



# EXPLORING LATINOS' ROLE IN U.S. FISHERIES

INSIGHTS, CHALLENGES, AND RECOMMENDATIONS

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# LETTER FROM CONSERVATION DIRECTOR



**Melissa Soto Morris**  
Director of Conservation

Thank you from our Conservation Team for taking the time to read **Exploring Latinos' Role in U.S. Fisheries: Insights, Challenges, and Recommendations**. Both myself and our Ocean Manager joined the Hispanic Access Foundation staff earlier this year and saw a need for more research to be done in the space of fisheries with a specific lens on Latinos in our country. This paper takes a glance at the different roles Latinos play in fisheries and the unique perspective they have as well as significant challenges they are encountering.

Hispanic Access Foundation is headquartered in Washington, D.C., and our staff is based in communities throughout the U.S. We have developed extensive, trust-based community networks across the country in order to develop Latino leaders and bring underrepresented voices to the table.

From climate change to taking a deep dive into fishing sectors, this whitepaper is the first of its kind. We take a focus on a few regional areas, Florida, Texas, California, Puerto Rico and Alaska and fishing styles ranging from recreational to commercial to get a better understanding of Latinos, their role in the world of fisheries and how it all connects to conservation. Even with this fascinating, unique, first ever data collection, more is to be researched. We are just skimming the surface with our results gathered from exploring this topic. When Latinos are provided with the opportunity to voice their concerns, the ability to access educational material on sustainable seafood and fishing regulations, and are informed on the health risks and hazards of their work, much change can occur in the world.

From our Conservation Team at Hispanic Access, I hope this paper not only becomes a resource, but opens the door to more time and efforts being spent in learning about how Latinos have faced and continue to face challenges, have been a vital resource, and will continue to be a voice in fisheries. Your interest in this topic and in our oceans work allows us to continue to expand our outreach and make a change. We invite you to continue supporting our work by following us on our social media pages, signing up for our newsletter, or even by joining the Hispanic Access Conservation Network.

*Melissa Soto Morris*

*AS THE LARGEST AND ALSO FASTEST-GROWING DEMOGRAPHIC IN THE U.S., LATINOS DESERVE TO BE EQUITABLY REPRESENTED IN CRITICAL RESEARCH. WE ALL WANT CLEAN AND THRIVING OCEANS WHETHER IT'S IMPORTANT FOR OUR LIVELIHOODS, CULTURE & RECREATION, OR TO OBTAIN FOOD. IN ORDER TO ENSURE BOTH A HEALTHY OCEAN AND PLANET, WE HAVE TO INCLUDE LATINOS' PERSPECTIVES, INSIGHTS, AND TALENTS.*

**- SOFIA BARBOZA, OCEAN MANAGER**



# EXECUTIVE SUMMARY

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In the face of climate and environmental crises, the ocean and fisheries sectors are facing challenges that must be addressed since fish are crucial for food security, livelihoods, biodiversity and more. Latinos and Hispanics are the largest ethnic minority in the United States - and growing. It is necessary to understand our role as Latinos in the fisheries sector and the fisheries supply chain in the United States and Puerto Rico, a topic which has quite little research dedicated to it. This paper explores the role of Latinos and Hispanics in the commercial, recreational, and subsistence fishing sectors, in an effort to understand where Latinos are engaged in this space and what challenges are faced.

There are indications of substantial Latino involvement in these sectors such as a 45% increase in Hispanics fishing recreationally in the last decade, but there is a general lack of existing data and research. Regional overviews highlight examples such as the importance of angling for consumption for fishers in California, the prevalence of Latinos working in seafood processing in Alaska, as well as a lack of information in states with high Latino populations such as Texas and Florida. U.S. Latinos in fisheries are facing challenges such as language accessibility, discrimination, occupational hazards, health risks, obstacles related to temporary work visas, and gender inequities.

Through our research, we provide recommendations to alleviate these concerns, such as bilingual regulations and bilingual health advisories related to water pollution, increased outreach and awareness catered towards encouraging Hispanics to engage in fishing, and an investment in research in order to obtain an accurate portrayal of Latinos' involvement and contribution in commercial, recreational, and subsistence fisheries, the seafood processing industry, and more. A deeper understanding will allow Latinos to be more meaningfully engaged and represented in conservation efforts and policy arenas at the intersection of environmental health and fisheries.

The vastness of the ocean has long led people to believe that it was beyond human capacity to significantly alter or deplete its resources. However, we now understand that over centuries human activities have transformed the ocean, both physically and biologically (Bindoff et al. 2019). Some of these changes, such as rising temperatures and increasing acidity, are occurring on a global scale but are still relatively recent in our history. Overfishing, pollution, and habitat destruction began earlier and although often regarded as local problems, now collectively affect a large portion of the ocean (Halpern et al. 2019). As the significant scale of these changes and future threats become apparent, we must research and address how these changes not only affect marine life, but human communities as well.



# CLIMATE CHANGE AND THE FUTURE OF FISHERIES

As our planet and atmosphere are warming up due to excess heat-absorbing gasses (greenhouse gasses) in the atmosphere, the ocean is absorbing 90% of the excess heat on our planet because water has a higher ability to hold heat than air or land. In fact, the ocean reached record high temperatures in 2023. In addition, the ocean is absorbing the actual greenhouse gasses themselves, such as carbon dioxide (CO<sub>2</sub>), which is the most prominent (NOAA Education, 2020). The ocean absorbs about 30% of carbon dioxide produced by human activities each year. This process is called carbon sinking, where the ocean and other organisms such as terrestrial trees or coastline mangroves absorb and store away carbon. Without these carbon sinks, we would already feel the impacts of climate change even more drastically. However, this is having negative consequences on the state of the ocean. As the ocean absorbs excess carbon dioxide, its chemical composition becomes altered. In short, the ocean is becoming more acidic – this is called ocean acidification. In addition, 2023 ranked as the planet’s hottest year on record – in fact, the 10 hottest years since 1850 have all actually occurred within the last decade (NOAA, 2024). Knowing that the ocean absorbs the majority of excess heat, it is no surprise that global **ocean heat content**<sub>1</sub> also reached a record high. This means the upper 2,000 meters of the ocean are storing more heat than ever before (NOAA, 2024).

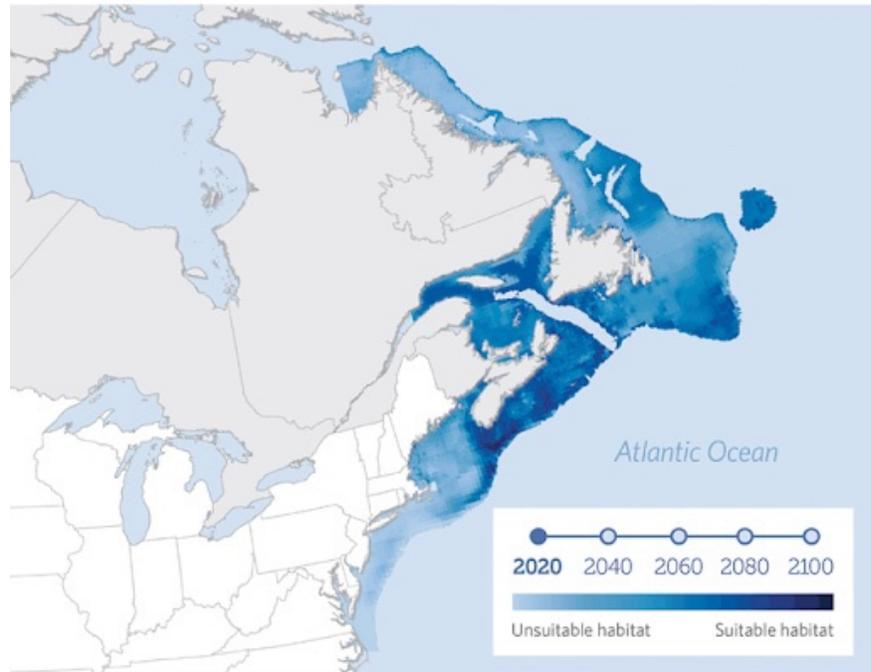
As both the ocean’s temperature and acidity rise, fish and invertebrates like lobsters or rockfish, which are important for the seafood sector, are undergoing physiological changes. In other words, the organism of the fish’s body is reacting and operating differently. Temperature rises affect different species to different degrees but generally cause energy efficiency issues, impacts to reproductive health (Gilfoyle, Asuna & Baird, Willow, 2023), and constraints in the cardiovascular system’s ability to stock oxygen (Little, 2020). With these challenges, fish may experience difficulties in migration as well as overall population decline (Little, 2020).

In response to an overall increase in ocean temperatures, some fish are naturally adapting by shifting their habitat ranges; they are doing this by moving polewards (generally away from the equator) to higher latitudes with deeper (colder) waters (Cheung et al., 2013). For example, a study published in *Frontiers in Marine Science* has shown that black sea bass landings have doubled in the New England and Mid-Atlantic regions when previously they were most plentiful off North Carolina’s coast (Heimann et al., 2023). Another study using climate models to analyze 686 species on the North American continental shelf found that under high emissions scenarios some species might even shift by 1,000 kilometers (Morley et al., 2018).

For example, if greenhouse gas emissions continue at current rates, suitable habitat areas for Atlantic cod are expected to shift in a northerly manner, as can be seen in the graphic below (Morley et al, 2018).

And while some fish may be able to adapt by migrating, their ability to migrate itself may be hindered by physiological changes due to temperature increases. Additionally, once they have migrated, this does not mean they have escaped ocean acidification. Several studies have shown that ocean acidification can impact and disrupt the growth of fish in their larval stages by causing tissue damage, behavioral changes, and reduced growth and survival rates (Stiasny et al., 2016). Even small changes in acidity can have “substantial effects on larval survival and population input” (Tasoff & Johnson, 2019).

### Projected Shift in Suitable Habitat for Atlantic Cod by 2100 Under High-Emission Scenario



Source: Morley et al., 2018

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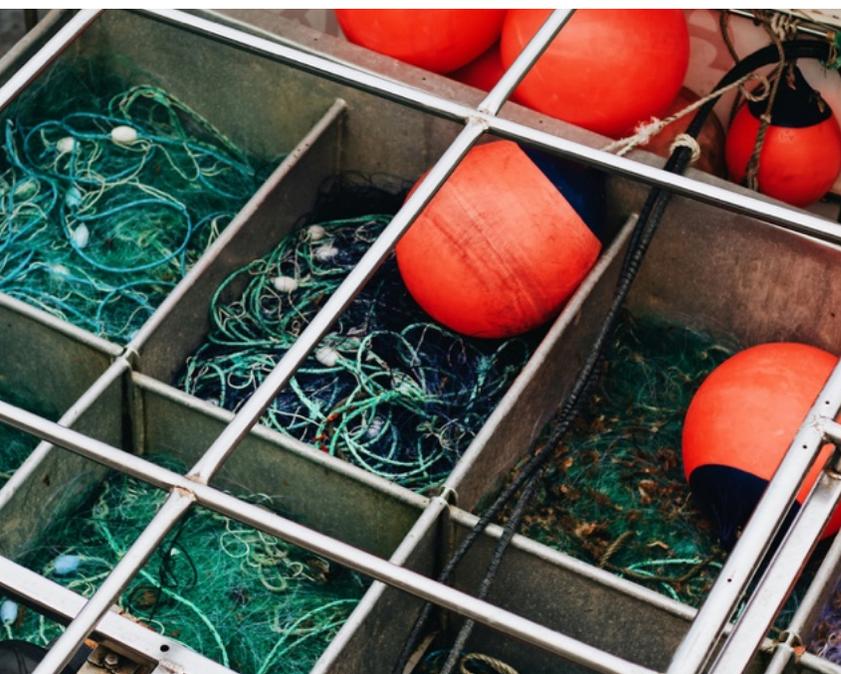
In another example, climate change has significantly affected the industrial fisheries sector, particularly in Alaska. The collapse of the eastern Bering Sea snow crab population, linked to **marine heatwaves**, in 2018-2019, caused widespread starvation among crabs, drastically reducing their numbers and impacting the local economy (NOAA, 2023). This collapse has led to authorities closing the 2022 season, financial strain on fishermen, and broader economic challenges for communities reliant on crab fishing.

It is also important to highlight coral reefs, which are home to an astounding 25% of all marine life, including 4,000 species of fish that depend on reefs at some stage in their life cycle. Coral reefs are notable throughout the Americas mainly along the Brazilian, Caribbean, and eastern Pacific coasts, bordering many Latin American Countries (Cortés, 2003). Additionally, there are also coral reefs in seven U.S. states and territories. Florida and Puerto Rico, areas with high Latino populations, are two of those locations with reefs. Thus, corals are a culturally important ecosystem in Latin America and for Latinos. Many of the fish we consume rely on healthy corals for breeding, nursery, feeding, and habitat grounds and healthy coral reefs play a crucial role in supporting both commercial and subsistence fisheries, as well as providing employment and business opportunities in the tourism and recreation sectors. It is estimated that around 50% of all federally managed fisheries in the U.S. rely on coral reefs and their associated habitats at some stage in their life cycles (NOAA). Corals also provide a tremendous amount of value; 400 million people worldwide rely on coral reef fish as a food source and 35 billion dollars are generated annually by coral reef-related tourism (Florida Department of Environmental Protection, 2022). Healthy reefs are crucial to our fisheries, yet rising sea surface temperatures have amplified the occurrence and severity of coral bleaching incidents, resulting in coral mortality, diminished coral cover, and disruptions in coral-reef-fish populations (Sully et al., 2019).

When we think about Latinos in the United States, it is crucial to think about our Latin American roots. While Latin America and the Caribbean is a diverse region comprising 33 countries, we tend to have similarities in terms of historical and cultural connections to fishing and fish consumption. For example, **ceviche**<sup>3</sup> is an extremely popular Latin American dish consumed in many countries with each adding its own twist. During Lent and **Semana Santa**<sup>4</sup>, a time where eating meat is restricted due to religious reasons, seafood recipes abound – **fanesca**<sup>5</sup> in Ecuador, **bacalao a la vizcaina**<sup>6</sup> in Puerto Rico, **potaje de la vigilia**<sup>7</sup> in Colombia, and more (Thompson, 2022). But the culture of fish consumption dates back to pre-colonial times; archaeological remains of an ancient market in Monterrey, Mexico indicated consumption of both freshwater and marine fish species (Guzmán et al., 2016). Going even further back, archaeological remains of the Moche people, who once flourished in present-day Peru from about 200 to 800 AD, indicated diets based on marine protein (Gagnon & Laffey, 2017).

Today, Latin America continues to showcase its connection to the ocean by being a strong global leader in marine protection efforts; several countries in the region have already met or even exceeded the global goal of protecting 30% of their ocean by 2030 (García Nice, 2024). Latinos in the United States also exemplify their commitment to ocean protection with a recent poll showing that a whopping 80% of U.S. Latinos would be more likely to vote for candidates that support stronger policies to protect the ocean (Barreto Segura Partners, 2024).

Our ocean and fisheries are facing a plethora of issues from rising ocean temperatures to changes in the ocean’s chemical composition as well as overfishing and pollution – ranging from debris such as plastic to **agricultural runoff**<sup>8</sup> carrying pollutants and pesticides infiltrating rivers and the ocean. As fish ingest these toxins they become contaminated as the substances **bioaccumulate**<sup>9</sup>, or build up over time (Ray & Vashishth, 2024). This has the potential to become a human health issue when consuming seafood. While there have been improvements, the NOAA Fisheries 2023 Report to Congress showed that 18% of fisheries are still overfished, not allowing population sizes to replenish sustainably (NOAA Fisheries, 2023). Ultimately, with more than 3 billion people around the world relying on seafood for a substantial portion of their protein intake (The Nature Conservancy, 2021), we need to think about these challenges the fisheries sector faces and how communities’ livelihoods, food security, and more are impacted.



Fisheries, along with **aquaculture**<sup>10</sup>, play a crucial role in providing food, nutrition, source of income, culture, and livelihood for millions of people worldwide. Seafood is a significant commodity in international trade, with approximately 78% of seafood products being traded globally (Asche et al., 2015). The **Global South**<sup>11</sup> accounts for more than half of the aquatic product exports in terms of value (Asche et al., 2015). Concerns regarding excessive exploitation of natural resources have sparked a continuous discussion on the present condition and future outlook of worldwide fisheries, the risks posed to marine biodiversity, and the diminishing harvests accessible for human consumption. However, there is a growing need to understand how the fisheries sector and corresponding conservation and economic measures affect minorities and vulnerable communities across the world.



# WHAT ARE FISHERIES?

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Commercial fishing involves the catching of fish and other seafood for the purpose of making a profit. This sector encompasses various activities, including the capture, processing, and sale of seafood products. Unlike recreational fishing, which is conducted for sport or fun, commercial fishing is primarily aimed at generating income through the sale of fish products. The term commercial fisheries is often used with industrial fisheries, since industrial fisheries are characterized by their use of large vessels, advanced technology, and high levels of investment, often deployed in offshore and deep **pelagic**<sup>12</sup> habitats to catch larger and more commercially and economically valuable fish. Industrial fisheries experts have calculated that in the last five decades, the overall **biomass**<sup>13</sup> of large predatory fish, including species like tuna and swordfish, has decreased by 90% due to commercial fisheries (Myers and Worm, 2005). Additionally, the species diversity of these fish has also seen a decline ranging from 10 to 50% (Myers and Worm, 2005).

Recreational fishing is a kind of fishery where people go out to fish for sport, competition and fun. The boats are usually small (compared to industrial ships) and only have four or five people fishing on them. The term subsistence fishing describes fishing in order to feed the fisher's family. Subsistence fishing, which is often culturally significant and a vital part of Latino heritage, involves fishing for livelihood and survival rather than profit, with catch distributed through non-market mechanisms (Schumann and Macinko, 2007).



# LATINO WAVES: THE ROLE OF LATINOS IN U.S. FISHERIES

In 2022, data showed that Latinos comprised 52.6% of Farming, Fishing, and Forestry occupations (Household Data Annual Averages, 2024). However, it must be noted that the percentage specifically detailing Latinos in fishing occupations is not identified. In the recreational fishing scene, the involvement of Hispanics aged six and above has surged by approximately 45% in the past ten years. In 2022, the number of Hispanic recreational fishing participants increased from 4.7 million in 2021 to 5.1 million (Outdoor Foundation, 2023).

Despite their significant presence, Latinos often face barriers to full participation and advancement in fisheries. Issues such as lack of permits, inadequate signage, and limited accessibility to information in Spanish can hinder their effective involvement. The low percentage of Latino recreational and subsistence fishermen, compared to their numbers in the commercial sector, suggests that these barriers may be particularly pronounced in non-commercial fishing activities (Commercial Fishermen Demographics by Race, 2022; Seafood Processor Demographics and Statistics in the US, 2022). Recreational barriers include the lack of learning opportunities, access to fishing gear, and transportation. Additionally, there are fewer opportunities for Latinos to engage with other **anglers**<sup>14</sup> who share similar backgrounds (Eyzaguirre et al., 2023; Floyd, 2001; Schroeder, Nemeth, et al., 2008). The challenges limit access to information and can obstruct Latinos' effective participation and compliance.

## AN INSIGHT INTO COMMERCIAL FISHERIES

The U.S. commercial fisheries sector is one of the largest and most important natural resources markets. In 2020, the U.S. Fisheries Report from NOAA estimated this is a \$4.8 billion industry bringing in about 8.4 billion pounds of seafood. The major regions for commercial industrial landings were the **Atlantic (40%)**, **Alaska (31%)**, **Gulf of Mexico (15%)** and the **Pacific (14%)** (Fisheries of the United States, 2024). As mentioned previously, commercial fisheries involve large-scale operations with advanced vessels, extensive processing activities, and a high number of employees.



A study published in 2023 in *Marine Policy* confirmed that “despite its growing importance, there remains a dearth of information about the seafood processing industry and its workforce.” (Cramer et al., 2023). Given that there is a general lack of information about the seafood processing workforce, we know even less specifically about Latinos in the seafood processing workforce sector. However, we share below some salient findings. Latinos constitute a significant portion of the workforce in the U.S. commercial fisheries sector. Commercial fishermen in the U.S. in 2021 were 72.9% White, 8.3% Latino, 6.0% American Indian and Alaska Native and 5.9% Asian (Commercial Fisherman Demographics by Race, 2022). Seafood processors in 2021 were 57.4% White, 24.1% Latino, 6.1% African American, and 7.8% Asian (Seafood Processor Demographics and Statistics in the US, 2022). And while in 2023 the Bureau of Labor Force published a statistic of 25.4% of Latinos in the Agriculture, Forestry, Fishery (AgFF) sector, it did not break down what percentage was specifically Latinos working in fisheries (Household Data Annual Averages, 2024). While we have a clear need for more data and information on Hispanic and Latino participation, what we do have shows growing participation that underscores the critical role that Latino workers play in sustaining the commercial fisheries sector.

Latino workers not only contribute significantly to the labor force, but are also key members of the economic vitality of their fishing communities. For example, in the lower Laguna Madre region of Texas, nearly 90% of commercial fishermen are Hispanic, showcasing the regional dominance and influence of Latino fishers (Blanchet et al., 2001). In 2017, the Gulf states reported that Latino commercial industrial workers totaled 7.3%, the third highest ethnicity for the region (Posadas, 2018). This demographic shift is reflective of broader trends where Latino participation is essential for the operational success and sustainability of local fisheries.

One state that highly depends on commercial fisheries is Alaska, whose primary export is seafood (Alaska’s Seafood Industry, 2024). Latinos contribute significantly to the Alaska commercial fisheries workforce in two ways: As residents, since Alaska’s growing Latino population community went from 40,000 in 2013 to 56,000 in 2023 (8% of the total population of Alaska) and second through the H-2B visa in which employers can apply for a lottery to bring foreign nationals to the U.S. to fill temporary positions particularly in seafood processing plants (Sabor Ártico: Latinos En Alaska, 2024). However, the percentage of Latino Alaskan residents versus temporary Latino migrant workers in the industrial fisheries sector has not been documented by the Alaskan authorities (Package & Sepez, 2004). Finally, there is a data gap on the changing patterns of Latinos in processing versus Latinos working on fishing vessels that needs to be documented better.

A lot of the existing literature on Latinos in the U.S. commercial fisheries sector centers on occupational health and safety issues, particularly in seafood processing plants (Byler, 2013; Liebman et al., n.d.; Quandt et al., 2013; Santiago et al., 2021). Nationally, fatal fishery injuries rank 3rd with 57%, while within the Latino community it is 3% (Byler, 2013). A high prevalence of injuries, particularly wounds affecting hands, wrists, and fingers, has been documented among Latino fishing and crabbing crews in North Carolina and Maryland (Selby et al., 2001).

While the existing data highlights the critical presence of Latinos in commercial fisheries, there is a pressing need for more research. The current focus on occupational health hazards in commercial fisheries provides valuable insights but falls short of capturing the full scope of Latino contributions across the entire fisheries sector in the U.S. There also seems to be regional pockets where this research is being conducted such as the Gulf of Mexico with Texas, some Eastern states such as the Carolinas and Maryland, freshwater fisheries in the Great Lakes Region, and Alaska. Addressing this gap is essential for developing targeted policies and support systems that recognize and enhance the role of Latino workers in this vital industry.

In summary, U.S.-based Latinos play an indispensable role in the commercial fisheries sector. Their contributions are not only economic but also cultural, significantly impacting local communities and the industry at large. However, the lack of focused research on their specific experiences and challenges necessitates a more detailed and inclusive approach to understanding and supporting this crucial workforce segment.

## EXPLORING RECREATIONAL FISHING: LEISURE, FUN, AND FOOD

**Recreational fishing ranks as one of the top five outdoor activities enjoyed by Americans** (Outdoor Foundation, 2023). This popular pastime has been a long-standing tradition, contributing significantly to the revenue of the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service, 2022) and the U.S. economy; in 2023 recreational fishing contributed \$148 billion to the economy, supported 945,500 jobs, and added \$1.8 billion to conservation (American Sportfishing Association 2023). Like other outdoor pursuits, recreational fishing offers various health benefits that promote overall well-being and empowerment for many individuals (Pita et al., 2022). However, these advantages are not equally accessible to all, with marginalized communities often having the least access (Rowland-Shea et al., 2020). Although a significant portion of research on recreation preferences has focused on the motivations and constraints of anglers in the U.S., the majority of these studies have predominantly focused on white, non-Latino, male anglers (Thomas et al., 2022).

Nonetheless, the results for the 2023 Special Report on Fishing reaffirmed the significance of Hispanics in the recreational fishing sector. In comparison to the previous year, the number of Hispanic participants



in recreational freshwater fishing **increased by 16%**, while saltwater fishing saw a **21% growth** (Outdoor Foundation, 2023). The number of Hispanic **fly fishing**<sub>15</sub> participants has more than doubled over the span of a decade, rising from 433,000 in 2012 to nearly one million in 2022 (Outdoor Foundation, 2023). Furthermore, 59% of the Hispanic individuals who participate in recreational fishing identified themselves as occasional participants, yet almost half expressed a desire to fish more frequently (Outdoor Foundation, 2023). Hispanic Access Foundation contributed to increasing Hispanic recreational fishing representation by being a 2016-2020 recipient of the George H.W. Bush **Vamos a Pescar**<sub>16</sub> Education Fund grant, an outreach initiative that focuses on engaging Hispanic families via hands-on educational opportunities related to fishing, boating, and conservation activities. Their increasing representation in the U.S. population and keen interest in fishing confirms that Latinos and Hispanics will remain an important demographic in the future of recreational fisheries.

## TRADITION AND SURVIVAL: THE IMPORTANCE OF SUBSISTENCE FISHERIES

Subsistence fishing in the United States has been overlooked in research and management. This oversight may be attributed to the fact that those involved in subsistence fishing often belong to impoverished, indigenous, or immigrant communities. Furthermore, more data is needed to identify the extent to which “recreational” angling (under a recreational fishing permit) is being pursued as a form of “subsistence” fishing (Pitchon et al., 2012). A study from 2020 in Santa Barbara, CA reported recreational pier fishing is a form of subsistence, particularly benefiting low-income, Latino and Asian/Pacific Islander fishers (Quimby et al., 2020). How much Latinos in the U.S. depend on recreational fisheries for their protein intake, and how often do they need to fish to meet their needs is something that requires further research. Given the potential dependency that Latino communities may have on recreational fishing as a source of food, it is important for Latino communities to know fishing regulations, fishing updates, and health advisories in order to properly and safely eat their catch.

By researching and leveraging insights into the fishing preferences and experiences of Hispanic fishers, natural resources agencies and **conservation entities**<sup>17</sup> can adapt their outreach, education, and recruitment strategies to better cater to the specific recreation needs of Latinos and Hispanics. This approach would ultimately contribute to increasing the diversity of participants (Winter et al., 2019), providing a larger support base for conservation, improved compliance of fishing regulations, and increased fishing equity.

## SAVORING THE SEA: SEAFOOD IN LATINO CULTURE

Although understudied, it appears that fish and seafood consumption remain an important aspect of cuisine for U.S. Latinos. A survey conducted in New York City found that **97% of Hispanics were seafood eaters**. Interestingly, the survey found that respondents not born in the mainland U.S., but born in Colombia, Dominican Republic, or Puerto Rico believed a bit more strongly that seafood is healthy and nutritious and that consuming it is part of religious and family traditions (Weinstein et al., 1999). This is not particularly surprising; as mentioned earlier, fish and seafood consumption is culturally important for many Latin American countries, especially those bordering the ocean. As cultural customs are passed down generationally, it can be expected that Latinos in the U.S. also integrate seafood into their cuisine. For example, research done in another area of the U.S., at Kentucky State University, found that whole tilapia received an 84% consumer approval with Hispanic consumers and that they were willing to pay a price that would be profitable for their local aquaculture farms (Dasgupta et al., 2011).

Recent information, via a 2022 poll conducted by the ocean non-profit [Azul](#), found that **74% of respondents** (Latinos in the United States) **supported stricter regulation of illegal, unreported and unregulated (IUU) fishing activities**, even if it meant paying more for fewer fish (Segura, 2022). All of the aforementioned might indicate Latinos both enjoy seafood and are keen to consume this resource in a sustainable manner, both by supporting local resources and engaging in more sustainably-sourced options.



# REGIONAL CASE STUDIES

## CALIFORNIA

According to the United States Census Bureau, California is the state with the highest Hispanic population at 15.7 million people identifying as Hispanic (US Census Bureau, 2024). This means that 40% of Californians are Latinos (Johnson et al., 2024). Given that California is home to many of our country's Latinos as well as flanked by the Pacific Ocean, we explore how Latinos here are engaging with the coast. Five percent of Californian Latinos are employed in the agricultural, forestry, fishing, hunting, and mining industry sectors, with Latinos in small metro and rural counties more likely to be employed in these sectors than those in suburbs or urban counties (A Statistical Picture of Latinos in California 2017 Update, 2017). However, as evidenced by the grouping of this sector, there is little to no demographic information specifically discussing Latinos engaged in fishing in the state. In addition, although ~28% of the Californian population (or 10 million residents) speak Spanish, the California Fish and Wildlife Department Fishing Regulations are not provided in Spanish on their website.



[Heal the Bay](#), a nonprofit in the Los Angeles region focused on making the area's coastal waters and watersheds healthy, clean, and safe, started an Angler Outreach Program in 2003. The program focuses on educating pier and shore anglers in Los Angeles County and Orange County about the risks of consuming

toxic-contaminated fish (Orrala, 2023). A study led by Heal the Bay which conducted pier angler surveys across 10 piers in these 2 counties showed that the majority (60%) were Latino and native Spanish-speakers (Stevenson et al., 2012). Furthermore, it's important to note that 78% of the pier anglers were fishing for subsistence purposes (Stevenson et al., 2012).

Moreover, Hispanic anglers in California ingested an average of 13.9 micrograms of mercury per day via consumption of fish they had caught in local waters (Grajales-Hall, 2011); this is almost double the amount of mercury that has been determined as safe by the Environmental Protection Agency. The issue is exacerbated by a lack of bilingual or Spanish advisories and signage warning anglers of the threat of contamination.

Similarly, research focused on contaminated fish consumption in California's Central Valley Delta found that for Hispanics, signage at the fishing location itself is the main source of information about contaminated fish (Shilling et al., 2010). Receiving this information via television is the second preferred option. In addition, the study showed that Hispanics viewed health providers as the most trustworthy source to receive health information from. Second to health providers, friends and family were the most trusted health information sources (Shilling et al., 2010).

It is evident more research needs to be dedicated to Latinos' involvement in the recreational, commercial, and subsistence sectors in California, especially given it is the state with the largest Latino population. Without a foundational understanding of Latinos' involvement, challenges and concerns cannot be addressed. While there is some existing information regarding recreational and subsistence fisheries involved in angling, it is scarce. However, Latino anglers in California would benefit from increased language accessibility ensuring that signage in Spanish is posted where Latinos tend to fish from piers. California must enhance their efforts to make health risks related to contaminated fish consumption widely known via culturally appropriate news mediums and languages.

## FLORIDA

With an estimated four million anglers, a combined revenue of \$13.8 billion a year by saltwater and freshwater recreational fishing (FWC 17/18), and \$4.6 billion in income impacts for commercial fisheries supporting 1.3 million jobs in this sector (NOAA, 2022), it's no wonder Florida considers itself the "Fishing Capital of the World". In 2022, Florida also generated

\$24.6 billion in sales impacts, the largest in the Gulf of Mexico region (NOAA, 2022), highlighting Florida's importance in the U.S. fishing sector by not only providing revenue and jobs, but also as a key seafood supplier for the nation.



Additionally, according to the U.S. Census Bureau's July 2023 estimates, nearly 30% of Florida's population, approximately six million individuals, are Latino (U.S. Census Bureau, 2023). This demographic group now represents the largest minority in Florida, a notable increase from one in six individuals a decade ago. Florida experienced a significant increase in its Hispanic population compared to the total population, with a growth rate of 34.9% versus 14.6% between 2010 and 2020 (Office of Economic and Demographic Research, 2024). The proportion of Hispanic or Latino individuals rose in the majority of counties across the state of Florida. Additionally, it is estimated that 22% of Floridians primarily speak Spanish at home.

Furthermore, Hispanics in Florida show a higher propensity for outdoor activities compared to other ethnic groups in the state. Specifically, 33% of Hispanics in Florida indicate that their pastimes, hobbies, and recreational interests are focused on outdoor activities, whereas this figure is 25% for non-Hispanic whites, 20% for Black people, and 22% for Asians (The Nature of Americans Report, 2017). Given the high proportion of Latinos that live in Florida, how valuable the outdoors are for this demographic, and how important Florida fisheries are for the economy and for food-security, Latinos in Florida fisheries warrant further research.

However, there is no public data on how many Latinos hold fishing licenses in Florida, what proportion of the Florida commercial and seafood sector are Latino employees, how much do Latinos depend on fisheries to feed themselves and their families, or what barriers and motivations do Latinos experience in regards to fishing in Florida. The saltwater and freshwater fishing regulations are not translated into Spanish in Florida, although the shorter and more condensed fishing "quick-charts" that are used for reference are available in Spanish.

The website [gooutdoorsflorida.com](http://gooutdoorsflorida.com), which is used to apply for fishing and hunting licenses, is not available in Spanish either. Additionally, a Social Security number is needed to purchase commercial and recreational fishing licenses, yet many Latinos do not feel comfortable sharing information regarding legal identification documents or may not even have a Social Security number. Although there is an option for non-residents (mostly geared towards out-of-state and international tourists) to purchase a fishing license without providing a Social Security number, these "temporary" licenses are only valid for 7 days as opposed to a year, and costs 3-5x more than the resident license purchased with a Social Security number. The price for a temporary license, the process and documentation needed to purchase fishing licenses may intimidate Latino fishers who otherwise are inclined to register, willing to pay, and happy to comply with

licenses may intimidate Latino fishers who otherwise are inclined to register, willing to pay, and happy to comply with fishing regulations.

Latinos in Florida would benefit from more language access, as well as more demographic data and insights, in the fishery sectors. Resource management and enforcement agencies in Florida would benefit from increased compliance, higher license sales, more support for conservation and a better informed workforce if more information was made accessible in Spanish and further research went into understanding the roles Latinos have across Florida fisheries.

## TEXAS

As of the most recent estimates, the Latino population in Texas has grown significantly, making it the largest demographic group in the state. Latinos now make up approximately 40.2% of Texas's total population, surpassing non-Hispanic whites. Notably, 49.3% of Texans under the age of 18 are Latino, reflecting the youthfulness of the Latino population in the state (Ura, 2023).

With a growing demographic comes the expanding interest in environmental issues and outdoor recreation.



A 2001 study analyzed secondary data from four statewide angler surveys conducted in Texas between 1989 and 1997 between non-Latino White and Latino anglers (Hunt & Ditton, 2001). These surveys included approximately 10,000 anglers each, and data was collected on their fishing participation and preferences. The study highlights how cultural orientations influence recreational activities. Non-Latino White people with a more individualistic and utilitarian orientation, emphasized stress relief and natural settings. In contrast,

Latinos, with a more community and present-oriented perspective, valued the social and achievement aspects of fishing. The findings suggest that as the Latino population segment of anglers grows, fisheries management and educational programs need to consider these cultural differences to effectively serve diverse angler communities and address their specific needs and preferences (Hunt & Ditton, 2001).

Recreationally, fishing is a significant pastime within the Texan Latino community, fostering not only a source of leisure but also a means of connecting with family and nature (Hunt & Ditton, 2001). The [Texas Parks & Wildlife Department](#) (TPWD) promotes recreational fishing among Latinos through various education programs and events designed to increase participation and awareness about fishing regulations and conservation efforts; however, they are not keeping track of licensing by ethnicity (Lopez et al., 2005).

Most recently, the Communication and Marketing Department of TPWD through a grant from the Recreational Boating and Fishing Foundation engaged Latina anglers to encourage them to fish more, to highlight benefits of fishing, and to get them to renew their license. An online survey sent to a group of 1,830 female anglers demonstrated that only 16% identified as Latinas. However, tailored communication using mixed media strategies to promote fishing proved successful with Latino anglers being receptive to Spanish online ads and in total there was an increase of 37% engagement on Instagram (Johnson & Communications & Marketing, 2024). Now the team is looking to test other platforms such as texting, continuing to focus on women, target neighborhood fishing lakes for accessibility and comfort, and explore Latino media/events to reach all ages.

platforms such as texting, continuing to focus on women, target neighborhood fishing lakes for accessibility and comfort, and explore Latino media/events to reach all ages.

In fact, it seems local organizations and clubs are leading the charge in promoting fishing. A quick Google search demonstrated the Facebook page 'Latinos Fishing Club' located in Houston, Texas. This page welcomes all Latinos in Texas to fish with an exchange of ideas from participants of the group using personal videos/photos out on the water fostering collaboration and community. The users of the Facebook group discussed subsistence fishing, which while less documented, remains a critical part of the lifestyle for many Latino families in Texas, providing both a cost-effective way to support their families and a connection to traditional food sources. Other organizations, such as [Latino Outdoors](#), emphasize the importance of inclusive outreach programs to encourage participation and support among Latino recreational fishers.

In conclusion, the growing Latino population in Texas, now the largest demographic group in the state, has shown an interest in environmental issues and outdoor recreation, particularly fishing. This community's unique cultural perspectives emphasize social and achievement aspects of fishing, contrasting with the individualistic approach of other demographics. Natural resource agencies would benefit to partner with local organizations to target and educate the Latino population in fisheries.

## PUERTO RICO

Puerto Rico is an unincorporated territory of the United States. It is an integral part of Latin America and prides itself in being rooted in a multi-cultural context as a Caribbean island with a total population of 3.29 million people as reported by the 2020 U.S. Census (Figueroa-Lazu et al., 2022). Latinos are the dominant population at 98.7% and Spanish is spoken in 94.8% of households (Figueroa-Lazu et al., 2022). Although there were no exact figures on what percentage of the Puerto Rican population engages in fisheries, there are reports and studies demonstrating the significant role fisheries plays in Puerto Ricans' lives.



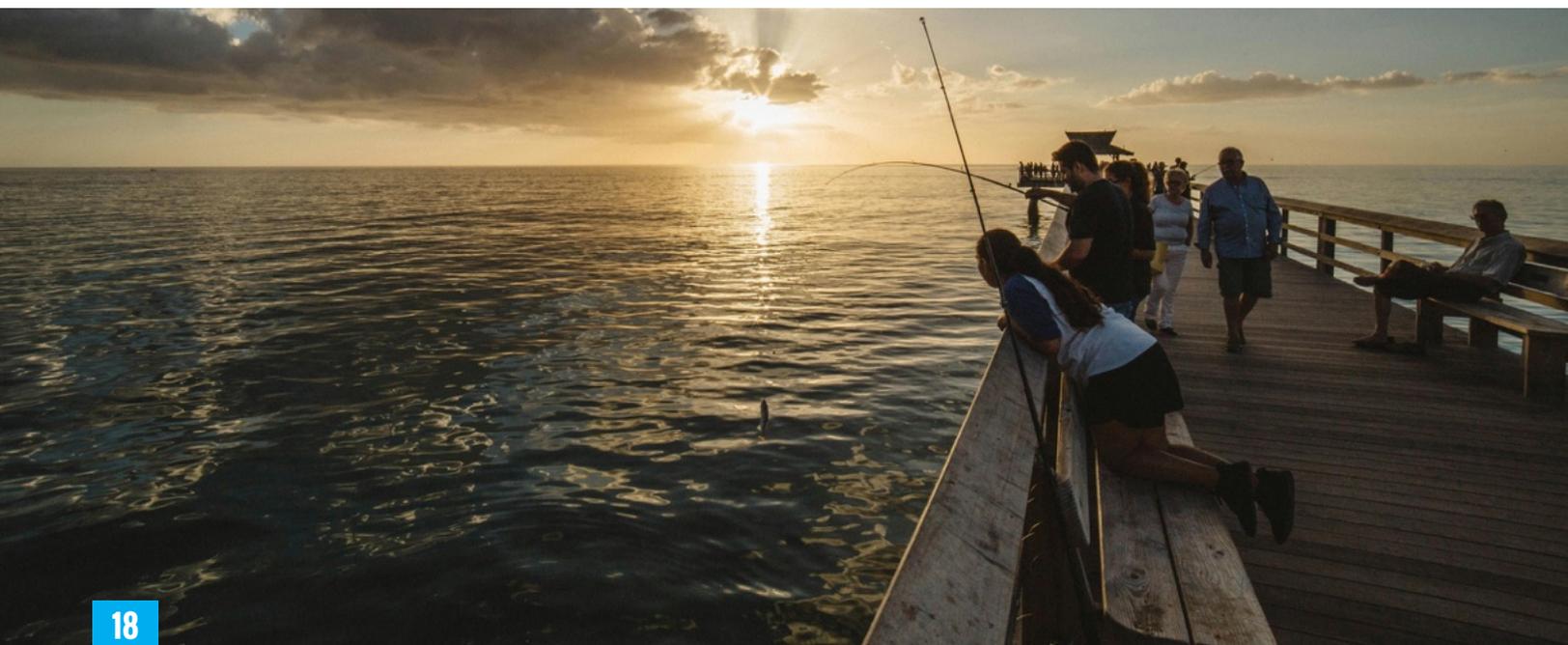
In Puerto Rico, the fishing sector plays a role across commercial, recreational, and subsistence activities, deeply interwoven with both the economy and cultural practices of the island. Recreationally, fishing is not only a popular pastime but also a substantial economic contributor, particularly through tourism and related activities (Puerto Rico Fishery Management Plan, 2022). Recreational fishing in Puerto Rico's jurisdictional waters is overseen by the [Department of Natural and Environmental Resources](#), which has implemented fishing regulations and education programs to benefit recreational fisheries (Programa de Educación Para La Promoción de La Pesca Recreativa (PEPPR), 2022). To put it into context, in 2011 recreational fishing provided jobs to 265 residents and generated \$29.2 million in sales (Valdés Pizzini et al., 2021). This sector is crucial for the island's economic recovery, especially post-natural disasters like Hurricane Maria, which severely impacted the local infrastructure and economy.

Hurricane Maria's impact on the commercial fishing industry was severe. When Maria landed on Puerto Rico as a Category 4, it caused an estimated 3,000 deaths, and \$43 billion in damages and losses (Agar et al., 2020). In a NOAA and University of Miami report, Hurricane Maria caused a 20% decrease of commercial landings and there was a loss of \$17.8 million for small-scale fisheries (Agar et al., 2020). Hurricane Maria has highlighted the need for more research into the socio-economic complexities of small-scale fisheries so that recovery by government agencies can address all of the community needs.

Subsistence fishing remains integral to Puerto Rican culture and survival, especially in rural areas. A 2021 study analyzed conflict and cooperation in small-scale fisheries from 2010 to 2019, identifying 35 conflict events and 133 cooperation events (Villegas et al., 2021). The primary conflict causes included maritime crime, an actual or perceived decline in fish populations and ecosystem change as mentioned in the study. Cooperation often stemmed from shared environmental concerns, with fishers and stakeholders collaborating through meetings and support from NGOs. The study also revealed a notable gap in direct cooperative networks between regional environmental managers and fishers, pointing to potential improvements through stronger co-management agreements. These could be further supported by existing relationships between fishers and various university actors and non-governmental organizations (NGOs), suggesting a foundation for building more integrated management approaches.

An important contributor to getting this information to the public is [SeaGrant Puerto Rico](#), a nationwide program funded through NOAA that operates locally by state and territory and specifically in Puerto Rico publishes a fisheries magazine called 'Fuete y verguilla' on topics such as issues, laws, ecology and regulations (Puerto Rico Sea Grant, n.d.). This supports the integration of fishers into more cohesive management frameworks, fostering better communication and cooperation between fishers, universities, and NGOs.

In summary, fishing in Puerto Rico exemplifies the critical interplay between commercial success and the preservation of recreational and subsistence fishing. As can be seen, fishery activities are vital for the island's economic stability and cultural heritage, especially in the aftermath of natural disasters like Hurricane Maria. However, the lack of resources allocated by the U.S. government has contributed to insufficient detailed information and statistics about the sector. Enhanced funding and resources are essential to improve data collection, support recovery efforts, and ensure sustainable fisheries management in Puerto Rico.





# LATINO VOICES IN FISHING

It is evident there is a data gap regarding Latinos' involvement in fisheries in the U.S. and Puerto Rico with no comprehensive research highlighting Latino experiences, challenges, or needs. Through the [Hispanic Access Foundation](#) network, we identified and spoke with Latino fishers in order to hear their firsthand experiences.

## JARED GUERRA - MIAMI, FL

FORMER SUBSISTENCE ANGLER



Jared, a 1st generation Cuban-American, has been involved in subsistence fishing, commercial fishing, and fishing for sport. When Jared was young and being raised by his grandfather, he was fishing for a living but said he did not realize it at the time because his grandfather did not tell him. Back then, more than seven of their monthly meals came from Jared's fishing. Today, he has seen that others face barriers to fishing such as expensive bait and gear, no access to boats, not knowing where to get a fishing license or what the fishing regulations are, or not understanding English enough.

"For those that face a barrier of not speaking English, I become their translator. There is a lack of understanding of protocol, laws, membership, regulations, registrations -they become frustrated and eventually give up and do it the way they used to," said Jared.

Jared's willingness to help is commendable and illustrates the power of language and community support. However, the need for Spanish-language materials, outreach and education to the Hispanic community regarding fishing protocol and regulations is made apparent.

Now, he views fishing with a different perspective. "Seeing the [fishing] landscape turned me into a conservationist.

conservationist. Now looking at fishing is difficult for me. We don't know as much about the entirety of the ocean so I'd say we need more protection about the areas that we don't know and don't understand." His experiences with fishing as well as his scientific curiosity led Jared to "be more conscious" and want to "conserve and preserve our natural resources."

## RODDY GONZALEZ - MIAMI, FL

OWNER OF A FISHING SUPPLY STORE AND SPORT FISHERMAN



Roddy is a first generation American of Latin descent. He fishes for sport (for a prize), to spend quality time with his loved ones, and to bring 5 - 6 meals home per month to his family. While fishing itself is not his main occupation, he is the owner of El Capitan Sports Center, Inc. in Miami, a family-owned marine and fishing supply store that has been in business for 50 years. Selling to fishermen is his job, where Roddy says 75-80% of his customers are Latino.

Roddy shared that while he believes that the Marine Protected Areas that exist are sufficient, "there is a lack of enforcement. You can have as many MPAs as you want. If you're not enforcing the rules, what's the purpose of having the MPA?" In addition, "The community needs more in Spanish for fishing seminars. I try to educate people here in the store but I'm a very small segment. I believe we need more education for boaters and fishermen that speaks to Latin [people]

specifically. I think that would help a lot of the problems out there right now. Education is needed on fishing, boating, rules, etiquette, legislation - whatever is needed to be a person respectful of others on the water and following the rules. I think that would be of benefit to the community." He also shared that expenses related to fishing may be a barrier for some.

While there is limited data and research showing Latinos' involvement in fishing at both the federal and state level, stories such as Roddy's demonstrate Latino involvement in the sector as well as the need for educational opportunities that are culturally relevant for the community.

## GRACIE RIVERA - TALLAHASSEE, FL

RECREATIONAL FISHERWOMAN



Gracie is Puerto Rican, the daughter of Puerto Rican parents that came to live on the mainland United States. Gracie views fishing as a hobby; she fishes in order to spend time outdoors and enjoys eating what she catches from saltwater fishing.

She believes that more fishing enforcement is needed, "I go to a lot of different places where there's no enforcement at all and people just catch and keep whatever. There's regulation signage but people don't respect it. And there should be more regulation on picking up your leftover line and trash. I see a lot of line out there in the water and on the trees. You cast out and you're reeling in line that's been leftover."

Gracie also shares about her experience fishing as a woman: "There's a lot of stigma out there that women can't or don't know how to fish or don't know how to bait a hook, but we are fully capable. When I'm the only woman out there fishing, people give me weird looks. A lot of times they get close to me when I'm fishing and a lot of times I feel like if I was a man they wouldn't do that. When I do see other women, I try to make it known [that] we are in this together, and that if you need help with anything, let me know."

Jared, Roddy, and Gracie's personal experiences are emblematic of larger issues at hand that are reflected in the findings of this paper. A need for more enforcement is mentioned and if that is the case we must ensure that enforcement is culturally appropriate and accessible by having bilingual or Spanish-speaking enforcement officers. In addition, the community is asking for Spanish-language materials, regulation signs, and outreach and awareness programs. This would help the Latino community better understand how to fish, where to fish, and more. [Hispanic Access Foundation](#) contributed to overcoming some of these challenges through applying to and being awarded with the Vamos a Pescar Education Fund Grant in 2016, 2017, 2018, 2019, and 2020. This program is an outreach initiative that focuses on engaging Hispanic families in a variety of hands-on educational activities, such as fishing. Through this program, Hispanic Access implemented bilingual events in Virginia, Nevada, Idaho, and California, reaching several hundred multi-generational Hispanics. Hispanic Access was proud to offer unique support by being able to provide fishing licenses for participants at no cost as well as providing information on how and where to obtain licenses in their respective states; in some cases this information had been previously difficult to obtain for participants. As a result of these events, many children and adults learned how to fish, many for the first time. Qualitative feedback from the events showed that families appreciated and enjoyed the events thoroughly. Participants expressed improved fishing ability as well as the confidence to do so in areas close to their homes, helping to instill a custom of families fishing in their local communities. This program was valuable in aiding some of our Latino community members in overcoming accessibility barriers to becoming involved in fishing.





# SOCIAL RESPONSIBILITY: U.S. LATINOS & FISHERIES

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## SOCIAL RESPONSIBILITY IN FISHERIES FOR U.S. BASED LATINOS

The concept of social responsibility in fisheries encompasses a range of issues, including fair labor practices, equitable access to resources, environmental stewardship, and the well-being of fishing communities. For U.S.-based Latinos, who constitute a significant and growing portion of the outdoor recreation community and fisheries workforce, addressing these issues is critical. This section delves into the social responsibilities associated with fisheries, particularly focusing on challenges such as language accessibility, discrimination, occupational hazards, health risks, immigration status, and gender inequities faced by Latinos in commercial, subsistence, and recreational fisheries.

## LANGUAGE ACCESSIBILITY

As mentioned previously, a significant issue is the lack of bilingual resources and bilingual law enforcement. Several studies have pointed out that Latino/Latina fishers whose first language may not be English face complications obtaining fishing licenses, and often face fears related to immigration status (Eyzaguirre et al., 2023; Schroeder, Nemeth, et al., 2008). In some cases, interactions with regulatory bodies and law enforcement are difficult. This language barrier can lead to misunderstandings, legal issues, and a general sense of alienation from the regulatory processes that govern their livelihoods (Schroeder, Nemeth, et al., 2008).

A study in 2012 highlighted that within minorities in the U.S, Native Americans and African Americans were more likely than Latino residents to know of fish health advisories (Driscoll et al., 2012). This is likely due to a language barrier, given that most fishing notices are not translated to Spanish. Indeed, a study in the Great Lakes found



that for Latino anglers, fishing advisories were minimally effective because of the complex wording (Beehler et al., 2003), which continues to be an issue, with immigrant anglers being more exposed to potentially contaminated fish (Lauber et al., 2017). A study on constraints to fishing participation in communities of color found that language barriers were identified as a problem for Chicano/Latino individuals (Schroeder et al., 2008). Not knowing or understanding fish advisories relating to health warnings can be detrimental to Latino communities.

It is no surprise then that a study found Latino children incur disproportionate exposures to pollutants, pesticides, and toxic chemicals, leading Latino children to have higher rates of asthma, lead and mercury poisoning (Carter-Pokras et al., 2007).

Fisheries management and enforcement are typically up to state and federal authorities; however, most states have been charged with providing resources for Spanish-speaking fishers. Unfortunately, not all states offer bilingual resources, and there is a lack of uniformity in the type of resources provided. Some states only offer fishing regulations in Spanish, while others provide comprehensive beginner guides, instructional videos, or written documents. This inconsistency creates challenges for Spanish-speaking anglers, who may struggle to find the necessary information and support depending on their state (Appendix I). Addressing these disparities is crucial to ensuring equitable access to fisheries resources and promoting inclusivity.

## DISCRIMINATION

It is not only with enforcement and regulatory bodies that Latino fishers are encountering conflicts. Within the recreational community Latinos are reporting that they are experiencing systemic racism and harassment. They face dismissive and negative treatment from other anglers, which can deter participation and create an unwelcoming environment (Schroeder, Fulton, et al., 2008; Schroeder, Nemeth, et al., 2008). This ongoing need to negotiate racial harassment is a significant deterrent for many Latino anglers.

## OCCUPATIONAL HAZARDS

In terms of industrial commercial fisheries, Latino workers are also facing racially motivated issues and are particularly vulnerable to occupational health hazards. The physically demanding nature of the work, coupled with inadequate safety measures and training, exacerbates these risks. Moreover, exposure to elements such as heat and chemicals without personal protection equipment (PPE) further endangers their health (Workers in the Fishing Industry, n.d.). In 2017, a Latino working on an industrial fishing vessel in Alaska won \$1.85 million after experiencing racial abuse and unsafe working conditions, which led to the death of one man that was ill and was forced to work a 22-24 hour shift, while he worked on the vessel in 2011 (Bush, 2017). The Fair Labor Standards Act (FLSA) does not cover commercial fishing crews, including those involved in tasks related to catching and harvesting fish at sea [29 U.S.C. § 213(a)(5)].

More controlled environments in the industrial fishing industry are not immune to the threats of health and well-being of Latino workers. In the Maryland crab industry, the repetitive motions affiliated with removing the meat from the tough carapace of the crab has resulted in cuts, arthritis, and back pains, and long-term exposure to crab meat can lead to allergies (Juarez, 2024; Rathod & Lockie, 2010). Even within aquaculture,

Latino workers at the Taylor Shellfish Farms in Washington state are facing challenging conditions including long hours and hazardous environments. This includes extreme heat particularly exacerbated by climate change, which has led to heat-related illnesses and causes instability in the production of shellfish, affecting the livelihood of workers (Kardas-Nelson & Tamayo, 2022). Such cases highlight the urgent need for improved safety standards and labor practices in the industry, especially in the face of climate change.

## IMMIGRATION STATUS

Temporary migrant workers from Mexico and Central America play a crucial role in the U.S. seafood processing industry, particularly under the H-2B visa program. Each year, U.S. companies apply to the [Department of Labor](#) and [Department of Homeland Security](#) for a limited number of visas through a lottery system. Following selection, companies often recruit workers through events in border towns along the California and Texas borders or via recruiting agencies (Juarez, 2024; Smith, 2023). These workers fill essential labor gaps in communities where local populations cannot meet the demand for processing large quantities of seafood (Smith, 2023). Once selected workers pass interviews, background checks, and other hiring procedures, some companies arrange transportation, including airfare. However, practices vary across the country, with some companies requiring workers to repay travel costs through deductions from their wages (Rathod & Lockie, 2010).



In North Carolina, for example, crab and oyster processing is almost exclusively performed by H-2B migrant workers from Mexico (Selby et al., 2001). These workers are often paid near minimum wage, with wages determined by the U.S. Department of Labor. Employers are not required to provide housing for H-2B workers, but if they do, it must meet OSHA and state standards yet based on interviews with workers, housing can become crowded. Latino workers often refrain from submitting formal complaints to their employers due to the fear of losing their jobs, which would prevent them from transferring to other companies. Their visas are tied to the specific seafood companies rather than to the individual workers. This dependency creates a hostile work environment where workers are afraid about speaking out due to potential retribution (Rathod & Lockie, 2010; Smith, 2023).

Similarly in Oregon, Latinos were found to comprise a sizable portion of the seafood processing sector in Coos County with sector leaders describing the Latino seafood workforce as “long-term employees with positive reputations for their work” (Cramer et al., 2023). However, Latino interviewees from this same study reported a plethora of challenges such as housing discrimination, healthcare issues such as chronic pain, depression and isolation, and large language issues including a general lack of Spanish-language resources for their community as well as working under supervisors that did not speak Spanish. It is important to note that factors such as English fluency, immigration status, and whether or not they had extended family living in the area led to differences in experiences, working conditions, and wages (Cramer et al., 2023).

In another example from across the country, a New England interviewee from the same study shared that “A

lot of the workers [in the processing facilities] are Latina.” Yet another interviewee shared that “A lot of the laborers in New Bedford [Massachusetts] are Central American...from San Salvador and Guatemala” and that there are services and agencies in the area to provide support for the Spanish-speaking population. As has been mentioned in the case of Alaska, many of the seafood processing workers tend to be seasonal workers on H-2B visas. In addition, Brown’s paper notes that “little research has addressed the occupational health of these workers” (Brown, 2008).

Despite challenges such as being away from their families and missing significant life events, many Latino migrant workers prefer working in the U.S. due to better employment opportunities compared to their home countries (Juarez, 2024). These workers play an essential role and yet the absence of comprehensive labor protection leaves them vulnerable to exploitation and poor working conditions.

## HEALTH RISKS



The issue of bioaccumulation of toxins and heavy metals in fish is a significant concern for all fishers, particularly those engaged in subsistence fishing. These toxins can pose serious health risks, especially for communities that rely heavily on fish for their diet. Certain fish species are known to accumulate higher concentrations of heavy metals like mercury, lead, and cadmium due to their position in the food chain and longevity in tissues. Mercury is of concern for marine fisheries; the [Environmental Protection Agency](#) (EPA) has warned that high levels of this heavy metal in the bloodstream can impair neurological development, which is why pregnant women and children are warned against high levels of consumption (What You Need to Know about Mercury in Fish and Shellfish, 2017). Symptoms of mercury poisoning include sensory impairment (vision, hearing, and speech), disturbed sensation, and a lack of coordination. Chronic exposure can lead to more severe effects such as memory problems, cognitive deficits, and even developmental delays in children. Addressing this issue ties into the broader need for ocean health improvement measures, such as reducing pollution and mitigating ocean acidification. Mercury is released into the environment by burning coal which then bioaccumulates in organisms in the environment and

can then be found at high levels in sport fishing species, such as mackerel or tuna (Menon, 2016). Ensuring that fish stocks are safe for consumption is a critical aspect of social responsibility in fisheries.

## GENDER INEQUITIES

Gender inequities in fisheries are often overlooked, yet Latinas play crucial roles, particularly in processing and supporting activities for fisheries. Yet in the commercial fisheries industry female workers often face additional challenges, such as lower wages, limited advancement opportunities, and greater exposure to unsafe working conditions. Several case studies in crab processing plants of Maryland and North Carolina demonstrated this as well as a racial struggle between Latina migrant workers and African American and White women workers vying for the same positions (Rathod & Lockie, 2010; Selby et al., 2001).



There is a noticeable lack of diversity among female recreational anglers, with 79% identifying as non-Latino white (Eyzaguirre et al., 2023). A 2023 study from Colorado State University revealed that both male and female interviewees acknowledged that despite stereotypical gender roles in Latino culture not directly hindering their fishing participation, fishing remains perceived as a male-dominated activity, often discouraged for women and girls. Interviewees highlighted that Latinas are more likely to assist rather than actively participate in fishing, similar to house chores being done primarily by Latinas, so is the preparation for cleaning and cooking the catch (Eyzaguirre et al., 2023). One interviewee noted that Latinas often believe outdoor activities like fishing should be taught by men (Eyzaguirre et al., 2023). However it is to be noted that a 2005 study on Texan Latinos demonstrated that women showed greater environmental awareness than men and that religious affiliation correlated with increased environmental concern which shows women's interest in the outdoors

(Lopez et al., 2005). This demonstrates that Latina women are interested in the environment and the outdoors but feel discouraged in participation. Addressing these gender-specific issues is crucial for fostering equity and inclusivity in fisheries.

**Power dynamics within the fisheries workforce and decision-making bodies often leave Latino workers with little influence over policies that affect their livelihoods. This lack of representation in decision-making processes exacerbates the inequities they face. Efforts to improve equity in fisheries management must include increasing the participation of Latino workers in leadership roles and ensuring that their voices are heard in policy discussions.**



# RECOMMENDATIONS

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## RIGHTS TO LANGUAGE ACCESS

**Title VI**<sup>18</sup> of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq.) was established to ensure that no one is discriminated against based on race, color, or national origin in programs and activities that receive federal financial support. This law requires that these programs make their services accessible to individuals with limited English proficiency (LEP). In addition, Title VI encourages organizations to track and improve their language assistance efforts to enhance accessibility for everyone.

Language access is especially important when disseminating critical information, such as updates on extreme weather events, health hazards, and safety warnings. For example, any press release or important document issued in English should also be available in other languages that reflect the community's demographics and needs.

Between 2018 - 2022, Spanish was the second most common language in the U.S after English, spoken in 61% of homes (U.S Census 2023). The lack of language equity may contribute to why Latinos are unaware of certain health and environmental dangers, and may also be uninformed of policy changes and updates which can result in decreased compliance. Additionally, in 2023 the Justice Department's Office of Environmental Justice published its first-ever Annual Report on the Comprehensive Environmental Justice Enforcement Strategy, under Title VI. This report highlights cases involving environmental justice issues and detailing its approach to interacting with and providing solutions to communities that have been disproportionately affected by pollution for a long time.

From the report:

*"Communities of color, indigenous communities and low-income communities too often feel the greatest effects of pollution and climate change," said Assistant Attorney General Todd Kim of ENRD. "It is imperative that we use all the legal authorities available to address long standing inequities that deny people healthy and safe communities," said Assistant Attorney General Kristen Clarke of the Civil Rights Division. "We will continue to coordinate with our federal partners in using our civil rights laws to advance environmental justice for historically underserved, overburdened and marginalized communities."*

Given Title VI and its new Comprehensive Environmental Justice Enforcement Strategy, as well as the great impact pollution and climate change have on our oceans, our fish, and our communities, all entities that receive federal funding should make efforts to have all their health advisories, fishing regulations and fishing updates available in languages other than English.

## LEGISLATIVE RECOMMENDATIONS



**Ensure that all states provide comprehensive bilingual resources for fishers.** These resources should include not only fishing regulations but also educational materials such as beginner guides, species identification guides, safety instructions, and environmental conservation guidelines. Consistency across states will help standardize the information available to Spanish-speaking fishermen, ensuring equitable access regardless of location (Lopez et al., 2005; Selby et al., 2001).

**Amend the Fair Labor Standards Act (FLSA) to include minimum wage and overtime protections for all workers in the fisheries sector, including those on commercial fishing crews and processing workers.** Current exemptions leave these workers vulnerable to exploitation and unsafe working conditions (Quandt et al., 2013; Selby et al., 2001). Enforce stricter oversight of the H-2B visa program to ensure fair wages and safe working conditions for migrant workers. Regulations should mandate employer-provided housing that meets OSHA standards, and there should be penalties for non-compliance (Arcury & Quandt, 2009).

## INCREASE REPRESENTATION & LEADERSHIP OPPORTUNITIES

**Increase Latino representation in fisheries management and decision-making bodies.** This can be achieved through targeted recruitment and support for Latino candidates in leadership positions within natural resource agencies as well as including them in Regional Fisheries Management Councils (Lopez et al., 2005). Support policies that facilitate community engagement and input from Latino fishers in policy development and resource management decisions. Marine Protected Areas (MPAs) such as the National Marine Sanctuaries are critical areas in the U.S. that are protected for their natural resources and for the benefit of the public. Latinos as stakeholders need to have a place at the table that considers their perceptions, beliefs and needs when establishing new areas or amending regulations for these areas.

The NOAA Fisheries Equity and Environmental Justice Strategy published in 2023 is a fantastic resource to push for inclusive collaboration with underrepresented communities in fisheries; there needs to be more frameworks such as this one for state natural resource authorities (Equity and Environmental Justice Strategy NOAA Fisheries | Equity and Environmental Justice Strategy, 2024). This can help address specific cultural and socio-economic needs within the Latino fishing community. Latinos represent the largest untapped segment of the population when it comes to civic engagement and political potential with a Latino turning 18 every 30 seconds. **Latino Advocacy Week**<sup>19</sup>, hosted by Hispanic Access Foundation is one way that Latinos are able to speak directly to their elected officials on critical environmental issues such as fisheries in an effort to uplift and support Latino communities across the country.

## INCREASE EDUCATION

**Develop outreach programs tailored to the cultural contexts of Latino communities.** These programs should highlight the benefits of fishing, provide educational workshops, and include mentorship opportunities to encourage participation in recreational fishing (Eyzaguirre et al., 2023). Utilize community centers, schools, and local organizations to disseminate information and resources, ensuring they are accessible to Spanish-speaking individuals and families.

The power of social media in our technologically driven world allows any message to get to thousands or even millions of people. As mentioned previously, the Texas Parks and Wildlife Department was able to increase engagement among Latino fishers when they did targeted marketing social media campaigns. This needs to be done nationwide by authorities in partnership with NGOs, such as Hispanic Access Foundation, that truly know their community (Johnson & Communications & Marketing, 2024). Social media gives the opportunity of being inclusive and accessible.



## ADDRESS GENDER INEQUITIES

**Create initiatives aimed at encouraging Latina women and girls to participate in recreational fishing.** Programs should focus on breaking down gender stereotypes and providing role models who can mentor and inspire female anglers (Eyzaguirre et al., 2023).

Implement educational campaigns that address the unique barriers faced by Latina anglers, including safety concerns and the perception that fishing is a male-dominated activity. These campaigns should promote fishing as an inclusive and family-friendly activity. Furthermore, there are gender inequities not only in all fishery sectors, but also in fisheries policy and conservation spaces. Fisheries outreach and education should aim at promoting professional and career opportunities for women, in addition to increasing female engagement in fishing activities.

## ENVIRONMENTAL AND HEALTH EDUCATION

Given the gaps in knowledge on how much Latinos depend on subsistence fisheries, proactive communication and outreach regarding environmental and health hazards in Spanish is needed. Indeed, Title VI encourages press releases and any urgent notices to be translated. More information and education for Latino fishers on the health risks associated with consuming fish with high levels of heavy metals and toxins is needed. Clear guidance must be provided via socially and culturally relevant mediums regarding which fish are safe to eat and how to minimize exposure to contaminants (EPA and FDA guidelines).

## ADDRESSING RESEARCH AND DATA GAPS

Latinos are a growing demographic both in our country and in fisheries. Excluding them would do more harm than progress in the protection of these important natural resources. Making sure fishing is accessible to Latinos is crucial. Therefore, more research and data is needed in all aspects of Latinos engaged in fisheries from nationwide statistics on participation patterns of recreational, small-scale, and industrial fishing, to fishing barriers and challenges that Latinos face. More research will help our understanding of the issues Latinos face, which can lead to actionable items that can improve accessibility.



# LOOKING AHEAD

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Further research needs to be done on the Latino demographic across all fishing-related sectors. These data gaps prevent us from understanding the true importance and contribution Latinos have in commercial, recreational and subsistence fisheries, in the seafood processing sector, in the U.S. economy, and in the conservation and policy arenas. Similarly, we might also be underestimating the importance and extent of reliance on fisheries and how this might affect Latinos' health, income, protein-intake, livelihood and culture.

It is crucial to provide written resources and learning opportunities in Spanish to enhance awareness and participation among limited-English speaking Latinos. Additionally, there is a need for more extensive communication efforts to inform Latino communities about changes in fishing regulations and rules, particularly those related to any that may have legal or health consequences.

In the face of climate change and its related consequences, we must ensure to approach the issue with solutions that are sustainable, both environmentally and socially. Fishing should be done in ways that are climate-friendly and allow fish stocks to be replenished. Latinos working on vessels and in seafood processing plants must have their occupational needs met by working in safe conditions that limits their exposure to physical harm and provides a setting where they can communicate well with their supervisors and voice their concerns. Local governments must meet their communities where they are at and ensure that toxin and health advisories related to polluted waters and contaminated fish are readily available in the needed languages. Lastly, Latinos must have a seat at the table as important stakeholders, in roles such as biologists, conservationists, policy-makers, as well as in the management of fisheries from regional management councils to MPAs; as the largest ethnic minority in the country as well as the fastest-growing demographic, Latinos must be included in the conversation.

Finally, consuming seafood and being conservation-minded can go hand in hand. Latinos in our country have demonstrated that they are willing to consume sustainably-sourced seafood even if it means paying a bit of a higher price. Mobile apps such as [Seafood Watch](#)<sub>20</sub> (available in both English and Spanish) can aid consumers in understanding where their seafood is coming from and what environmental impact it has. When Latinos have the tools and resources they need, conservation efforts can soar to new heights. This is the beginning of acknowledging and valuing Latinos and their role in the world of U.S. fisheries. To thrive, Latinos need bilingual materials, access to affordable fishing gear, ongoing educational and career opportunities, and a chance to affect policy.

# FOOTNOTES

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<sup>1</sup>**Ocean Heat Content** - The amount of heat energy stored in the Ocean.

<sup>2</sup>**Marine Heatwaves** - Periods of persistent warm ocean temperatures, which can impact marine life as well as coastal communities and economies.

<sup>3</sup>**Ceviche** - Seafood dish that involves marinating raw fish or shellfish in citrus juice and seasonings, common all throughout Latin America.

<sup>4</sup>**Semana Santa** - Easter week, translates as “Holy Week.”

<sup>5</sup>**Fanesca** - Ecuadorian soup traditionally prepared with cod for Easter Sunday.

<sup>6</sup>**Bacalao a la Vizcaina** - A Puerto Rican stewed salted-codfish dish with potatoes, onion, garlic, olives, and capers in a broth made of tomato sauce and white wine; typically eaten during Holy Week.

<sup>7</sup>**Potaje de la Vigilia** - A Colombian codfish stew typically made with bacalao, chickpeas, and spinach and consumed during Holy Week.

<sup>8</sup>**Agricultural Runoff** - Water from farm fields that flows over the ground, picks up and carries pollutants.

<sup>9</sup>**Bioaccumulation** - Buildup of chemicals or toxins, in an organism over time.

<sup>10</sup>**Aquaculture** - Breeding, and raising seafood for consumption.

<sup>11</sup>**Global South** - The Global South broadly comprises Africa, Latin America and the Caribbean, Asia (excluding Israel, Japan, and South Korea), and Oceania (excluding Australia and New Zealand).

<sup>12</sup>**Pelagic** - Open ocean far away from shore.

<sup>13</sup>**Biomass** - Total quantity or weight of organisms in a given area.

<sup>14</sup>**Angler** - A person who fishes with a rod and line.

<sup>15</sup>**Fly Fishing** - Rod and reel fishing technique that uses an artificial fly as a lure.

<sup>16</sup>**Vamos a Pescar** - The English translation is “Let’s Go Fishing.”

<sup>17</sup>**Conservation Entity** - A nonprofit organization organized and operated primarily to enhance and protect natural resources.

<sup>18</sup>**Title VI** - Learn more [here](#).

<sup>19</sup>**Latino Advocacy Week** - Hispanic Access Foundation’s Latino Advocacy Week helps build the capacity and familiarity among Latinos to advocate for themselves, their families, and their communities. Learn more [here](#).

<sup>20</sup>**Seafood Watch** - Science-based sustainable seafood recommendations found [here](#).

# GLOSSARY

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**Aquaculture** - Aquaculture is breeding, raising, and harvesting fish, shellfish, and aquatic plants.

**Blue Economy** - sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean.

**Carbon Sink** - Anything that absorbs more carbon from the atmosphere than it releases.

**Climate change** - Long-term shifts in temperatures and weather patterns, driven by human activities.

**Commercial Fisheries** - Fisheries undertaken for profit and with the objective to sell the on the market.

**Ecosystem** - A biological community of interacting organisms and their physical environment.

**Fishery/Fisheries** - Refers to the occupation, industry, season for, or the business of catching the fish. (NOAA)

**Freshwater (fishing)** - Refers to fishing done in freshwater bodies such as rivers, lakes, streams, and ponds.

**Greenhouse Gasses** - Gasses that trap heat in the Earth's atmosphere and warm the planet.

**Industrial Fisheries** - Capital-intensive fisheries using relatively large vessels with a high degree of technology.

**Landings** - The total number or weight of all marine species captured and brought to shore.

**Language Accessibility** - The ability to communicate and access information in a preferred language.

**Marine Protected Area (MPA)** - A defined region designated and managed for the long-term conservation of marine resources.

**Ocean Acidification** - An increase in acidity of the ocean over an extended period of time, caused primarily by uptake of carbon dioxide (CO<sub>2</sub>) from the atmosphere.

**Recreational Fisheries** - Catching fish for personal use, leisure, sport and challenge.

**Saltwater (fishing)** - Refers to fishing done in the ocean.

**Small-Scale Fisheries** - Work-intensive fisheries using small crafts (if any), little capital and equipment, and small crew. May be commercial or for subsistence.

**Social Responsibility** - Social responsibility refers to the ethical framework suggesting that individuals, organizations, and businesses have an obligation to act for the benefit of society at large.

**Subsistence** - A fishery where the fish caught are consumed directly by the families.

Check the source [here](#).

# AUTHORS

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## SOFIA BARBOZA, HISPANIC ACCESS FOUNDATION'S OCEAN MANAGER



Sofía Barboza is a Costa Rican-American climate science specialist, anthropologist, Fulbright Scholar, and a passionate environmental advocate working at the ocean-climate nexus. Sofia has been a key organizer and implementer of international events such as the United Nations Ocean Conference Youth & Innovation Forum in Portugal and the Our Ocean Youth Leadership Summit in Panama, which featured honored guests such as UN Secretary General António Guterres, all with the goal to elevate the involvement of youth in SDG14. She has also engaged in ocean conservation grantmaking, ocean policy initiatives, and overseeing the operations of the global young ocean leader network at Sustainable Ocean Alliance. Sofia

holds a Master's in Climate & Society from Columbia University's Climate School as well as a B.A. in Cultural Anthropology from the University of Pittsburgh with minors in Spanish and Portuguese and a focus on Latin American Studies. Sofia is determined to work in collaboration with others at the ocean-climate nexus in order to mitigate the impacts of climate change on people and the planet.

## DR. CAMILA CÁCERES, HISPANIC ACCESS FOUNDATION CONSERVATION NETWORK MEMBER



Dr. Camila Cáceres is a marine biologist, shark scientist and fisheries researcher. An award-winning scientist recognized by the academic community, she is also an author, educator and expert science communicator. Born in Colombia, her passion focuses on the cross section of fisheries management, environmental justice and community inclusion. She has been featured in Telemundo, Univision, National Geographic and Discovery channel, among others, advocating for conservation and human rights.

## ANA ROJAS, HISPANIC ACCESS FOUNDATION CONSERVATION NETWORK MEMBER



Ana Rojas is a Deering Estate's Conservation and Research Specialist who handles the Cultural and Ecological Field Station, research and conservation projects, acquiring and administering grants, assisting with programming and building partnerships with a multitude of natural resource agencies and universities. She also teaches environmental science as a professor for Miami-Dade College. Originally from Bogota, Colombia, she learned to have a passion for the natural environment due to the incredible biodiversity available. Her goal is to not only further research in the socio-ecological realm but to teach others to appreciate, respect, and care for the nature around them.

# EXPERT REVIEWERS

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## STEPHANIE MARTINEZ-RIVERA



Stephanie Martinez-Rivera obtained a bachelor's degree in Coastal Marine Biology from Universidad de Puerto Rico Humacao in 2012. In 2018 Stephanie obtained her Doctoral Degree in Marine Estuarine Environmental Science from The University of Maryland Eastern Shore (UMES) through NOAA's Living Marine Resources Cooperative Science Center graduate program. Her dissertation was titled, "Reproductive biology of the female red deep-sea crab, *Chaceon quinquegens* (Smith, 1879) in the Mid-Atlantic Bight.". During her research at UMES, she worked closely with The Atlantic Red Crab Co. and led the Red Crab Research Group. Stephanie went on to work for the National Oceanic and Atmospheric Administration (NOAA) as a Fish Biologist for the Caribbean Fisheries Branch in the Sustainable Fisheries Division of the Southeast Fisheries Science Center. She would like to contribute further to the fields of life history, fisheries management, and stock assessment.

## COREY RIDINGS



Corey has been part of the environmental advocacy community since 2011 focusing on efforts related to climate change and ecosystem-based management. She is a member of the Pacific Fishery Management Council, on the advisory board of California Sea Grant, and an advisor for California to the Pacific States Marine Fisheries Commission. She was a Knauss Fellow with the U.S. House Committee on Natural Resources, observed in the North Pacific groundfish fleet, and served as the minority health epidemiologist for the state of Michigan. She is a Returned Peace Corps Philippines Volunteer and holds a BA in biology from Occidental College and an MPH from Yale. She is a PhD candidate at the University of Washington with Dr. Phil

Levin, focusing on equity and justice in fisheries governance and management.

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# APPENDIX

## RESOURCES IN SPANISH BY STATE

### Alabama

- <https://www.outdooralabama.com/about-us/accessibility-language-assistance>

### Alaska

- <https://www.adfg.alaska.gov/index.cfm?adfg=fishing.main>
- Not in Spanish but a lot of resources and divides it into subsistence, commercial, etc.

### Arizona

- <https://www.azgfd.com/fishing-2/licenses-and-regulations/>
- Scroll to bottom and choose language to translate to. A Spanish option is available.

### Arkansas

- [CurrentSPANISHFishingGuidebook.pdf](#)

### California - <https://wildlife.ca.gov/Regulations>

- Heal the Bay's Angler Outreach Program (en Español)
- Spotlight on Venice Pier (en Español)
- How to Safely Eat Fish Caught in LA (en Español)
- Fish Advisories | OEHA (California Fish Advisory Fact Sheet in Spanish)
- [https://mywaterquality.ca.gov/monitoring\\_council/bioaccumulation\\_oversight\\_group/docs/2022/BioaccumulationProgram\\_SpanishFactSheet\\_070822\\_](https://mywaterquality.ca.gov/monitoring_council/bioaccumulation_oversight_group/docs/2022/BioaccumulationProgram_SpanishFactSheet_070822_)

### Colorado

- <https://cpw.state.co.us/Documents/RulesRegs/Brochure/pesca.pdf>

### Connecticut

- [https://portal.ct.gov/-/media/deep/fishing/anglers\\_guide/2024-spanish-fishing-guide-152024-web.pdf](https://portal.ct.gov/-/media/deep/fishing/anglers_guide/2024-spanish-fishing-guide-152024-web.pdf)

### Delaware

- [https://www.eregulations.com/assets/docs/resources/DE/24DEFW-SP-For-Translation\\_es\\_us\\_LR2.pdf](https://www.eregulations.com/assets/docs/resources/DE/24DEFW-SP-For-Translation_es_us_LR2.pdf)

### Florida

- <https://reportedepesca.com/regulaciones-de-pesca-florida/>
- <https://ifas-seagrant.catalog.instructure.com/courses/spanish-florida-friendly-angler>

### Georgia

- <https://coastalgadnr.org/RecreationalFishing>
- NA in Spanish

### Hawaii

- <https://dlnr.hawaii.gov/dar/fishing/fishing-regulations/>
- NA in Spanish

### Idaho

- <https://idfg.idaho.gov/rules/fish>
- NA in Spanish

### Illinois

- <https://dnr.illinois.gov/espanol/pesca-y-caza.html>
- <https://www.ifishillinois.org/regulations/FishingDigestSpanish.pdf>

### Indiana

- <https://www.casscountyonline.com/2015/09/dnr-releases-spanish-language-fishing-regulation-guide/>
- NOT UPDATED FROM 2015

### Iowa

- [https://www.iowadnr.gov/Portals/idnr/uploads/fish/files/IA\\_Fishingbasics\\_Spanish.pdf](https://www.iowadnr.gov/Portals/idnr/uploads/fish/files/IA_Fishingbasics_Spanish.pdf)

### Kansas

- <https://ksoutdoors.com/content/download/53521/571551/version/6/file/2024+Pescar+en+Kansas+Resumen+de+regulaciones.pdf>

### Kentucky

- <https://fw.ky.gov/Fish/Documents/FishingGuide-Spanish.pdf>

### Louisiana

- [https://www.wlf.louisiana.gov/assets/Footer/Files/federal\\_aid\\_title\\_vi\\_LDWF.pdf](https://www.wlf.louisiana.gov/assets/Footer/Files/federal_aid_title_vi_LDWF.pdf)

# APPENDIX

## Maine

- <https://www.maine.gov/ifw/fishing-boating/fishing/index.html#>
- Must click on Language translation on the top right of the page and select Spanish.
- Guide itself is a pdf only available in English.

## Maryland

- [https://dnr.maryland.gov/fisheries/Pages/Recreational/espanol\\_pagina.aspx](https://dnr.maryland.gov/fisheries/Pages/Recreational/espanol_pagina.aspx)

## Main Fisheries Page in Spanish

- <https://dnr.maryland.gov/fisheries/documents/espanol-tidal.pdf>
- <https://dnr.maryland.gov/fisheries/documents/espanol-coastal.pdf>

## Massachusetts

- <https://www.mass.gov/info-details/recreational-saltwater-fishing-regulations>
- Must click on Language translation on top right of page and select Spanish.

## Michigan

- [https://www.michigan.gov/dnr/-/media/Project/Websites/dnr/Documents/LED/digests/2024\\_fishing\\_guide.pdf?rev=e92fe67b1deb4aecac251daaaocf317a](https://www.michigan.gov/dnr/-/media/Project/Websites/dnr/Documents/LED/digests/2024_fishing_guide.pdf?rev=e92fe67b1deb4aecac251daaaocf317a)
- NA in Spanish

## Minnesota

- [https://files.dnr.state.mn.us/rlp/regulations/fishing/espanol\\_fish.pdf?20210524](https://files.dnr.state.mn.us/rlp/regulations/fishing/espanol_fish.pdf?20210524)

## Mississippi

- <https://dmr.ms.gov/recreational-catch-limits/>
- NA in Spanish

## Missouri

- <https://mdc.mo.gov/fishing/regulations>
- NA in Spanish

## Montana

- <https://fwp.mt.gov/fish>
- NA in Spanish

## Nebraska

- <http://digital.outdoornebraska.gov/i/1522467-2024-guia-de-pesca/o?>

## Nevada

- <https://www.ndow.org/get-outside/fishing/plan-your-fishing-trip/#>
- NA in Spanish

## New Hampshire

- <https://www.eregulations.com/newhampshire/fishing/saltwater>
- NA in Spanish

## New Jersey

- <https://dep.nj.gov/njfw/digests/marine/>
- Only landing page not full regulation PDF and language must be changed on top right by selecting Spanish.

## New Mexico

- <https://wildlife.dgf.nm.gov/download/2024-2025-new-mexico-fishing-rules-and-info?wpdmml=48312&refresh=669927b848ae11721313208>
- NA in Spanish

## New York

- <https://es.dec.ny.gov/things-to-do/saltwater-fishing/recreational-fishing-regulations>
- Main landing page is in english and then individual must scroll down to spanish translation

## North Carolina

- <https://www.ncwildlife.org/inland-fishing-regs-23-24-espanolpdf/download?attachment>

## North Dakota

- <https://gf.nd.gov/fishing/regulations-guide/2024-26>
- NA in Spanish

## Ohio

- [https://dam.assets.ohio.gov/image/upload/ohiodnr.gov/documents/wildlife/aws-regs-licenses/OhioFishingRegs\\_Spanish.pdf](https://dam.assets.ohio.gov/image/upload/ohiodnr.gov/documents/wildlife/aws-regs-licenses/OhioFishingRegs_Spanish.pdf)

# APPENDIX

## Oklahoma

- <https://www.wildlifedepartment.com/fishing/regs>
- NA in Spanish

## Oregon

- <https://myodfw.com/articles/oregon-fishing-hunting-regulations-and-updates>
- NA in Spanish

## Pennsylvania

- <https://www.fishandboat.com/Fishing/Regulations/Documents/SummaryBook.pdf#page=13>
- NA in Spanish

## Rhode Island

- <https://dem.ri.gov/natural-resources-bureau/marine-fisheries/marine-fisheries-minimum-sizes-possession-limits#>
- Must change translation to Spanish

## South Carolina

- [https://www.eregulations.com/assets/docs/resources/SC/23SCAB-SP\\_LR.pdf](https://www.eregulations.com/assets/docs/resources/SC/23SCAB-SP_LR.pdf)

## South Dakota

- <https://www.flipsnack.com/sdgamefishparks/2024-south-dakota-fishing-handbook/full-view.html>
- NA in Spanish

## Tennessee

- <https://www.tn.gov/twra/fishing-regs/statewide-creel-length-limits.html>
- Must translate page at the bottom to Spanish

## Texas

- <https://tpwd.texas.gov/espanol/pub>

## Utah

- <https://wildlife.utah.gov/guidebooks/guia-de-pesca.pdf>

## Vermont

- <https://vtfishandwildlife.com/fish/fishing-regulations>
- NA in Spanish

## Virginia

- <http://vtfishandwildlife.com/fish/language-assistance-fishing>

## Washington

- <https://wdfw.wa.gov/accessibility/requests-accommodation/translations-es>
- Must request for Spanish translation, not readily accessible

## West Virginia

- [https://wvdnr.gov/wp-content/uploads/2024/02/Pub\\_Regs\\_2024Fishing\\_DNR\\_DIGITAL\\_hires\\_pp-1.pdf](https://wvdnr.gov/wp-content/uploads/2024/02/Pub_Regs_2024Fishing_DNR_DIGITAL_hires_pp-1.pdf)
- NA in Spanish

## Wisconsin

- <https://widnr.widen.net/s/2kvfmmzxgh/fishingregsspanish2425>

## Wyoming

- <https://www.nxtbook.com/wyominggame/Regulations/2024-fishing-regulations/index.php>
- NA in Spanish

## Other Resources:

- [Hispanic Toolkit - Take Me Fishing](#)

# ABOUT US

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Hispanic Access Foundation is a 501(c)(3) non-profit organization that connects Latinos with partners and opportunities improving lives and creating an equitable society. Our vision is that all Hispanics throughout the U.S. enjoy good physical health, a healthy natural environment, a quality education, economic success and civic engagement in their communities with the sum improving the future of America. For more information, visit [www.hispanicaccess.org](http://www.hispanicaccess.org).

Hispanic Access Foundation was actively involved in elevating the Latino community's voice around the Browns Canyon, San Gabriel Mountains, Boulder-White Clouds, Sand to Snow, Mojave Trails, Castle Mountains National Monument, and Castner Range National Monument efforts. Additionally, Hispanic Access has launched the initiatives Por la Creacion Faith Based Alliance, which unites Latino faith leaders around the protection of God's creation and creating tomorrow's environmental stewards, and Latino Conservation Week, which includes dozens of conservation and outdoor-related events across the country.



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