in Port Isabel Brownsville originate in Louisiana and those

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| | <p>people wanted they moved down here so they'd be closer to Mexico.</p> <p>Port Isabel/Brownsville\P&B_12: 34 - 34 (0)</p> | |
| <p>Always learning</p> | <p>Yea, you're always still learning, yea so. So if you asked me how did I get into it. *chuckles* I was pretty much just pushed into it *laughing* so anyways.</p> <p>Port Isabel/Brownsville\P&B_2: 8 - 8 (0)</p> <p>So they run itno lot of that so in that sense, but these guys are learning how to work around that you know what I mean.</p> <p>Port Isabel/Brownsville\P&B_2: 18 - 18 (0)</p> <p>Once you learn a lot of the maintance you will be doing on the boat doing it on multiple boats is not as hard.</p> <p>Port Isabel/Brownsville\P&B_11: 12 - 12 (0)</p> <p>people come to you for knowledge you know. Knowledge is power you know just like money is power.</p> <p>Port Isabel/Brownsville\P&B_14: 16 - 16 (0)</p> <p>Si si y eso se aprende tengo ya 50 años *laughs* y sigo en esto sigo trabajando.</p> | <p>So I did that last year and put the bare minimums on each boat to try to get some response back from my captains and also to get a feel of how much fuel they are burning see if it's better form the year before</p> <p>Palacios\Pal_10: 14 - 14 (0)</p> <p>And then all of a sudden on of the guys lost one and that made me nervous and then I started gettting on to them bout losing nets and getting on wrecks but then when you do that you put pressure on the captain and then he don't want to go to areas and try to experiment and then don't find the shrimp and here I am on his case about being safe don't want to tear up but then he don't catch no shrimp cause he is trying to be safe.</p> <p>Palacios\Pal_10: 14 - 14 (0)</p> <p>O sea esa era mi intencion, aprender ahi lo que el hacia y como el tenia que vender bastante bait especialmente todo los weekends, todos. Yo dije, yo tengo que aprender aqui para que yo solo tenia mi plan mi pensamiento para que el me deje ir en el barco y el se quede aqui cuidando el lugar.</p> |

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| | <p>Port Isabel/Brownsville\P&B_15: 20 - 20 (0)</p> | <p>Palacios\Pal_14: 20 - 20 (0)</p> <p>o todo los dias aprendo cosas nuevas y por el que llega y el que se va y por el que esta por venir yo aprendo y me gusta oír a todo el mundo.</p> <p>Palacios\Pal_14: 22 - 22 (0)</p> |
| <p>Local workforce</p> | <p>Ellos de aqui. Son americanos</p> <p>[This particular owner did prefer to work with the American workforce because that's how their husband did it for decades.]</p> <p>Port Isabel/Brownsville\P&B_1: 19 - 19 (0)</p> <p>No, pues la gente de aqui este trabaja casi no le llama la atencion [Why?] Pues yo digo que es porque es un trabajo muy rudo.</p> <p>Port Isabel/Brownsville\P&B_5: 58 - 58 (0)</p> <p>Oh, I started out and it was summer I was 14. So I did summer work I remember a family of mine my cousin they had a my cousin ran the boat and then I would go. I would go make money to buy clothes for school that's what I was told. Which everybody works for the family so you went to school and I ended up captain of a shrimp boat. I did it because of the money,</p> | <p>Y yo lo que pienso que aqui el Americano no quiere trabajar porque no quiere estar fuera de su casa mucho tiempo.</p> <p>Palacios\Pal_8: 72 - 72 (0)</p> <p>there's no American workers that kinda wanna do that type of labor and when you need 30 guys you know it's nearly impossible to find them here.</p> <p>Palacios\Pal_12: 40 - 40 (0)</p> <p>Yea like you know when I was young and even 20 years ago the highschool kids., you know we would have highschool kids working out here.</p> <p>Palacios\Pal_13: 28 - 28 (0)</p> <p>I mean so we're constantly trying to I say get more help local help whatever uh to fish these boats year</p> |

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| <p>Port Isabel/Brownsville\P&B_6: 10 - 10 (0)</p> <p>They didn't want to come help at the dock. They just want to come jump on the boat, Is the boat ready? Yea the boats ready but they don't want to come help get it ready. It's just me and the rigman who is here because he's a permit worker. The other guys that have papers...Probably the biggest issue right now is crew. Biggest issue.</p> <p>Port Isabel/Brownsville\P&B_6: 34 - 34 (0)</p> <p>I graduated high school in 88 and that summer of 88 I left with a boat for 42 days as a 17 year old kid and I went out with one of our better captains</p> <p>Port Isabel/Brownsville\P&B_7: 18 - 18 (0)</p> <p>You know again it's I got a couple of guys out here that fell on hard times you know they came in here as bums basically with nothing on their back um they just needed a job</p> <p>Port Isabel/Brownsville\P&B_7: 34 - 34 (0)</p> <p>Umm my daddy he used to shrimp when he was a kid. He was part of Port Isabel (fleet).</p> <p>Port Isabel/Brownsville\P&B_8: 4 - 4 (0)</p> | <p>round but we don't have any luck with that and even if we do they may be they will only be on there for one trip and they won't even make a trip sometimes.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> |
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these guys US citizens they don't want to know nothing all the help is coming from outside.

Port Isabel/Brownsville\P&B_8: 38 - 38 (0)

Yes, cuz this little town has always been like in the shrimp industry you know it's always been a port it's always been a there was one of the biggest fleets here in Brownsville and in Port Isabel. So yea most of the people where from here.

Port Isabel/Brownsville\P&B_9: 42 - 42 (0)

Yes and no we still had labor issues especially for the season and stuff, but back in the 70's I can remember uh college kids coming down here to make money to go to college okay and back in the early 80's that kinda all went away.

Port Isabel/Brownsville\P&B_10: 10 - 10 (0)

I used to actually I used to when I was in jr high started and I would only go out in the summer for one or two trips and then high school I would go out two or three

Port Isabel/Brownsville\P&B_13: 8 - 8 (0)

Back then a lot yes. Back then you'd see it a lot because I remember going out and every boat had at least one young guy

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| | <p>Port Isabel/Brownsville\P&B_13: 14 - 14 (0)</p> <p>They really like it but they like that paycheck and like I said you get you're 18 years old and the only thing on your mind is partying till that money is gone you're not ready to go out and we gotta get out of here in 5 or 6 days so. And that's why we have a huge uh turnover on young kids.</p> <p>Port Isabel/Brownsville\P&B_13: 18 - 18 (0)</p> <p>the other 60 percent are US citizens from here local</p> <p>Port Isabel/Brownsville\P&B_13: 28 - 28 (0)</p> | |
| <p>Many hats</p> | <p>No, it was. I did not actually. Um it's kinda um if you would have met my boss he woulda been like here __ here you go this is what you are gonna do *laughs*. Yes, a lot of salvage we do well we still do it right but umm we did a lot with ____ (deceased owner) a lot of salvage. Uh salvage work means pulling boats off the beach, sunken boats umm anywhere from building docks I mean anything that had to with uh as far as marine stuff goes we pretty much involved in pretty much everything. (So you know a lot).</p> <p>[A fleet manager but just like on the boat he had to move up from welder into this current role and still has to be able to do it all.]</p> <p>Port Isabel/Brownsville\P&B_2: 8 - 8 (0)</p> | <p>Well we got out of the shrimp business and got into the big fish market, the bluefin, do you understand a bluefin?</p> <p>Palacios\Pal_2: 8 - 8 (0)</p> <p>And, so I'd do anything from maintance, production, um you know licensing. Anything that we'd need for the boat.</p> <p>Palacios\Pal_12: 12 - 12 (0)</p> <p>Most of what I've done over the years is uh I really like the aspect of the maintenance aspect and</p> |

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| | <p>Uh since I was probably 15 years old. [How did you begin?] Oh my grandfather back in the day owned, he was a diesel mechanic he was a refrigeration tech</p> <p>Port Isabel/Brownsville\P&B_13: 4 - 4 (0)</p> <p>Uh probably like 17-18 I spent my birthday on the boat cuz it was July 14 which was yesterday. And uh we made the trip we had a good catch came in unloaded and then my dad says look I need you more here (points to the office around him) cuz I'm doing all your work and I'm fed up with it you need to be here. This is just too much for me.</p> <p>Port Isabel/Brownsville\P&B_14: 8 - 8 (0)</p> | <p>working with the boats and working with the people so I've kinda stuck with that.</p> <p>Palacios\Pal_15: 4 - 4 (0)</p> <p>Yea, I've been out uh several times I wouldn't say most of my time has been spent on the maintenance side, the management side, uh working around the docks lot of times when we were-when dad and them had were building up this business course they needed the help around here so I ended up spending a lot of my time around here umm.</p> <p>Palacios\Pal_15: 6 - 6 (0)</p> <p>No, you know I come from a very traditional family there are 13 of us and my mother although my mother always kept all the books for uh and did all the paperwork um she did not allow us girls to go to the bay so we um did not.</p> <p>Palacios\Pal_16: 8 - 8 (0)</p> |
| <p>Older workforce</p> | <p>Que trabaje. No mas tenemos un capitán es el que trae el ____ (boat name) pero son señores grandes y tienen miedo. Y yo le digo pues si está feo y todo no salgan. Yo hasta eso les digo. Y los que había pues ya murieron de la enfermedad esta (COVID). Si capitanes.</p> | <p>I think it was the people coming up. Just the older ones was the hustlers.</p> <p>Palacios\Pal_2: 20 - 20 (0)</p> |

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| | <p>[Because of their ages they were were scared about getting COVID.]</p> <p>Port Isabel/Brownsville\P&B_1: 17 - 17 (0)</p> <p>No porque en el trayecto que nosotros vamos supones los anos que tenemos aqui como los mismos. No hay gente nueva que diga que viene gente nueva, no. Somo los mismos lo que estamos trabajando continuamente años con años.</p> <p>Port Isabel/Brownsville\P&B_5: 34 - 34 (0)</p> <p>Every year there's captains you know that I've known every year seems like one or two of them have died got sick or can't go shrimping anymore so yea.</p> <p>Port Isabel/Brownsville\P&B_6: 32 - 32 (0)</p> <p>Doing this job was really hard on me, because I'm on my last runs I mean right now I'm 55 right</p> <p>Port Isabel/Brownsville\P&B_8: 26 - 26 (0)</p> <p>Kinda, very little it's hard to see that and it's sad. Because I see the older ones that were older than me their like oh man these guys are like in their 70's like their not supposed to be out there.</p> <p>Port Isabel/Brownsville\P&B_8: 32 - 32 (0)</p> | <p>I don't know I don't think anybody gonna yea we just you know just like we talk with ___ I mean later on we gonna have to retire and who gonna run the business maybe we gonna have to sell it.</p> <p>Palacios\Pal_6: 46 - 46 (0)</p> <p>Si, uhuh. Ellos son capitanes viejos y son los que me enseñaron a mi.</p> <p>Palacios\Pal_9: 18 - 18 (0)</p> <p>This trip I had 3 boats working that the deckhand is 65 years old and you can't it's hard for a man that age in the back deck.</p> <p>Palacios\Pal_11: 3 - 3 (0)</p> <p>a, they are starting to get some age to them you know cuz it's a type of industry that you gotta be a guy who does it till he's in his 50's or 60's well uh he's a deckhand he's moved his way up to a deckhand</p> <p>Palacios\Pal_11: 19 - 19 (0)</p> <p>Uhhh, I don't know there's not many young guys you know when I was young there was a lot of</p> |
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| | <p>Pero these fishermen they have it in their blood like my dad. I had to tell him you know you gotta stop you are gonna be 80 dude.</p> <p>Port Isabel/Brownsville\P&B_8: 36 - 36 (0)</p> <p>Back in the mid-80s when we had 17 to 20 boats I had the best captains in the world all Port Isabel graduates just really good kids and good shrimpers but that was a long time ago. They've all I don't have any of those guys left anymore.</p> <p>Port Isabel/Brownsville\P&B_12: 40 - 40 (0)</p> | <p>young people in it. Now it's you know there is a few but it's not many.</p> <p>Palacios\Pal_13: 42 - 42 (0)</p> <p>Mi papa trabajo como por 33 años en el agua.</p> <p>Palacios\Pal_14: 10 - 10 (0)</p> <p>And that's what we are seeing I think on production now we're seeing older boat owners that are owner/operators and they are getting out of the business and their kids aren't coming in so we are now seeing another shrinking down.</p> <p>Palacios\Pal_16: 18 - 18 (0)</p> |
| <p>Lack of adequate help</p> | <p>Pues mas este año a ver como va. De ve como no hay gente una no hay gente.</p> <p>[This particular shirmp boat owner has had a run of bad luck previously with captains stealing from them and only has one boat that is up to code for this shrimp season but says that their isn't anyone to work.]</p> <p>Port Isabel/Brownsville\P&B_1: 15 - 15 (0)</p> <p>We have used them last year we couldn't get them because of the whole covid thing right everything slowed down everything just dead stop.</p> | <p>Changes like to the industry um I think the crew is the most the thingt that changed. We don't have the crew like we used to have.</p> <p>Palacios\Pal_7: 24 - 24 (0)</p> <p>ueno es eso que es mas dificil buscar personas que quieran trabaja.</p> <p>Palacios\Pal_8: 72 - 72 (0)</p> |

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| <p>Port Isabel/Brownsville\P&B_2: 22 - 22 (0)</p> <p>Nah. Yea no not to many of them are left. It's harder and harder to find specially kids</p> <p>Port Isabel/Brownsville\P&B_2: 30 - 30 (0)</p> <p>No, we have issues with finding crew. H2B. Crew as far as headers is what we are lacking right now</p> <p>Port Isabel/Brownsville\P&B_3: 22 - 22 (0)</p> <p>That's been more of a recent issues because we didn't get our workers last year. Yea we didn't get our workers last year.</p> <p>Port Isabel/Brownsville\P&B_3: 28 - 28 (0)</p> <p>We had two boats tied up. Two boats didn't have a crew at all. The other ones just went with one header so yes the production was a little bit lower than what normally when we get our workers here.</p> <p>Port Isabel/Brownsville\P&B_3: 30 - 30 (0)</p> <p>Bueno en la produccion que hubo camaron pero no hubo gente para trabajarlo.</p> <p>Port Isabel/Brownsville\P&B_5: 26 - 26 (0)</p> | <p>I'm having to deal with I call them local people but they are here to Brownsville and it's hard to find good help um especially young help.</p> <p>Palacios\Pal_11: 3 - 3 (0)</p> <p>The bad that I see is it's harder and harder for us to get uh visa workers and</p> <p>Palacios\Pal_12: 40 - 40 (0)</p> <p>That really hurts because it is hard to find help.</p> <p>Palacios\Pal_13: 22 - 22 (0)</p> <p>Well, wherever we can get them you know it's, it's not easy to find workers that's for sure.</p> <p>Palacios\Pal_13: 26 - 26 (0)</p> <p>There is not a whole lot of people just lined up out here that want to jump on these boats for 50 days and go out there and *chuckle* head shrimp and bounce around on a boat so you know it's it's a-that's been a tough piece you know for the industry.</p> <p>Palacios\Pal_15: 4 - 4 (0)</p> |
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| | <p>Bueno no habia trabajadores porque el ano pasado no le llego el permiso al patron.</p> <p>Port Isabel/Brownsville\P&B_5: 36 - 36 (0)</p> <p>We got shut down and wasn't a whole bunch of shrimping going on and the crew with the permits. This year we last year we didn't have crew we had a couple of boats that never left the dock they stayed tied up. So that's been a change. Dockside it's getting lot harder to keep crew.</p> <p>Port Isabel/Brownsville\P&B_6: 32 - 32 (0)</p> <p>We short on people pero we still gonna go out and do whatever we can.</p> <p>Port Isabel/Brownsville\P&B_9: 48 - 48 (0)</p> <p>Uh crew's are harder to get ahold of there is less people wanting to be a shrimper to learn to be a captain.</p> <p>Port Isabel/Brownsville\P&B_12: 26 - 26 (0)</p> <p>And just the time it's so much easier to go do something else. So it's hard to get people.</p> <p>Port Isabel/Brownsville\P&B_12: 28 - 28 (0)</p> | <p>The biggest change I'll save overall and the biggest thing that's uh that's continuing to be a struggle for the industry is definitely the labor force</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> <p>You know so it's a challenge and I'll say that that part of the labor force has gotten to be more of a challenge than I've ever seen.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> <p>The rest of the boats were here at the dock tied up. Cuz we didn't have people to work them.</p> <p>Palacios\Pal_15: 14 - 14 (0)</p> |
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| | <p>you know and personale you know it's hard to get personale.</p> <p>Port Isabel/Brownsville\P&B_14: 14 - 14 (0)</p> | |
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APPENDIX D

INTERACTIVE QUOTE MATRIX YUCATAN RESEARCH QUESTION 2

| Codes | San Felipe Interviews (N=15) | Sisal Interviews (N=15) |
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| Negative impacts | <p>El problema esta que viene la corrupcion y no te quitan tu lancha no te quitan tu motor y ya me armo con dos lanchas.</p> <p>San Felipe Interviews\San_Fe_4: 40 - 40 (0)</p> <p>No son muy buenos. Claro si ayudan algunos pero al final le cosas terminan en perjudicando. Claro</p> <p>San Felipe Interviews\San_Fe_4: 40 - 40 (0)</p> <p>Pero desafortunadamente, desafortunadamente pasa mucho que por ejemplo el capacitarnos garantia de ejecucion y de exito porque el seguimiento quien se lo da?</p> <p>San Felipe Interviews\San_Fe_4: 42 - 42 (0)</p> | |
| Success of implementation | <p>Pero si da, si da resultado cuidar las especies. Si da resultado cuidar este pues respetar las vedas.</p> <p>San Felipe Interviews\San_Fe_1: 22 - 22 (0)</p> <p>Son buenas. Son buenas pero hay que aplicarlas bien.</p> | <p>Esta dando resultado en el sentido de que por medio de la Secretaria de turismo se solicitaron, se solicitaron otras, otra acreditacion aca en el puerto y se acreditaron creo que 36 personas mas y ahorita ya esas personas ya tiene su credencial ya esas personas tambien se estan involucrando a lo que es el turismo como alternativa a la pesca, si.</p> |

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| | <p>San Felipe Interviews\San_Fe_4: 36 - 36 (0)</p> <p>Fijate que si y no. Te voy a explicar. Cuando el gobierno implementa una ley, no es que yo sea antigobierno. Te explico porque. Porque es una realidad que vivimos en la costa. Eh el gobierno te agarra y te implementa una estrategia para mejorar la pesca. Para ayudar el pescador pero le deja muchos, muchas puertas abiertas en la cual por ejemplo hace que decolapse el proceso.</p> <p>San Felipe Interviews\San_Fe_4: 40 - 40 (0)</p> <p>Pero podriamos traer no se cada vez que concluia una veda de algun producto al inicio de la temporada de pesca pues habia una buena produccion y podiams permanecer mas tiempo pescando.</p> <p>San Felipe Interviews\San_Fe_7: 6 - 6 (0)</p> <p>Igual, igual por ejemplo la SESIA eso es a lo que vienen igual ahi ve tienen algunos este CENASICA SAGARPA para el manejo del pulpo como deben de estar nuestras neveras el hielo como se debe dar, no, o sea como conservarlo sin ensuciarlo ese el momento de seleccionar el producto la forma de que debemos de estar presentados, no, que hay que bañanos para la recepcion este no o sea unos extremos unas medidas asi muy higienicas.</p> <p>San Felipe Interviews\San_Fe_9: 42 - 42 (0)</p> | <p>Sisal Interviews\Sisal_15: 64 - 64 (0)</p> |
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| | <p>Si, si si. Toda la veda del mero estan perfectas la tallas estan perfectas.</p> <p>San Felipe Interviews\San_Fe_12: 28 - 28 (0)</p> | |
| <p>Disconnect between orgnizations and activities</p> | <p>Y si ha dado resultado tambien porque pues aqui por ejemplo ahorita estan en el empleo temporal de la veda del mero. No se como lo maneje el gobierno pero desgraciadamente no entran todos. A veces entran algunos que ni son pescadores.</p> <p>San Felipe Interviews\San_Fe_1: 24 - 24 (0)</p> <p>Entonces muchas coasa que pues que bueno que fuera como lo marca la ley pero pues se ve que en todo aveces no todo lo que se hace este enfavorece</p> <p>San Felipe Interviews\San_Fe_1: 24 - 24 (0)</p> <p>A la epoca de, de este Miguel de la Madrid se cambio Miguel de la Madrid entro otro presidente entonces las cosas decayeron. Decayo el trabajo, ya no habia trabajo.</p> <p>San Felipe Interviews\San_Fe_3: 12 - 12 (0)</p> <p>Pero hay un problema porque dicen que son 750 (pesos) de vales que te deberian dar y 750 en efectivo lo que segun deberia de ser. No lo estan dando solo estan dando 600.</p> | <p>Siempre, siempre cualquier gobierno que a entrado de azul rojo verde lo que sea ese apoyo al pescador siempre a llegado sino que lo manejan de esta manera y es lo que ahorita estamos pelieando.</p> <p>Sisal Interviews\Sisal_8: 30 - 30 (0)</p> <p>Las leyes estan establecidas. Quienes la aplica es el problema.</p> <p>Sisal Interviews\Sisal_11: 17 - 17 (0)</p> <p>No realmente ni ahora se dan. O sea el pescador desconoce podemos decir el 80% de las leyes acualmente,no. Entonces como te digo la gente que se dedica a la pesca es gente de escasos recursos gente de bajo nivel educativo y ellos son los que estan alla.</p> <p>Sisal Interviews\Sisal_13: 34 - 34 (0)</p> <p>Entonces como no se los dieron a saber no habia ni un papel de notificacion en talar una demanda. Lo cual pues obiamente ganaron pues porque no hay</p> |

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| | <p>San Felipe Interviews\San_Fe_6: 60 - 60 (0)</p> <p>Si hubiera una regulacion asi que digan "Tu estas llevando tantos kilos de bolsa me tienes que traer tantos kilos de bolsas otra vez." Pero no se me explico porque no lo hacen. No lo hacen.</p> <p>San Felipe Interviews\San_Fe_12: 26 - 26 (0)</p> <p>LLego un tiempo que todas nosotras cobrabamos hace como 4-5 años cobrabamos la veda del mero y de pronto nos sacaron que porque no. Que porque no entrabamos al palandre y el mero no lo pescamos.</p> <p>San Felipe Interviews\San_Fe_14: 32 - 32 (0)</p> | <p>nada. Entonces que hizo el gobierno trasladarse hasta donde ya no eran terrenos particulares. Entonces perdio 8 km de costa protegida.</p> <p>Sisal Interviews\Sisal_13: 135 - 135 (0)</p> <p>Se los impone. En todo litoral. En todo litoral Yucateco se los impone. Ese eh empieza avisar de que la veda comienza el primero de febrero comenzo terminamos hasta el ultimo dia de marzo.</p> <p>Sisal Interviews\Sisal_15: 42 - 42 (0)</p> <p>Y yo siento que no es asi. Eso es como le vuelvo a repetir ellos quieren formar sus, su propia leyes y no toman en cuenta el pescador, su opinon del pescador. Claro.</p> <p>Sisal Interviews\Sisal_15: 46 - 46 (0)</p> |
| <p>Awareness of organizations</p> | <p>Entonces como hasta el dia de hoy ahora ya no se permite que se pesque con anzuelo asi en el fondo bicheriado le dicen. Sino que tiene que ser este con las jimbas.</p> <p>San Felipe Interviews\San_Fe_1: 14 - 14 (0)</p> <p>Entonces no es justo que se esta bajando-Este territorio es de San Felipe y Dzilam esta por aca.</p> <p>San Felipe Interviews\San_Fe_1: 22 - 22 (0)</p> | <p>Ese muchacho que SAGARPA quedo se lo dijo a [mi hijo] y todo prefiero ayudarme me dieron la carta y todo te quiero ayudar.</p> <p>Sisal Interviews\Sisal_8: 34 - 34 (0)</p> <p>Aja, se les hace el concocimiento a los permisionarios les llamamos o los dueños de la cooperativas. Eso la CONAPESCA se los hace llegar a ellos y ya ellos pegan sus papeles ahi en</p> |

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| | <p>Eso me imagino que va a seguir porque la autoridad no hace lo que le corresponde.</p> <p>San Felipe Interviews\San_Fe_1: 22 - 22 (0)</p> <p>No, eso. Viene por base de la cooperativa. La cooperativa como usted es reconocido, si entonces trabajamos junto con eh a ver como le puede decir este el gobierno solicitamos nosotros curso y vienen ellos.</p> <p>San Felipe Interviews\San_Fe_2: 56 - 56 (0)</p> <p>Nos dieron apoyo de nevera tambien. Si, nos dan apoyo de nevera. Del mismo gobierno. Damos un 50% y el 50% lo dan ellos. Por el apoyo que nos dan.</p> <p>San Felipe Interviews\San_Fe_2: 56 - 56 (0)</p> <p>Pues no, de, nosotros sabemos que solo tenemos de vedas pero no de. No la embarcacion pues no hay nada regla que diga pues tienes que ir en una embarcacion de este tamaño un motor de este caballaje. No, no tenemos reglas de eso puedes pescar tu como, como a ti te acople mas o como tu puedas ir a la pesca.</p> <p>San Felipe Interviews\San_Fe_5: 34 - 34 (0)</p> | <p>sus bodegas donde indican si hay una nueva norma o hay si. El gobierno del estado es el que se encarga de todo eso.</p> <p>Sisal Interviews\Sisal_9: 52 - 52 (0)</p> <p>'empezar la autoidad que era la CONAPESCA que es la que vigila se disentrego ya no hay delegado ya no hay sub-delegado ya no hay inspectores antes habian de periodo 2-3 inspectores para todo el litoral.</p> <p>Sisal Interviews\Sisal_11: 27 - 27 (0)</p> <p>Y a rais de esa amistad que tenemos pues siempre no hablan y nos dice oye esto y lo otro. Ese es el viniculo que tenemos con la UNAM ultimamente tuvimos este un viniculo</p> <p>Sisal Interviews\Sisal_11: 35 - 35 (0)</p> <p>Si, si, mayormente nos mandan este nos mandan un boletin por parte de la SAGARPA no en este casode la Secretaria de Pesca que es la que esta ahorita. Nos manda un correo electronico avisandonos que ya practicamente tal especie va entrar en periodo de veda</p> <p>Sisal Interviews\Sisal_12: 32 - 32 (0)</p> |
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| | <p>Si, se le da curso a los pescadores bueno a mi no me a tocado. A mis hermanos le a tocado pues como le dire cursos de, de por ejemplo de creo que es de veda de pulpo o algo asi como un apoyo que le toca a ellos. Creo que el gobierno lo manda creo anual o cada dos años y llega 7mil pos (pesos) por pescador.</p> <p>San Felipe Interviews\San_Fe_5: 36 - 36 (0)</p> <p>Ehm hasta donde yo se no. A nosotros no nos a tocado.</p> <p>San Felipe Interviews\San_Fe_5: 38 - 38 (0)</p> <p>Los dio como se llama una empresa de Mexico nos dio los cursos.</p> <p>San Felipe Interviews\San_Fe_6: 26 - 26 (0)</p> <p>Si, las vedas siempre han existido.</p> <p>San Felipe Interviews\San_Fe_6: 48 - 48 (0)</p> <p>Bueno los otros talleres que nos han dado ha sido sobre una organazcion insitucion aqui que se llama CINACIQUA sobre buenas practicas de manejo de producto</p> <p>San Felipe Interviews\San_Fe_7: 32 - 32 (0)</p> | <p>Bueno hay un señor que pues bueno el se dedica hacer los proyectos entonces los ingresa en este caso a CONAFOR que es una institucion que se dedica a lo de a reforestar lo que es tanto manglares como selvas.</p> <p>Sisal Interviews\Sisal_13: 32 - 32 (0)</p> <p>No se, no se la verdad no se. Como aveces mas que nada he sido un poco medio..</p> <p>Sisal Interviews\Sisal_13: 84 - 84 (0)</p> <p>Un grupo externo que venga ayudar por ejemplo hay ONGs que estan trabajando en Cuba con pescadores y les estan dando talleres para que tambien trabajen en el turismo. Por eso estoy preguntando si en algun momento a existido algo asi aqui en Sisal.</p> <p>R: No. Si hay turismo ahorita por ejemplo ahorita se hacen un tures que hacen pero no habia. El gobierno no manda. Nos ayuda en esa parte el gobierno.</p> <p>Sisal Interviews\Sisal_14: 76 - 77 (0)</p> |
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I: Entonces aqui con un permiso de pesca tu puedes por toda la costa ir? No importa o si hay como regiones que esta region pertenece a.

R: En teoria hay.

San Felipe Interviews\San_Fe_8: 19 - 20 (0)

Si. Pues segun investigaciones que se han hecho no. Son investigaciones que se han hecho y nosotros hemos tomados esos cursos que nos dan las dependencias del gobierno, no.

San Felipe Interviews\San_Fe_8: 24 - 24 (0)

Ehmm si pero si he escuchado de algunos por ejemplo en las cooperativas se dan cursos de buceo para el tiempo de cuando tiempo tardas en profundidad en tus tablas como se llama

San Felipe Interviews\San_Fe_9: 40 - 40 (0)

No verdad (asks her sister)No nos han dando. Bueno aquella cuando vino como se llama uuu pero te digo eso fue años.

San Felipe Interviews\San_Fe_10: 38 - 38 (0)

Si habia. Si existia (his wife disagrees). Antiguamente con lo de la pesca de mero pues solo se vedaba porque nomas nos compraban el producto cuando habia sol marzo abril mayo junio.

San Felipe Interviews\San_Fe_13: 60 - 60 (0)

Veda. Pues practicamente se pone como no esta en el libro no existe en el libro porque nostras queriamos nuestro permiso nos dicen que no existe en el libro.

San Felipe Interviews\San_Fe_14: 30 - 30 (0)

Si esa vez no se como estuvo pero si tuve que ver el gobierno. Pero teniamos una cooperativa. En cooperativas si les dan en libres no.

San Felipe Interviews\San_Fe_14: 42 - 42 (0)

Haste cuenta un permiso te viene saliendo como 3mil pesos un permiso de digamos implacamiento y todo eso. Todo todo te cuesta. Tienes que ponerle la matricula eso tiene permiso tu tarjeton avaces lo vienen a dar gratis pero avaces te cobran 500 pesos por el tarjeton. Y asi muchos papeleos que un pescador ocupa

San Felipe Interviews\San_Fe_14: 54 - 54 (0)

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| | <p>No que yo sepa no nunca. No.</p> <p>San Felipe Interviews\San_Fe_15: 40 - 40 (0)</p> | |
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Interactive Quote Matrix Texas Research Question 2

| Code | Port Isabel/Brownsville (N=22) | Palacios (N=17) |
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| <p>Agreement with organization</p> | <p>And I do noticed too like you (looks at Sea Grant Agent) were telling us about the TEDs well when we pick up we see the fishes come out.</p> <p>Port Isabel/Brownsville\P&B_6: 22 - 22 (0)</p> <p>Plus then came the turtle excluders all those new stuff which is understandable for the sea species becasue they are an endangered they are. Sometimes we don't know honesly you know I'm telling you from my heart I mean you don't know sometimes until you find out really like later, hey.</p> <p>Port Isabel/Brownsville\P&B_8: 8 - 8 (0)</p> <p>You're not lost. Um if there is an accident we have EPRBS you activate an EPRB Coast Guards out there to help your crew you know within 2 to 3 hours back then you'd have to navigate back to the dock and people would die because they bleed to death when they you know would have accidents so oh it's changed drastically.</p> | <p>Uh pues hay ciertos bueno unos que se encargan como de las trampas verdad a experimentar pues como ella como la que salio orita como que mas se encarga como mas pescarlo el pescado.</p> <p>Palacios\Pal_5: 40 - 40 (0)</p> <p>No they talk English. Well just like we know one of the Coast Guard he talk a little bit Vietnamese *smiling about that* Pretty cool yea well his mom was Vietnamese and his dad's American yea.</p> <p>Palacios\Pal_6: 58 - 58 (0)</p> <p>I don't know somehow we all managed to adjust to it. We realized that something that we have to you know live with so I mean we try to see if there is regulation that um you know like</p> |

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| | <p>Port Isabel/Brownsville\P&B_13: 20 - 20 (0)</p> <p>Probably about the same time I don't know maybe a little longer. I mean I don't have any timespan but I've known ___ you he retired and then ___ took over so you know I met ___ and ___ well he's always been a friend out our since forever [all Texas Sea Grant employees] and they've been out on boats and stuff they've kinda seen what goes on</p> <p>Port Isabel/Brownsville\P&B_14: 16 - 16 (0)</p> <p>No no vamos a la eh la oficina donde venden la licencias. (Texas Parks and Wildlife) Nos dan un libro.</p> <p>Port Isabel/Brownsville\P&B_15: 32 - 32 (0)</p> | <p>uh give an input in to see if there is something better you know instead of doing that but you knowbut it seems like with our people like people I would explain to them the reason why they have that and stuff like that they want to preserve you know.</p> <p>Palacios\Pal_7: 26 - 26 (0)</p> <p>You know it's not they want to put you out of business it's just that they want to you know find a way to preserve and you know um having you know closure on this day and that day is to you know help the industry sustainable. So and then they take it and I say you know Don't gripe just try to do it I mean I say God will manage for you you know I mean yea. It may start losing you know 10% 15% of your you know income but then eventually you will know how to you know things will it seems like it will all work out.</p> <p>Palacios\Pal_7: 26 - 26 (0)</p> <p>My brother ___ he had the ___ that's the one that ___ (Extension Agent) always use him as a tester *laughs*. And he's pretty good you know he follows ___ (Extension Agent) pretty well.</p> <p>Palacios\Pal_7: 38 - 38 (0)</p> |
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| | | <p>Si, si nos han explicado de algunos pescados que no se deben no debemos de traer y las redes tienen que traer sus trampas para las tortugas y tener los salvavidas.</p> <p>Palacios\Pal_8: 46 - 46 (0)</p> <p>Si vienen a inspeccionarlos yea inspecciones a chequear las trampas.</p> <p>Palacios\Pal_9: 50 - 50 (0)</p> <p>Uhh pues no cuando dan escuela pa' este como se llama el gps na'mas.</p> <p>Palacios\Pal_9: 52 - 52 (0)</p> <p>I think it's slowed down. It's definitely slowed down the amount of imports coming in here uh there is still a lot you know, but yea it's slowed down. I guess if they wouldn't of been there and that penalty wouldn't have been put on them there is no telling how much would be dumped over here. They raise them pretty cheap over there.</p> <p>Palacios\Pal_11: 25 - 25 (0)</p> |
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| <p>Too many regulations</p> | <p>Too many. (about 1300) You can't even like lets say the coast guard comes brings in a boat for whatever reason if they don't follow or something is not complete or they have an expired um document on board ect about 4-5 years ago I went on the docks because I get there information because I have to do my monthly reports to Texas Parks and Wildlife you know the count the price etc so I went and I wanted to ask the capitan you know I need your information I need to know what area you are working, how many boxesand the Coast Guard, Immigration, Boarder Patrol DEA you name it we had all the different ones out there says you are not allowed to speak to him. I said excuse all I need is my informtion. They said now mam you are not allowed to speak to any of the crew memebrs.</p> <p>Port Isabel/Brownsville\P&B_3: 50 - 50 (0)</p> <p>Si si pero como le digo todo es legal. Porque todos somos permisados. Y nosotros no somos que venimos hacer el mal a nadie venimos a trabajar.</p> <p>Port Isabel/Brownsville\P&B_5: 32 - 32 (0)</p> | <p>And what he means by that is there is going to be so many regulations so much cost to going out there and doing what we need to do that uh you are not going to be able to afford to go do it so is this gonna be a flourish economist it's gonna be a commodity it's gonna be out there and nobody is going to catch it.</p> <p>Palacios\Pal_10: 18 - 18 (0)</p> <p>See back in the early (pauses to calculate) 70's (1970s) or I don't know exactly when the TED was put into place, but that was sometimes in the 80's (1980s) or 70's but before then it was a not so much strict but you know my lifetime its pretty much all been the same.</p> <p>Palacios\Pal_12: 32 - 32 (0)</p> <p>Yea, and there's so many more regulations on the vessels when you build a boat. I don't even know if you could actually, well they're very expensive and there's a lot of regulations on them. Coast guard regulations. I think they are trying to put the you know basically the coast guard would like it where our boats would be like a ship or something where you'd be under the same laws like that.</p> <p>Palacios\Pal_13: 52 - 52 (0)</p> |
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| | | <p>Um you know there are always requirements coming down from um our large uh customers especially national companies grocery stores they're always wanting or pushing for um you know whether it's um labor issues or food safety issues or various ocean programs you know that can be difficult because it tends to be um global sometimes and we are the way our goverment regulates us now.</p> <p>Palacios\Pal_16: 10 - 10 (0)</p> |
| <p>Certain things not allowed</p> | <p>That's not allowed anymore.</p> <p>Port Isabel/Brownsville\P&B_3: 40 - 40 (0)</p> <p>Y si algun dia sale una asi como sale [points to TED]. Porque no queremos broncas. [metion I've heard the coast guard has been cracking down on TED violations]. No porque son muy duras las multas. Mejor tranquilo.</p> <p>Port Isabel/Brownsville\P&B_5: 54 - 54 (0)</p> <p>We had them pretty much depleted and federal government changed the laws and protections and now sharks are everywhere.</p> <p>Port Isabel/Brownsville\P&B_6: 22 - 22 (0)</p> | <p>Depend on the boat if they boat have a life raft for 6 person then they okay but the boat that only have 4 person life raft then basically it's gonna have to be worked out somehow or you know and no body have extra liferafts to put on.</p> <p>Palacios\Pal_7: 18 - 18 (0)</p> <p>The permit is tied to the boat, but you, if someone is willing to do it you can buy the permit and then lets say you have a boat that didn't come with a permit you can use that permit for that boat.</p> <p>Palacios\Pal_12: 48 - 48 (0)</p> |

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| | <p>The regulations for shrimp boats are a lot lot harder.</p> <p>Port Isabel/Brownsville\P&B_6: 40 - 40 (0)</p> <p>Right, all the permits and all the documentation and everything expires at different times. So that's what I was doing right now you know you're going through the EPURB the emergency positioning indicating device your liferaft your fire exitingushers your coast guard federal regulations your state regulations your permits for the guys uh fishing permits. So you got all these different permits governmental regulations and they are all expiring at different times and (they weren't around in the 80s) Not as much. You know back then you didn't there wasn't a person that had to have a CPR liscence or a CPR card on the boat now there does now there is. Before you didn't have to have a US citizen on the boat with a captain's liscence now you do. Umm</p> <p>Port Isabel/Brownsville\P&B_7: 40 - 40 (0)</p> <p>R: Uh, it wasn't too many regulations not even on the like on the fish on all that. We used to bring our fish you know.</p> <p>I: What would you do with that fish?</p> <p>R: Yea, for the family or you know yea. Pero now there's a lot of new law we can't bring everything has a limit, yea.</p> <p>I: When you are out there are you able to if you catch something eat it?</p> | <p>No, you just needed a bay license for the bay gulf license for the gulf that was it. Like, when I would go to Louisiana back in the 70s (1970) whenever I would want to work I would be on my boat just run into Cameron and get a license at a grocery store. Now you have. Everything has changed it's a lot of paperwork. And well you know Texas is limited there's no more license you can't.</p> <p>Palacios\Pal_13: 14 - 14 (0)</p> |
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| | <p>R: Yes, we do. [You just can't bring it in]</p> <p>Port Isabel/Brownsville\P&B_9: 26 - 30 (0)</p> | |
| Influence on their wages | <p>Yes it did (dropped) yea. Yes. But the department of labor is what tells us what the starting prevailing wage is. Yes we have to go through the department of labor.</p> <p>Port Isabel/Brownsville\P&B_3: 24 - 24 (0)</p> | <p>And I can tell which boat which owner can you know uh be able to keep their boats or not. Cuz back then their payment to uh Caterpillar is like \$8,000 a month and then and then plus the diesel was back was like \$2-\$3 there's one time it was like \$4.15</p> <p>Palacios\Pal_7: 32 - 32 (0)</p> <p>The TEDs *chuckles* That was the worst law I mean you know for us. Very expensive just you know it's like when TEDs started it was just like one regulation after the other. Yea, you know it was the TEDs and its the BYRD and the by-catch and the you know all that stuff cost a lot of money to keep. You know each on of those TEDs your looking probably 500 bucks.</p> <p>Palacios\Pal_13: 52 - 52 (0)</p> |
| Distrust in established organizations | <p>Si entonces por eso aqui ahorita estoy batallando porque ella lo que arreglar alla no arreglo de lo que estaban dando del Texas PAC no arreglo nada.</p> <p>Port Isabel/Brownsville\P&B_1: 7 - 7 (0)</p> | <p>Pierdes camaron con los TEDs. No se que tanto porciento 20% digo yo. Y aparte como que agarras mas lodo. La red como que se clava mas enotnces a veces agarra lodo y tienes que sacar las redes para lavar y pierdes tiempo. De ahi en fuera no no no afecta na' pero en la produccion si te afecta de perdido el 20%.</p> |

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| | <p>Para cobrar mas. Por eso digo tienes mucha gente de todos los paises pero vienen a ver que le damos.</p> <p>Port Isabel/Brownsville\P&B_1: 31 - 31 (0)</p> <p>All that stuff changed you know enviornmentalists and all these general land commission all these different you know entities came in and you can't do this you can't do that so.</p> <p>Port Isabel/Brownsville\P&B_3: 48 - 48 (0)</p> <p>I was in Port Aransas I mean Aransas Pass there's were I was and uh pues they started coming out with these TEDs and we didn't like it you know cuz uh we were thinking well we are gonna lose a lot of shrimp. So we all went in and blocked off the channel and uh. In protest to make a statement coast guard there cutting the ropes. You know like trying to move us out and we were there like a day 2 days. Like 2 days and we stopped all the traffic and everything. Yea, pero they won. *chuckle* We had to use them anyway.</p> <p>Port Isabel/Brownsville\P&B_9: 22 - 22 (0)</p> <p>Yes, well that started um probably about 86-87 when they started shoving that and then when they really were gonna shove it that's that picture right there (picture showing the blockade).</p> <p>Port Isabel/Brownsville\P&B_10: 14 - 14 (0)</p> | <p>Palacios\Pal_4: 36 - 36 (0)</p> <p>So I never step on the boat but the Vietnamese have problem with woman go down the boat because they think that woman bring bad luck. And they say you know the boats that have somebody the woman walk down they go out there then all they catch is crab *laughs* No I'm serious... When observer. I call what's his name at uh Galveston ___ umm the fishermen want to see if you can pick just man on the, he said 'Tell them to grow up' *laughs*. It United State we all equal.</p> <p>Palacios\Pal_7: 16 - 16 (0)</p> <p>So I think, the only problem is that we have is actually getting them but that's more like has to do with the government.</p> <p>Palacios\Pal_12: 50 - 50 (0)</p> <p>Not really. Well we have the SSA and you know they do lobby but I can't really see where that's. I'm sure it's helped some.</p> <p>Palacios\Pal_13: 56 - 56 (0)</p> |
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o, I mean it's still a hassle I mean a big hassle sometimes with those things tangling up on you and literally causing you money because you know if they are not functioning right or if you get something jammed in them or whatever it can cause you know some catch. And so uh and I started out with uh that soft TED that you used to sew in the body of the net remember that one (to extension agent) okay. And I started out with that and uh uh by the time I got off in 92 we had gone to then were starting to go to the hard TED okay.

Port Isabel/Brownsville\P&B_10: 16 - 16 (0)

And then the observers. Which has been that has been a pain. Literally.

Port Isabel/Brownsville\P&B_10: 28 - 28 (0)

Of course if you're familiar now with the new program that ___ (Sea Grant agent) and they are pushing where they want us to save some of the by-catch uh and you're not familiar with that. They are pushing and I work with them as much as I can, but they want us now to save uh part of the by-catch and bring it in. In other words freeze it store it bring it in we'll take it down to the processing plant and they'll pick it up and analyze it so that they can perhaps you know have a different data from what National Marine Fisheries or the observers are reporting or whatever. So that's another thing. So yea there's changes there's constantly.

So it's a combination because they're trying to certify the gulf you know there's pressure from that side and then you have other NGO's trying to you know it's difficult um because then you have customers that want you to participate and it's I mean it's business. So there are people that are truly friends of the industry and there are people that want to manipulate the industry

Palacios\Pal_16: 12 - 12 (0)

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| | <p>Port Isabel/Brownsville\P&B_10: 30 - 30 (0)</p> <p>Turtle excluder probably. I don't care what they say we lose production through turtle excluder. Uh I think that was the biggest because we do lose production.</p> <p>Port Isabel/Brownsville\P&B_12: 20 - 20 (0)</p> <p>Well back when the Vietnam war was over they brought a lot of Vietnamese over here and put a lot of them in the shrimping industry uh somebody I don't know if it was National Marine Fisheries or Caterpillar fianaced a bunch of new boats for them and they never got paid but they put a lot of people in the industry. And that's part of it.</p> <p>Port Isabel/Brownsville\P&B_12: 28 - 28 (0)</p> <p>oo many devices to where I know it's to help the environment I know it's to help turtles or bycatch but you know I don't care how good a device is you're gonna lose shrimp through them and that's our biggest thing. Going out there and losing 10-15 percent 20 percent of our catch to these devices it's been tough. Umm so that's been our biggest thing. Too many regulations on our nets, you know. It's pretty tough.</p> <p>Port Isabel/Brownsville\P&B_13: 36 - 36 (0)</p> | |
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| | <p>Digo traigo un tiburón que lo iba a concinar pero ya no podimos. Digo pero aquí está...Que el mismo guardacosta no sabe siquiera la clase de tiburones.</p> <p>Port Isabel/Brownsville\P&B_15: 30 - 30 (0)</p> <p>Quien nos va a tener cuidado para que tengamos nosotros una vida tranquila y segura, nadie. No lo hicieron.</p> <p>Port Isabel/Brownsville\P&B_15: 34 - 34 (0)</p> | |
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