In Hot Water Sz1Ep1_Texas Shrimp_.mp3

Julie Kuchepatov [00:00:11] Three generations hit the road to explore key seafood producing regions across the U.S. and hear from people working at the intersections of fisheries, aquaculture, seafood, and conservation while grappling with the effects of the global climate crisis. We may represent three generations, but we have a lot in common, namely a love of seafood and a dedication to contribute to community driven generational effort in movement towards climate justice. The result of these travels. Welcome to In Hot Water, a seafood and climate podcast series. Join me, Julie Kuchepatov, Gen X, along with my travel companions

Crystal Sanders-Alvarado [00:00:45] Crystal Sanders Alvarado, Xennial and

Cameron Moore [00:00:47] Cameron Moore, Gen Z.

Julie Kuchepatov [00:00:49] as we travel the country and chat with people who share the challenges facing their region and their personal stories. Along the way we experienced some moments that make us ask what the heck? As we try to understand why we are in hot water and what we can do about it. We start this series in the Lone Star State, Texas, particularly with a visit to the coastal bend along the Gulf of Mexico one of the most important offshore petroleum production regions in the world, making it one sixth of the United States total production and a critically important source of seafood, supplying more than 40% of the U.S. domestic seafood production. We travel from Aransas Pass, the self-proclaimed shrimp capital of the world, to Corpus Christi, the "Birdiest City in America," and end up in Galveston known in the 1800s as the "Playground of the South" and importantly, the birthplace of Juneteenth, where on June 19th, 1865, two and a half years after Abraham Lincoln issued the Emancipation Proclamation that legally freed 3.5 million enslaved people in Confederate States, the Juneteenth Order was issued. Finally liberating the 250,000 enslaved black people in Texas. So, we should start with a little back story of how we ended up on this journey and developing this podcast series. So, I host a different podcast called The Conch, where I'm joined in conversation by incredible people working in the seafood sector, and they share their career journeys and the challenges they face and the triumphs they've achieved. And this podcast is exceptional platform to uplift and amplify the voices of people who typically don't get access to such platforms to share their stories. Two episodes of the podcast showcase Crystal, who is the audio engineer for this podcast, as well as for the Conch, a fisheries scientist, and runs their own business, Seaworthy. So, in our conversation, Crystal, who's from Texas, mentioned The Shrimporee, a carnival celebrating all things shrimp in their hometown of Aransas Pass. And I became obsessed. So, I decided we should figure out how to take the podcast on the road. And at the same time, I was mulling over the climate crisis and what more I can do. What more Seafood and Gender Equality or SAGE, our nonprofit initiative, can do? And I gradually came to realize that SAGE is a climate organization, because empowering women and girls and underrepresented people in the seafood sector is a climate solution. So, we were off and running and now headed to Texas with a multi-generational team to quelch my obsession with the Shrimporee and hear from the people of Texas about the challenges our nation's seafood producing regions are experiencing due to the climate emergency. Here's Roland Rodriguez, public relations officer at the Chamber of Commerce in Aransas Pass, Texas.

Roland Rodriguez [00:03:23] This town has-has grown by leaps and bounds over the years. But a lot of folks don't realize, Aransas Pass was the shrimping capital of the world.

Julie Kuchepatov [00:03:34] Yeah.

Roland Rodriguez [00:03:34] It wasn't just, you know, the pass-through town. This was the hub, Aransas Pass. And we had, you know, shrimpers from all over come and they made this their home. And so, in 1948, this is how the whole Shrimporee started. They started a little festival, a little, little celebration to send off the shrimpers in a great mood as they head out to sea, because back then they were out on the water for months at a time. So, they figured, you know what? How can we celebrate our shrimpers by the community? So, they, someone came up with this idea, maybe the mayor, and he said, let's have a celebration. And they would have, you know, music and they would have a king and queen crowning, and they'd probably have a few cold ones at the time as well.

Julie Kuchepatov [00:04:21] Yeah.

Roland Rodriguez [00:04:21] And next thing you know, they're off to sea. And so, since then, this town has grown by leaps and bounds, as I mentioned, but the Shrimporee itself, it's we're celebrating our 75th annual Shrimporee. And it's gotten bigger and better. It's the biggest three-day festival on the Texas coast. And it all started just as a small thank you to the shrimpers who were going out there and do you know, doing what they do, making a living for, you know, for so many here in town.

Julie Kuchepatov [00:04:50] Aransas Pass has grown, as you said, by leaps and bounds and the Shrimporee is celebrating its 75th year. Yet shrimp are declining, and the shrimp fishery is struggling.

Roland Rodriguez [00:05:00] Now, we're not the shrimping capital of the world.

Julie Kuchepatov [00:05:02] Yeah.

Roland Rodriguez [00:05:03] And there's shrimp out here, but not as abundance as it was so many years ago. You know, we, we you know, we still have, you know, in Corpus and what not. They go out there, we still have shrimpers here and in the neighboring Port Aransas. They, they still go out on their boats daily. And now it's a daily trip.

Julie Kuchepatov [00:05:18] A day trip.

Roland Rodriguez [00:05:19] Day trip. They'll go out, you know, during shrimp season, you know, they'll start at 4:00 in the morning, head out there and they have, you know, there's time limits for everything. They can only be out the water for so long and, and you can own shrimp for so much that they'll be out there pretty much leave at four they're back by noon.

Julie Kuchepatov [00:05:35] Oh.

Roland Rodriguez [00:05:35] And then they go, and they sell, a lot of these fishermen are independent, so they'll be going selling it to bait shops or restaurants. There's restaurants from up as far as Houston that'll drive down to buy shrimp or the big huge (unintelligible) as well. So, it's, it's, it's, it's still very popular business you'd say, but it's not as big as it was once, you know, many years ago here in Aransas Pass.

Julie Kuchepatov [00:06:00] What are some of the challenges that the shrimp fishery is facing today?

Roland Rodriguez [00:06:04] Ahh, just. That's a good question. I would think. Their biggest challenge is just surviving because it's not is, it's you're putting more into, into what you're getting out.

Julie Kuchepatov [00:06:17] Yeah. It's expensive.

Roland Rodriguez [00:06:18] It's very expensive. You know, the fuel. You know, a lot of them are. It's just two people because you can't before you, you'd have to have a whole crew. Now you could only afford what, you, what, you're, you're working for free and you're

Julie Kuchepatov [00:06:33] Someone else.

Roland Rodriguez [00:06:33] And someone else to come and be your deckhand to help you with the little things, putting out the net, dragging it, you know, separating the, you know, the shrimp from the other catches and put it in, making sure they put back, you know, the fish or whatever or the oysters that they, they kind of drag up as well. So, it's I think the biggest thing is just the cost of doing this. It's, it's not easy. And you have to for me, you have to be very passionate about what you do. It's like any, any other job. If you if you love it, you're going to you're going to sacrifice what you have to. And I think for those that we do have out here; they just love it. Some of these fishermen or shrimpers that have been out here that are still working on Conn Brown Harbor, they're like third generation, fourth generation of shrimp from a shrimping families. And that's all they know. And so that's all they do.

Julie Kuchepatov [00:07:20] Yeah. That was I was going to ask that. It's pretty typical where there's a lot of family businesses through the generations coming up and shrimping together or fishing together. So that's same here.

Roland Rodriguez [00:07:29] Yeah. And then some of them. So, they'll move from wherever they, they're from and then come down here and set up shop. We have one to called Captain Joe's right down the street. And then there's a few bait shops on the harbor itself. And that's where those shrimpers sell their shrimp, or they buy their shrimp or what not. So. But it's, it's really tough, like I was saying, just, just to survive and, and for them to do it and daily basis and not complain. You know, you got a tip your hat to them.

Julie Kuchepatov [00:07:56] Yeah. They got to have the passion for sure.

Roland Rodriguez [00:07:58] Yeah. And because it takes, it's a lot of work. If you have ever been out there, it's, it's, it's work.

Julie Kuchepatov [00:08:04] Crystal can you break down the history of the decline of the shrimping industry here in Texas as it relates to climate change?

Crystal Sanders-Alvarado [00:08:11] Crabs, shrimp, oysters, all these things have calcium carbonate in their exoskeletons and the things that protect them. It's like their skin, right? It's like rising ocean temperatures and ocean acidification are dissolving these animals before they can ever form a skin or an exoskeleton that will protect them. And shrimp are an animal that like, highly fecund. They produce a lot of young. They're small. They have a relatively short lifespan. They reproduce in high numbers, right. Their life history strategy is something that should make them

Julie Kuchepatov [00:08:48] Abundant.

Crystal Sanders-Alvarado [00:08:49] Abundant. A great fishery option. Their life history should mean that they, one, are highly abundant in the ecosystem. Period. It should also mean that they are a sustainable fishery on their own. We're going to keep fishing methods out for right now.

Julie Kuchepatov [00:09:05] Right.

Crystal Sanders-Alvarado [00:09:06] But when we have changes in the ocean that are happening comparatively quickly versus the time in which these species evolved is very long, then they can't survive. And so, if the temperature's too high or the temperature's too low in the water, they're not going to survive. If the pH is too low and it's acidic when there are larva and they're trying to form these harder shells to be protected, the shells won't form, and those larvae are going to die.

Julie Kuchepatov [00:09:38] They won't survive.

Crystal Sanders-Alvarado [00:09:39] So if you're not having babies or you're having babies and they have a high mortality, you're going to lose your fishery, right? Those are direct ties. And then that's going to be attributed to other things, right. If we continue to ignore the effect of climate change on fisheries, the blame, quote unquote, for the decline.

Julie Kuchepatov [00:10:02] Some claim regulatory constraints and strict fishing regulations in place to manage and conserve shrimp populations, which include limits on catch size, seasonal closures, and gear restrictions, which may pose challenges for shrimpers in Texas and have contributed to the decline.

Roland Rodriguez [00:10:19] What also hurt a lot of our, our shrimpers was. I can't remember the term, but it was basically the turtle nets they use now.

Julie Kuchepatov [00:10:29] Turtle Excluder Devices or TEDs.

Roland Rodriguez [00:10:32] Before they could just do whatever they want but now, when they implemented that law back in what, late 80s, to save, you know, the species of the turtles, now they had to worry about that aspect of shrimping and had a, you know, big old hole internet. So, they're not catching as much shrimp and then they did catch a turtle, then, you know, they'd be fined heavily where it would almost put them out of business.

Julie Kuchepatov [00:10:57] Yeah.

Roland Rodriguez [00:10:57] So I think for one of the TED law came into effect, I think that was one of the things that really hurt a lot of fishermen. And, and so, but those who stuck with it stuck with it, but others were like, you know, it was an ongoing battle.

Crystal Sanders-Alvarado [00:11:10] The decline in shrimp and why people who have made their living as shrimpers is going to be put somewhere else, and it's going to be falsely put somewhere else. It's going to be put there on an assumption, right. It's like because there will be no talk around the direct ties between the effects of climate change like ocean, ocean acidification and why it will and has and is going to continue to affect the shrimping industry and the ecosystem functions of, that shrimp play in our lives. And we've, we kind of see that around in this area because we have sea turtles here and there

was mandates to put in Turtle Excluding Devices called TEDs and also which are specific to sea turtles. And then there was also mandates to put in bycatch reduction devices, which is more for fish, finfish and other animals that aren't turtles. And the decline in shrimp numbers and the decline in the commercial shrimp fishery is then automatically placed on like, oh well, these TEDs

Julie Kuchepatov [00:12:23] Those devices.

Crystal Sanders-Alvarado [00:12:24] Continue to just wreck the shrimping industry. And the law was put in place in the 70s, I believe. I'll need to go back and look. But the time since the law for TEDs has been put in place to 2023 where we are now, is a long time.

Julie Kuchepatov [00:12:43] Yeah.

Crystal Sanders-Alvarado [00:12:44] And you can't just continue to say it's the Turtle Excluding Devices that are killing the shrimp industry.

Julie Kuchepatov [00:12:53] Right.

Crystal Sanders-Alvarado [00:12:53] Without critical thinking around what else could be involved. And then a continued ignoring of like, we're not going to talk about climate change. We're not going to say that we're not going to, you know.

Julie Kuchepatov [00:13:05] In addition to ocean acidification, hurricanes, storms, and droughts can disrupt shrimping activities, damage equipment, and impact the overall health of shrimp populations.

Regina Garcia Peña [00:13:16] I'm Regina Garcia Peña, and I am the owner and CEO of Philly Seafood. I am second generation shrimp producer, although myself I did not shrimp, but my father started our family business. He just recently passed away at the age of, yes, 92 years old and he worked up until about two months before he actually passed.

Julie Kuchepatov [00:13:45] Woah.

Regina Garcia Peña [00:13:45] He hasn't shrimped for many, many years, but he had seven boats that he owned, and he would manage, but he would go to the boats every day, you know, check on his crews and manage his business. So, I grew up in a family of shrimpers. Many of my brothers, I have six brothers, and they followed in my dad's footsteps. Some of them, all of them are in the business now in some fashion, but they grew up going out shrimping in the summers with him and we girls, there were seven girls, so we come from a family of 13 that, yes, we girls were responsible for helping mom at home and when the boys came in and daddy came in, you know, they got to be catered on by the girls, which is always carried over. So. Yeah. So, my mom always felt like she's 94 now, and yeah, she's doing amazing. And yeah, the boys would go to work every summer and during school, help my dad after school. So, we grew up in this, this family of shrimpers and in the early 2000s, we started Philly Seafood to market and sell our family's production. That's what I'm doing now. We brought on our third generation. My nephews that are my brother's sons have come into the business and they are now managing their dad's boats were all getting kind of retirement age, although a shrimper never retires. But we do. Yes, it's true, but we do slow down. And I too on the marketing side, I have two of my daughters that work with me as well. So right now, we are just getting ready for our

season. It's kind of a difficult time right now in shrimping, as a lot of industries are having to deal with.

Julie Kuchepatov [00:15:28] I read that your family has been in the business since the 50s, which you which you mentioned. And so, I just wanted to understand. So, you at start of the like the 50s, the start of the family business, you were shrimping only.

Regina Garcia Peña [00:15:39] Yes.

Julie Kuchepatov [00:15:39] And that was how many boats at the time?

Regina Garcia Peña [00:15:42] Well, my mom and dad started with one.

Julie Kuchepatov [00:15:44] One.

Regina Garcia Peña [00:15:44] Yes, yeah.

Julie Kuchepatov [00:15:45] And then they gradually grew the business.

Regina Garcia Peña [00:15:47] Yes.

Julie Kuchepatov [00:15:48] And the extended family kind of became part of it. Yes. And then you decided in the 80s you said that you wanted to market it yourselves as opposed to selling it to someone.

Regina Garcia Peña [00:15:59] Well, it was in the early 2000s. 2000. Yes. Yeah. We, actually I had one of my brothers who at the time was my neighbor, who had many boats, and he had some shrimp that he had inventoried, and I had recently sold a business, so I was no longer working and he came on over and he was like, hey, you wanna sell shrimp? And I was like, okay, what I gotta do? And he was like, just tell him it's the best shrimp in the world and it'll sell itself and so that's kind of how we started. It was my brother had an, you know, a need to move some product, and it was just kind of that natural progression. It, you know, as the fleet grew, you know, you become reliant on buyers. And, you know, they determine price and, and what, you know, what you do with their shrimp. And my brother Kenneth has always been a very innovative person and so, you know, he was just like, I need do something else. I can't rely on this let, you know, we should try to do it ourselves and hopefully it eventually become vertically integrated. So that's, that's kind of how it started. Just, my brother had a need and, you know, I was unemployed.

Julie Kuchepatov [00:17:09] And when you started, so you, your, your brother had a need to move some inventory and he said, hey, help me out, marketing, you know. And so, what? And he said, it's going to sell itself. Did it sell itself or what did you what did you learn that first foray into selling shrimp?

Regina Garcia Peña [00:17:24] What I learned is I can sell anything. I can do anything, of course. And because I had at the time, I had five children. Yeah. And so, I threw them in the back of my Suburban, took some shrimp, and we went into Houston, and I went to, you know, the most expensive part of town. I knocked on the back door of really nice white tablecloth restaurants, and I said, hey, you want to try this shrimp? And they said, yes. And so that's how it began. I just started knocking on doors, and then they would call back and said, it was great, you know, and get me some more. And, and that's really how grass roots that began. I remember selling my first 300 pounds and I was like, you know, at first,

I was going to Houston like 2 or 3 days a week and I'm like 50 pounds, you know, 20 pounds. And then when I got an order for 300 pounds, I was like, oh, I made it.

Julie Kuchepatov [00:18:24] Gulf shrimpers experienced economic challenges like fluctuations in fuel price and markets that cause shrimp prices to be volatile due to global demand and competition from foreign markets.

Regina Garcia Peña [00:18:35] Although our wild shrimp, domestic wild shrimp, is such a tiny, tiny niche market, we are clumped into a much bigger category which is imported shrimp, farm raised shrimp, which is a commodity. So, when you are a commodity, you're price driven. And that's a challenge when you are, your model, your, your business model is an expensive one. You have your vessels, the upkeep of the vessels, the salaries of the staff and fuel. Fuel has been a huge issue, especially during the pandemic. Recently, it's kind of come down. It's calmed down a bit and that was great. It's great going into this new season. I think the last three years, especially with the start of the pandemic and the shutdown, you know, people are still even though we talk about supply chain issues, the imports were still coming in. Now we have this overabundance of production of imported product in freezers here. And of course, a very large segment of the imported product is subsidized. So, it's, we're not on a level playing field. First of all, we're a wild, wild product, which is a much healthier, even more sustainable and, and healthier for the environment than what these shrimp farms are doing around the world. But we are nevertheless lumped into that. And we think too we're healthier for the body, but then also a better taste profile, but it holds our pricing because it's a commodity.

Julie Kuchepatov [00:20:14] So how do you differentiate yourself in the market?

Regina Garcia Peña [00:20:17] I mean, we try to you know, it's always been our taste and texture. But again, with the shutdown and the pandemic, it squeezes our customers. You know, if you're a restaurant and you have an abundance of issues, they've had supply chain issues, so all of their grocery costs are there are on the plate. Costs have gone up. You try to squeeze where you can. And if you can get a shrimp that maybe doesn't taste as good but or has the same texture, but you can get it for a significant amount cheaper and maybe you put some sauce on it, you know, your customers won't notice.

Julie Kuchepatov [00:20:58] Yeah.

Regina Garcia Peña [00:20:58] And that's really been our biggest issue, you know, is just and it's, I think, it's well, it's global. But I think it's come down to the customers even, you know, us as moms and dads and people buying food, you sometimes you just have to make conscious decisions because it's about the bottom line. And you can't blame anybody for that. It's really unfortunate and it's affected our business and it's going to continue to affect our business. But you know, we struggle on. We shrimpers are a hardy group.

Julie Kuchepatov [00:21:32] Hardy bunch.

Regina Garcia Peña [00:21:33] Yeah, we are.

Julie Kuchepatov [00:21:34] So throughout this week that we've been meeting with people, we've heard a lot of talk around increased storm frequencies, and they're increasing in numbers and in intensity, as well as droughts as well as harsh freezes. So how does that affect your fishing schedule, your harvest, your work?

Regina Garcia Peña [00:21:54] Well, our seasons are regulated by the federal and state government. So now the droughts affect us because, you know, we need the, the down flow waters from the rivers to flush our estuaries to push our baby shrimp out into the Gulf. Right. You know, all of those things when you get up into Louisiana and Mississippi and you know, the deltas where the rivers come down and there's a lot of toxins, they have dead zones. That is horrific for us, you know, and when there's no water, those things just puddle and the dead zones get larger, which, you know, affect us in, you know, a great way. Our storms, those are necessary. I don't know if it's a necessary evil. It is, it's an evil.

Julie Kuchepatov [00:22:38] They happen.

Regina Garcia Peña [00:22:40] Yeah. They happen and but you know, what we find sometimes is my dad used to always say after a big hurricane, you know, the shrimping's going to be good. So yeah. So, I think we have to take the good with the bad.

Julie Kuchepatov [00:22:53] Is that true, though?

Regina Garcia Peña [00:22:55] If that's what he has always said, and you know that he always says it stirs the bottom and gets them shrimp roiled up.

Julie Kuchepatov [00:23:01] So got to trust that wisdom.

Regina Garcia Peña [00:23:03] I, yeah. You know, shrimping for 75 years. I think he'd know.

Julie Kuchepatov [00:23:09] How is it for you as a woman in seafood?

Regina Garcia Peña [00:23:12] I think, you know, as my dad and my brothers have an impeccable reputation of being producers. And everybody knew Lalo Garcia from Brownsville to Florida. And I think I took advantage of being his daughter and his name that gave me credibility. Had I not had that, it would have been very, very difficult. So, I did. I used what he gave me, which was a good name, and the production that they had in their reputation. Everything was built off of the hard work. Everything about Philly was built off the hard work and labor of my father and my brothers, and I can give them all of that credit for that. You know, it was and continues to be a difficult business but that is the business in itself. It's not easy. I am excited that my daughter was going to stay in the business and continue that which I, I think it's phenomenal, you know, it makes me very proud. I think that it is going to continue for some time to be a male dominated business, just because of the way in which the nature of it, right? If we talk about production because it's a very harsh to be away from your family type of business. But I do see, as I go to seafood shows, I see more and more women at the shows and, and selling and also moving up in leadership. I do see on the retail and the foodservice side, more women in roles of purchasing, which is very exciting too, and because those roles are very, very powerful roles when you work for these retailers in these large foodservice companies. So that's exciting, too. They are as dynamic and tough as any men that I have worked with, and they know their business and they are serious about it. So that's, that's very exciting. Yeah, I mean, I am 100% pro women in the workplace and, you know, it's so funny how over my life, you know, I'm 57, so how I've just seen women change even growing up as a little girl, like I said. You know, my mother and she is a queen. I mean, she is just the most amazing woman and has raised her children, completely devoted mother, and good Catholic woman. She is a saintly woman. But the way in which she raised us, and the way in which

I raised my daughters and I hope that my daughters will raise their daughters, has changed so much. And it's not bad, as I told you. You know, it was funny. I never, when I was a little girl, in junior high, and my friends would go heading to the heading house where you would go, the boats would come in, they would head the shrimp, right? And my mother was like, oh no, we will never. No, no, no. Well, when I started my company and, you know, I was working, you know, I would have to go to the bay, I always had my kids with me, so my girls said, momma, can go heading? And I was like, let's go heading. I mean, I've never been heading. And we were there for like a solid 30 minutes and I'm like, get me out of here. My mother was so wise.

Julie Kuchepatov [00:26:37] You had to try it, though.

Regina Garcia Peña [00:26:38] Yeah. Oh, my. Girls were like, heading. They were like, oh-oh. And then they made like, I don't know, $1.50, and they were like I'm never doing this again. Everybody's hands were swollen from, you know, heading. Yeah, it was really hard work. But my mother and her wisdom never let us girls do that.

Julie Kuchepatov [00:26:54] So tell me what you love about living and working in this area.

Regina Garcia Peña [00:26:59] I love number one. I love that Philly Seafood is named Philly Seafood and I, I don't know if you know the story behind that.

Julie Kuchepatov [00:27:08] Tell me the story.

Regina Garcia Peña [00:27:09] I had a son, and he was my second oldest and he passed away. And so, a couple of years after that was when my brother came over and asked me if I wanted his shrimp. And I said, yeah, yeah, what do you want to name it? And I said, can we name it Philly? His name was Daniel Phillip. And so, he said, of course, of course. So, I love, the thing I love the best is because I say his name and many, many people say his name. And so that is the best thing about Philly Seafood. And I love that I get to tell my daddy's story. I love my daddy. And he worked very hard and my mother too when they started. My father was, worked very, very hard. My father had a third-grade education, and my mother would do all the business for him. My father could, he could, you could give him a sheet of numbers and he, before you could punch him in the calculator, he knew those, he knew the answer. He was brilliant. But my father couldn't read. And so, my mother together, when they bought their first boat, she would do all of the, the documents. She would, she would read the contracts. They would decide together, and my daddy worked. And so, they were a, and that makes me so proud and its story of perseverance and the American dream and so that is the second greatest thing about I love about my business. I tell my family story. I get to sell my, my brother's production. I get to work with my daughter. And it just all of it gives me great pride. And so that's the best part. And then I get to meet awesome people, and I get to do awesome things and go awesome places. That's, that's the added bonus.

Julie Kuchepatov [00:28:58] Another challenge is habitat degradation caused by coastal development, pollution, and other human activities, which can lead to degradation of shrimp habitats affecting their reproduction and overall population health.

Liz Smith [00:29:11] I'm Liz Smith and I work for the International Crane Foundation, and I retired last year from the director of North America Programs and as Texas program director. So, the Texas coast is unique in that it has the longest barrier island chain in the

world. And so, Padre Island is the longest barrier island. And it's, you know, comes right here where we are in Corpus Christi, all the way down to Brownsville. And so that Barrier Island is actually protecting the shorelines in the bay systems and the bays themselves. The problem with barrier islands is we want to be on them, too. And so, development that has occurred has actually eliminated a lot of that natural dune face that's on the Gulf side. And so, as a sea level comes in and storms, you know, that is compromised. It's a built environment then. The other thing is, is that we have, you know, naturally, geologically we are you know, we're not getting the amount of replenishment sand from our rivers anymore. Just, just geologically, that's not happening like it did before. But we, also we're not allowing water to flow from our rivers to the Gulf because we're diverting that water for human uses. So, it's the sediment that would come with that water as well as the nutrients are not coming in and so the shorelines are eroding because of that as well. So, it's a, you know, it's always that, that naturally things change but anthropogenically we're creating change faster.

Julie Kuchepatov [00:30:50] Right.

Liz Smith [00:30:51] So that's one thing. So that barrier is very important. And then the fact that inside the bays, the vast marshes that are around the shoreline, they also are coming up against a natural bluff on some areas of the bays from, you know, from just natural wind erosion and so we are losing our habitat as well.

Julie Kuchepatov [00:31:13] Finally, there are labor issues which are not unique to the shrimp fishery and are experienced throughout the U.S. fishing sector, specifically a declining interest in the industry among younger generations.

Suraida Nañez-James [00:31:24] Hi, my name is Suraida Nañez-James. I'm the CEO and founder for the Gulf Reach Institute. We focus on education, health, and advocacy for the Gulf of Mexico, especially for underrepresented communities, and focusing on youth as well.

Julie Kuchepatov [00:31:40] Suraida recounts a time when she was teaching and visited the Port of Galveston with her students.

Suraida Nañez-James [00:31:46] The other incident, and it was with that we actually boarded to one of the ports there in Galveston, and the teachers all got out, and we were able to meet with a seafood person that we had contact with, and just so happened to see a shrimper boat come off the boat. And again, he was with his son and told us about how early he had to get up and how much he was getting, but at the same time, the price had gone down because it was flooded at that time. But his son, we asked his son, are you going to go into this field? And his son said, no. He said, it's not worth my time. He said, we, we've been up really early. It's just not worth it anymore. I want to do something different. I don't want to do what my dad does. And it wasn't just him and his father. It was him and his wife. And it was, it was a family business. So again, that gave me another insight to who was actually affected.

Julie Kuchepatov [00:32:38] Because of the decline of the shrimp fishery, some shrimp fishers are looking for other sources of income and to transition out of shrimp fishing.

Suraida Nañez-James [00:32:47] You know, you have those folks that during the BP or the Deep Horizon spill that they weren't allowed to, right. Because either they, they were saying this stuff was contaminated. Shrimp were contaminated. We actually saw the

shrimp rebound. If you saw that you would throw and they rebounded because nobody was fishing for it but at the same time, you cut off somebody's livelihood and conservationists, if you have that conservation mind, was like, we have to do it because this and that but I'm like, you are you, do you realize that that's what they do? And so, without just like any other transition of job and occupation, they would have to, you know, switch, or evolve to something else that considers training. So how do you do that in a good way because that's what they know.

Julie Kuchepatov [00:33:34] Thankfully, there are options for shrimpers to transition to other types of seafood production, like oyster farming.

Gail Sutton [00:33:40] My name's Gail Sutton. I'm the director for operations for Palacios Marine Agricultural Research. We, our administrative offices are located in Corpus Christi, Texas but our hatchery that we're building is located Palacios, Texas. We picked Palacios because it is, one, high minority, seafood driven market. By that, I mean a lot Vietnamese moved to that area and in let's say the 70s and 80s to be shrimpers. And now shrimping is a very deflated market due to the large quantity of seafood being shipped into this country. So, it's undermining the local markets grossly. And it's a big seafood area, but a very small rural town wo it's kind of an interesting dichotomy. So, our hatchery there, we're hoping will promote seafood, but also maybe give these people another avenue for a livelihood, which has been a real issue. Their freezers are full of shrimp but with the market being depressed with foreign shipments coming in, they don't really have another way of working, quite honestly. This is all they've known their whole life. So, we're thinking with oyster aquaculture, wouldn't it be wonderful? They don't have to go out hoping to find the food to harvest, but they can grow it themselves in cages, know where it is at all times, and also not use a boat maybe, you know, as much. Diesel is very expensive, insurance is very expensive, and they kind of own it themselves.

Julie Kuchepatov [00:35:16] Addressing these challenges requires innovation. An excellent climate solution is reducing food waste. According to ReFed.org, 38% of all food in the U.S. goes unsold or uneaten, and most of that goes to waste. And if wasted food were a country, it would be the third largest source of greenhouse gas emissions in the world, according to the UN's Food and Agriculture Organization. In terms of seafood, a 2015 study published in Global Environmental Change estimated that every year, almost half the seafood supply in the United States is lost, amounting to nearly 800 million pounds of protein waste. Globally, we lose 110 billion pounds. Considering the U.S. Department of Agriculture recommends that the average person consume at least 1.7oz of protein per day, this loss to seafood is enough to feed more than 2.7 million people for an entire year. Reducing food waste can help to cut down on these emissions, feed those who are hungry, and improve food security. While not specific to the shrimp sector, one company is leading the way in reducing food waste through an innovative technique called Ike Jime. Alyssa Lopez of Gulf of Mexico Ike Jime tells us about this technique. And tell me, what is Ike Jime?

Alyssa Lopez [00:36:31] Ike Jime is a method of dispatching fish. Basically, it means to spike a fish in the brain, which eliminates their movement, their motor functions, and that helps eliminate the lactic acid cortisol build-up that you'll get when your fish is in distress, which is what every fish experiences after they're harvested. They're programmed to just continually swim, so when you throw them on the deck and just let them keep swimming, that's where you produce the stress hormones that can decay your fish.

Julie Kuchepatov [00:37:04] So the Ike Jime method of dispatch essentially is a very quick spike to the brain and the spinal column?

Alyssa Lopez [00:37:13] So it's four steps. We've got the spike to the brain. And then you go further and destroy the spinal canal which eliminates the nerve endings that's going into your, your meat. And then the next step would be to chill your fish, 1:1 ratio of ice and water for long enough to bring the core temperature down to just above freezing. And then we store the fish properly, away from water if we can.

Julie Kuchepatov [00:37:40] I'm curious about the Ike Jime method as a way to reduce spoilage and food waste in fish, right. Is that, that's true? Yeah?

Alyssa Lopez [00:37:50] Absolutely. 100%. So, you know, the FDA, I think they recommend discarding fish after 1 or 2 days of being refrigerated and that's just ludicrous and nonsense. And Ike Jime enhances the shelf life so that for one, you've got a product that you can keep for longer and, two, really all credit goes to the chef at this point is how they're harnessing the fish and using it. You know, they're taking the bones out one by one now. They're using the skin of the fish. They're using the collars, and you've got to use your whole product. And like I said, the chefs, really, that's where they pick up the line from our end.

Julie Kuchepatov [00:38:35] So the chefs are your main customer.

Alyssa Lopez [00:38:38] Yes. Absolutely. For us it just makes the most sense because they're going to appreciate what we're providing the most. And a lot of times, you know, big chain grocery stores. We hope to scale one day but for the time being, I don't think that our fish should sit in a case to spoil, you know? They have, I think the grocers have upwards of 70%, I may be wrong, of waste seafood departments, so it's a really expensive program for grocers and I think for now, we'll stick with our chefs who've loved our fish from day one.

Julie Kuchepatov [00:39:17] Addressing these challenges also requires a collaborative effort involving government agencies, the fishing industry, scientists, and local communities. One thing we know for sure, any solutions must involve the community and be community sourced.

Suraida Nañez-James [00:39:32] If you don't have healthy waters, how do we expect to have healthy fish? And we can't have healthy communities. So, it's, it's all connected and it's always going to be those front-line communities who are most affected, who depend on these fisheries, who depend on these waters, and who depend on these regulations as well as what's going on because somebody else who doesn't really understand is making the regulations. It's making the laws. But how connected are they to these communities? It seems like so long ago, a lot of the communities that we were working with, scientists were coming in and doing research, and they felt very, it felt very extractive to them. We were in a meeting, and it got, it did get really emotional. They're like, y'all, you're coming in and you're just taking, you know, whatever fishery, whatever, whatever you want, and you're not paying us. You don't just tell people what to do for the things that they already know are happening. They're very aware of what is happening. They're aware of their history. They're aware of their present, and they know what they need. So how do we work with communities for things like climate action, climate justice, climate education, climate initiatives to work together? To see what they need, because we can tell them all day long as scientists what we think they need but that's not the way it goes. And a biggest thing

with working with communities is trust. And even here in the Coastal Bend, it's taken a while for me to even connect with some of those communities after a while, because they don't trust and for and for good reason. For good reason. The same reasons that really are across, like I told you, I was going to Alaska. Government has come in and taken. Scientists have come in and taken. It's all very extractive. Instead of looking, as you know, an exchange, it could be an exchange. Working with different, not just, you know, communities of color, but Indigenous communities where you have, it is very different of what they're seeing, so they're givers. And then even if we go in and we ask permission and we say we're going to co-create something, who's really profiting from that, whether it's a published paper or something that's being done. And then do we have the right to really use that knowledge the way we want to use it, without asking those people who have given us, really given us a gift of whatever knowledge or whatever information that we have asked for. You know, working with youth, they're their own community and their sense, right. You have a lot of the young folks who, who are very direct and in what they're doing. And that's from any community you have.

Julie Kuchepatov [00:42:18] In the next episode of this special edition of In Hot Water, a seafood and climate podcast featuring the Coastal Bend of Texas, we will learn more about oil and wind farm exploration in the Gulf of Mexico and hear how access to the Gulf is of critical concern to the numerous interested parties who share a Gulf that is adapting to and being affected by, the effects of a changing climate.

Crystal Sanders-Alvarado [00:42:40] Thank you for joining us for In Hot Water, a climate and seafood podcast by Seaworthy and SAGE. Let us know what you think by leaving us a review on your favorite podcast platforms. And don't forget to share with your seafaring friends. In Hot Water is a production of Seaworthy and Seafood and Gender Equality, or SAGE. Soundtrack generously provided by Mia Pixley. Audio production, editing, and sound design by Crystal Sanders-Alvarado and the team at Seaworthy. This season of Hot Water is generously funded by the Walton Family Foundation.