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Nathan Huynh

Bates College, nhuynh@bates.edu

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From Grain to Main

A Shrimptastic Tale of Vietnam's Agricultural Transition in the
70s-90s

Nathan Huynh

April 24, 2023

For decades, rice farming has been a staple industry in Vietnam, providing food and financial stability to millions. However, in the 1970s after the Vietnam War, a new industry began to blossom: shrimp farming. This transition from rice to shrimp farming has not only transformed the economy and ecology of Vietnam but also has had far-reaching consequences for the global seafood market.



Rice fields in the mountainous countryside (Via Quang Nguyen Vinh)

This paper explores the historical context and drivers of this transition in Ca Mau Province, its impacts on Vietnamese society, the environment, and the economy, as well as its broader implications for the 21st century. The study will shed light on the social, economic, and environmental changes that have occurred in Vietnam and their influence on sustainable development and global seafood markets.

The paper is divided into three sections:

1. Identifying the **historical context and drivers** of the transition from rice farming to shrimp farming in Vietnam
2. Analyzing the social, economic, and environmental **impacts of the transition**
3. Assessing the **implications of the transition** for sustainable development and the global seafood market



HISTORICAL CONTEXT

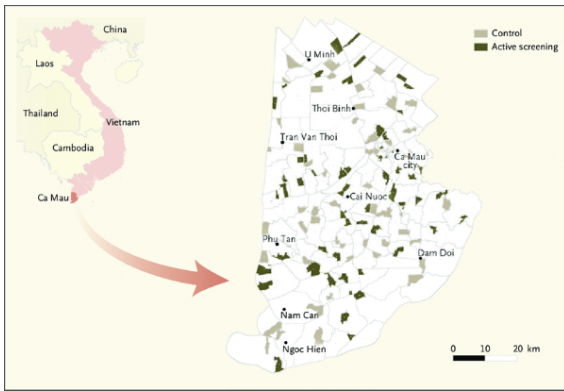
For centuries, rice farming has been a primary source of livelihood, a key agricultural activity, and a staple industry in Vietnam. Rice is an indispensable food and a cultural symbol of the country. Most rice farming in Vietnam is done by small-scale farmers who use traditional cultivation and irrigation methods.

In the 1980s, shrimp farming became a significant contributor to Vietnam's economy, with exports of shrimp and other seafood accounting for a substantial portion of the country's GDP. In 1991, Vietnam produced 56,000 metric tons of shrimp within 230,000 hectares of shrimp ponds. By 2005, production increased to 304,257 tons in 600,479 hectares and continues to grow to this day.



Rice fields during a sunny day (Via Quang Nguyen Vinh)

Ca Mau, located in the southernmost part of coastal Vietnam, is one of the largest and most productive shrimp farming regions in the country but it was not always this way. It used to be solely a massive



Ca Mau Province (Via ResearchGate)

rice sector. The fertile Mekong Delta region, where Ca Mau is located, was known as the "rice bowl" of Vietnam, and rice was not only a staple food but also a symbol of cultural identity and social status.

The province is known for its abundant natural resources, including seafood, forests, and minerals. The economy of Ca Mau is mainly driven by agriculture, forestry, and fishery, with rice and shrimp being the major products. The Mekong Delta accounts for 90% of shrimp ponds in Vietnam and 60% of its annual production. It is considered a melting pot of ethnic groups, including Kinh, Khmer, and Chinese. The province is also home to several nature reserves and protected areas, such as the Ca Mau National Park and the U Minh Ha Forest, which are important for the conservation of biodiversity and the mitigation of climate change. It has a rich history and culture, with many traditional festivals and customs still celebrated by the locals. Additionally, it is famous for its traditional craft villages, such as Tan Phuoc, which produces bamboo and rattan products, and Thoi Binh, which specializes in pottery.



Esri, DeLorme, NaturalVue | NOSTRA, Esri, HERE, ... 3 mi Powered by Esri

Mekong Delta in Southern Vietnam

Historically, the ability to cultivate and produce rice was seen as a measure of one's social status and wealth, as it was a valuable commodity that could be traded or used for payment of taxes. Even today, many Vietnamese people associate rice with their cultural heritage, as it is a central component of Vietnamese cuisine and a key part of many traditional celebrations and ceremonies.

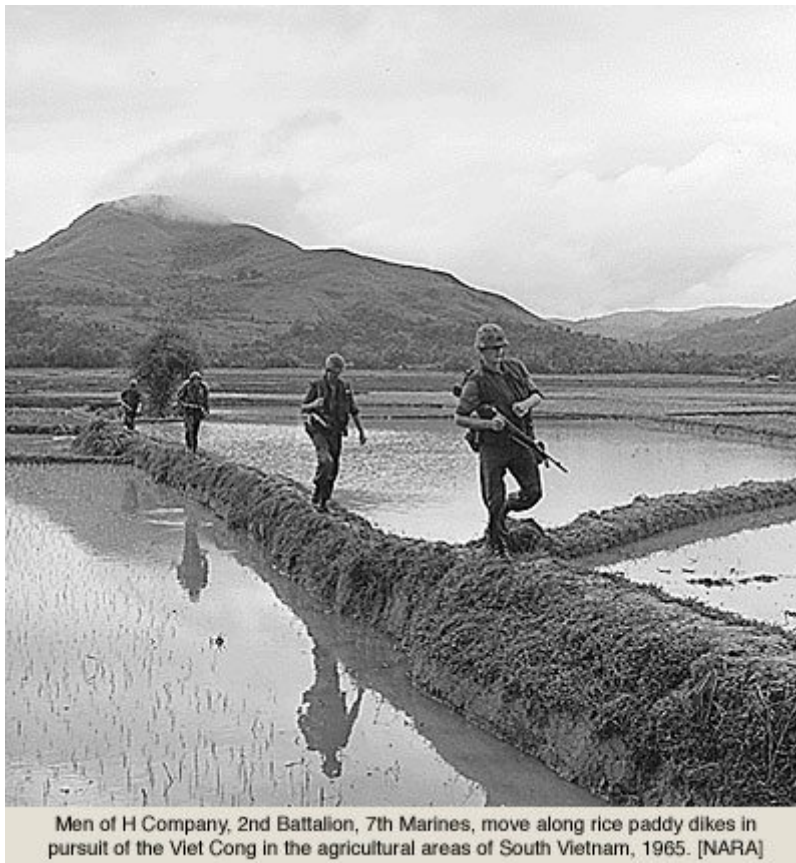
After the Vietnam War, the victorious North Vietnamese government initiated land reforms and policies to promote new agricultural development in the country. During the 1970s-1990s, rice nevertheless remained a central part of Vietnamese culture and daily life, and its importance was further reinforced by government policies that prioritized rice production and self-sufficiency. The Vietnamese government encouraged farmers to plant rice and supported them through subsidies, credit programs, and technical assistance. This emphasis on rice production was partly driven by the belief that rice was the foundation of the Vietnamese economy and society.



Man on rice patty (Via Pixabay)

Hybrid rice seed strains, specifically IR-5 and IR-8, held promise in the struggle against famine after the war. At the same time, rice continued to hold symbolic value as a cultural marker and source of national pride.

During the war, rice production dropped over 1 million tons between 1963-1967, forcing the country to import 750,000 tons. After the victory of the Communists, they shifted Vietnam's agricultural sector into an industrialization period. People initially were skeptical of the introduction of hybrid seeds but they quickly joined the trend due to government support.



Men of H Company, 2nd Battalion, 7th Marines, move along rice paddy dikes in pursuit of the Viet Cong in the agricultural areas of South Vietnam, 1965. [NARA]

Soldiers on a rice paddy (Via Wessel's Living History Farm)

The International Rice Research Institute sent experimental seeds to various regions to show farmers how effective it was. Traditional rice strains did not require vast amounts of fertilizer or pesticides but for maximum benefits, the hybrid strain required weeding and being sprayed frequently and fertilized with nitrogen compounds.

In this massive shift, the Agricultural Development Bank appointed bank loans to farmers in the form of cards. The color corresponded with the equipment farmers were allowed to buy. Green corresponded with rice seeds, yellow with insecticide, and pink with fertilizer. However, these new trends in rice cultivation caused various environmental degradation and resulted in fewer people producing more rice. This had the effect of moving other farmers into alternatives, such as the shrimping business.

In 1958, Vietnam had begun a modest expansion of its small shrimp industry using freezing technology. A new processing facility in Saigon primarily for exporting was able to intake an additional 10

tons daily, up to 50 tons total. Domestic consumption was largely limited to low-quality and small-sized shrimps. But until the early 1990s, the Ca Mau farmers generally followed the influence of the central government to push for rice production. Lots of saline regions were converted using a major irrigation project to produce freshwater for rice farming. Over a four-decade period from 1940, Ca Mau saw 345,900 acres of mangroves and reduced to 126,000 acres by the early 1980s due to rice reforms.



Traditional pre-1980 inland shrimp pond farmer (Via Vietnam Center and Sam Johnson Vietnam Archive)

The emergence of shrimp farming in Vietnam was a result of several factors, including a drop in the number of rice farmers, a decline in traditional fishing and aquaculture, the growth of the global seafood market, and technological innovations in shrimp breeding and processing. In Ca Mau, shrimp farming started small in the late 1970s, but gradually became a lucrative business for many farmers and slowly attracted others who saw that it could provide higher income and increase food protein yields.

With this initial success, the region's shrimp experimentation soon became backed by the central government for the sake of income generation and mangrove protection. In addition, during the war,

the region's natural environment was heavily impacted by defoliants and other chemical pollutants. This made it more difficult to grow rice, which is a crop sensitive to groundwater infiltration.

After the war, the Vietnamese government initiated land reforms and policies to promote diversified agricultural development in the country. This came to include incentivizing some farmers to switch from rice to shrimp farming as more rice could be grown by fewer farmers, so shrimping could be presented as a more lucrative and sustainable option.



Intensive shrimp farming in the Mekong Delta (Via Pacific Standard)

In addition to a favorable coastal climate and a large source of land and cheap labor, the Vietnamese government by the early 1990s provided substantial incentives and infrastructure assistance, and investment in research. These included low-interest loans, technical assistance, and tax exemptions. The government also invested in infrastructure development, such as constructing roads and ports, to facilitate the transportation of shrimp products. Farmers started by converting rice paddies into shrimp ponds, and the industry quickly

grew in popularity. By the mid-1990s, shrimp had become one of Vietnam's major export commodities, and Ca Mau province was the largest producer of shrimp in the country.

The success of shrimp farming in Vietnam was also attributed to technological innovations in shrimp breeding, feeding, and disease control. The country has research teams which together comprise an information network on environmental developments and epidemics to permit rapid response actions should an epidemic or unusual pollution arise inside or outside the region. Additionally, the growing demand for seafood in international markets, especially in the United States and Japan, has further boosted the growth of the shrimp farming industry. Technological innovations in shrimp farming, such as the development of high-density ponds and improved feeding techniques, have increased the productivity and profitability of shrimp farming in Vietnam.



Tiger prawn (Via The Fish Site)



Traditional shrimp farming in Vietnam (Via Forbes)

There are two forms of shrimp farming: traditional and extensive. Traditional coastal aquaculture was conducted in a “primitive” method and it was considered more of a fishery. It was a culturing system relying almost entirely on natural sources of seeds and foods. On the other hand, Brackish pond aquaculture provided much more of a nutrient-rich environment for the shrimp. Brackish water, a mixture of river water and seawater, is found more inland along the Mekong Delta and other regions, allowing for more economic mobility for rural areas. These lands could foster a rotation of shrimp, fish, and crops as opposed to only shrimp. Shrimp production in Vietnam was reported with the fishery sector until 1982 when it grew so big it needed to be considered its own category.

The Vietnamese government consequently played a significant role in facilitating the industry's growth in Ca Mau province. From the 1970s until the 1990s, the Vietnamese government slowly recognized the economic potential of shrimp farming as a key industry for foreign exchange earnings and rural development. The

government provided farmers with technical assistance, training, and subsidies to help them make the transition from rice to shrimp farming.



Giant river shrimp in rice paddies, Ca Mau (Via Vietnam Fisheries Magazine)

This included establishing research and development centers to improve the quality and productivity of shrimp farming, and establishing cooperatives to facilitate the marketing and distribution of shrimp products. The government also invested in the infrastructure needed to support the industry, such as roads and processing facilities. One example of such policies is the 1979 land reform law, which allowed private ownership of land and promoted the development of shrimp farming in Ca Mau.



Extensive shrimp farming in Vietnam (Via Global Seafood Alliance)

The government's support for shrimp farming proved successful, with the industry becoming a significant contributor to the country's economy. By the late 1990s, Vietnam had become one of the world's largest shrimp exporters, with shrimp farming accounting for a significant portion of the country's agricultural exports. However,

the government's policies also led to environmental degradation and social inequalities, which have become significant challenges for the sustainability of shrimp farming in Vietnam.



Extensive shrimp farm in Vietnam (Via Vietnam Plus)



TRANSITIONS OF IMPACT

The conversion of rice to shrimp farms has had vast impacts on Vietnamese society, the environment, and the economy. While the industry has brought economic benefits, it has also led to social and environmental challenges that must be addressed for sustainable development. In Ca Mao, it has brought significant social and cultural changes to the local community. For example, the shift from a communal rice farming system to an individualistic and market-oriented shrimp farming system has led to a cultural and traditional decline in values and practices.



Mangrove shrimp farmer in Vietnam (Via PANORAMA Solutions)

Many farmers who switched to shrimp farming had to learn new techniques and acquire new skills, which affected their traditional way of life. The shift from subsistence farming to commercial farming also had implications for the society of rural communities. Additionally, the shrimp farming industry created new job opportunities and income sources but also led to labor migration from rural to urban areas.

The expansion of shrimp farming in Ca Mau resulted in environmental degradation and sustainability challenges. The conversion of rice paddies to shrimp ponds has led to the loss of natural wetlands, mangrove forests, and other important habitats. Shrimp farming also requires large amounts of freshwater and inputs such as feed and antibiotics, which can lead to water pollution, soil erosion, and biodiversity loss. Furthermore, shrimp

farming can contribute to greenhouse gas emissions and climate change.

Simultaneously, it has brought significant economic benefits to Vietnam. The growth of the shrimp farming industry has led to increased export earnings, foreign investment, and job creation. Shrimp exports have become a major contributor to Vietnam's GDP and have helped to reduce poverty in rural areas. The industry is not yet perfected. It is subject to price fluctuations and risks associated with disease outbreaks and environmental degradation.



Vietnamese farmed shrimp (Via Forbes)

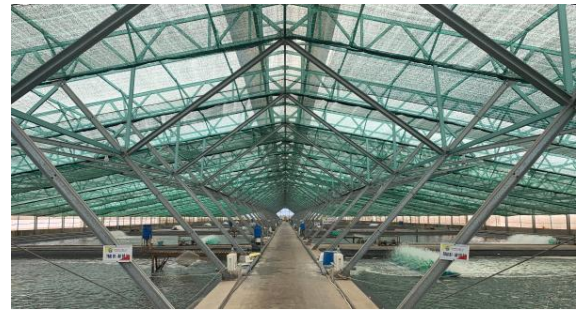
The benefits of the transition from rice farming to shrimp farming have not been equally distributed among different groups in Vietnam. Large-scale commercial shrimp farms have tended to benefit more than small-scale farmers. There are also concerns about land seizures, displacement of smallholders, and unequal access to resources and services. Furthermore, the social and environmental impacts of the shrimp farming industry have disproportionately affected marginalized groups such as women, ethnic minorities, and vulnerable coastal communities.



BROADER IMPLICATIONS

Vietnam has become one of the largest producers and exporters in the global shrimp farming market, primarily shipping to the United States, Europe, and Japan. The government plans to boost exports to \$10 billion by 2025 from an already impressive \$3 billion in 2016. While shrimp farming has also brought new sources of income and employment for Vietnam and other developing countries like Thailand and Ecuador, it has also triggered problems both in environmental sustainability and social justice.

Shrimp farming in Vietnam, while incredibly successful over less than three decades, nevertheless continually faces both competition from other countries as well as changing consumer preferences. As well, there is potential competition with the emergence of alternative plant-based protein products. The market is also subject to price fluctuations, international and domestic trade tariffs, and health regulations.



Shrimp farming facility (Via Undercurrent News)

Shrimp farming has many drawbacks: habitat destruction, water pollution from chemicals and runoff, and labor exploitation, among other negatives. If these concerns are not addressed, there are worries about the industry's sustainability and its ability to satisfy global demands. There is a need for sustainable production practices, social responsibility, and traceability. More policy solutions such as certification schemes and international agreements must be implemented. To address these issues, many efforts have been introduced to promote sustainable and responsible shrimp farming practices. Certifications from the Aquaculture Stewardship Council and the Global Aquaculture Alliance promote environmentally and socially responsible shrimp farming practices.



Aquaculture Stewardship Council (Left) and the Global Aquaculture Alliance (Right) certifications



Minh Phu Seafood Corp, one of the first shrimp export firms in Vietnam to qualify for sustainable certification

International agreements, such as the United Nations Sustainable Development Goals and the Paris Agreement on Climate Change, emphasize the need for sustainable development practices to address global challenges like poverty, hunger, and climate change. This includes responsible seafood production. These long-term initiatives aim to promote better shrimp farming practices for the industry.

The expansion of the shrimp farming industry has created new economic opportunities, but it has also led to the emergence of distributional impacts and social inequalities. These impacts can be seen in differences in access to resources and opportunities based on social status, gender, and ethnicity. Women and ethnic minorities traditionally have had limited access to credit and

technical assistance. This can impede their ability to participate in the industry and benefit from its new economic opportunities.



Mangrove shrimp farmer (Via The Independent)

In many cases, women and ethnic minorities may be excluded from decision-making processes related to the industry. This can perpetuate existing social inequalities and create new ones. Furthermore, the expansion of the shrimp farming industry has led to changes in land use and the displacement of traditional farming communities. This as well can also have distributional impacts and contribute to social inequalities.

It is important to address these distributional and social impacts as it relates to sustainable development. This calls for an improvement in access to resources and opportunities for marginalized groups. These groups must be included in decision-making processes related to shrimp farming and aquaculture as a whole. By promoting more inclusive and equitable development, it may be possible to achieve a more sustainable future for both humans and the environment.



Vietnamese shrimp (Via Nereus Program)

Policymakers, industry leaders, and organizations have a crucial role to play in supporting responsible practices and addressing the multifaceted challenges of shrimp farming. Potential solutions include improving transparency and traceability in the supply chain, promoting more sustainable aquaculture practices, protecting biodiversity, and supporting small-scale farmers and coastal communities.

The burden cannot only fall solely on smallholder shrimp farmers. The role of multinational corporations, such as Charoen Pokphand Foods or Minh Phu Seafood Corp has been significant. Their dominating presence in the shrimp market has also led to concerns about market concentration and negative impacts on small-scale farmers and local communities. Some large corporations invest heavily in the industry and essentially own the market. Furthermore, they have the financial and legal resources to invest in advanced technology to improve production and quality.



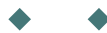
Charoen Pokphand Foods

In addition to the influence of multinational corporations, changing consumer preferences for sustainably produced and traceable

seafood have also affected the shrimp farming industry. Consumers are increasingly concerned about the environmental and social impacts of their food choices and are willing to pay a premium for seafood products that are sustainably produced and traceable.

Vietnam has recognized these trends. One example of a company with sustainable values is the Minh Phu Seafood Corporation. They are one of the largest shrimp exporters in Vietnam and have been implementing sustainability initiatives under renewable energy, responsible waste management, and environmentally friendly farming practices. They have also obtained certifications from organizations such as the Aquaculture Stewardship Council and the [GlobalGAP](#), which ensure sustainable production and traceability. This has led to the development of certification schemes and labeling programs that promote sustainable shrimp farming practices and provide consumers with information on how the shrimp they purchased was produced and where.

The deputy director of the [Ministry of Agriculture of Vietnam](#) stated in written correspondence that “organic agricultural production in the period of 2020-2025 in the area, in which shrimp is one of the key subjects of interest. The implementation plan for shrimp farming according to organic standards is developed in the shrimp farming area – forests in the area of the protection forest management boards: Tam Giang, Kien Vang, Dat Mui, West Sea, and Ngoc Hien Forest Company Limited with a total area over 19,025 hectares, mainly with international organic certifications (Naturland, EU Organic, Selva Shrimp, ASC, BAP,...) by seafood processing enterprises in the province to support certification for people.” The adoption of these practices by the industry can provide opportunities for market differentiation and access to premium markets.



CONCLUSION

This story map has examined the transition from rice farming to shrimp farming in Vietnam from the 1970s until the 1990s and the broader 21st century. It has shed light on the understanding of the dynamics and challenges of the shrimp farming industry, as well as the opportunities and risks for further development.

This case study has some limitations, mainly dealing with the interpretation of primary data. A majority of primary sources and academic findings are in Vietnamese and require extensive translation. While I was able to glean important findings, some of the material was beyond my limited ability to use Vietnamese. Future research could explore other cases and contexts globally through interviews and especially in-person observations. Additionally, further research could examine new technological innovations and alternative production methods for improving the sustainability of shrimp farming.



Mangrove shrimp farmers (Via Vietnam Fisheries Magazine)

This study has implications for both theory and practice. The theoretical contribution is contingent on the integration of varied perspectives and approaches such as political economy, social ecology, and sustainability science. The practical implications are relevant for policymakers, industry stakeholders, and overall society.

The environmental and social challenges of shrimp farming need to promote sustainability and inclusivity.

The transition from rice farming to shrimp farming in Vietnam has brought significant changes and challenges to the country and the global seafood market. There are also many opportunities for sustainable development. It is vital to implement a collaborative approach that balances economic, societal, and environmental considerations. That effort must involve every stakeholder from the smallest farmer to the largest corporation.

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Following Fish

A story about human migration

Nathan Huynh

March 3, 2023

At times, seafood can seem like an infinite resource because of how boundless oceans appear. But given that oceans are not limitless, what happens to the people whose lives depend on their resources?

This story map will address this question with a focus on Senegal, a West African country bordering on the Atlantic ocean. Fishing provides a vital source of livelihood; the fishing industry employs 17 percent of the country's workforce. However, overfishing has severely impacted it, particularly by foreign fishing fleets. Simultaneously, climate change has led to sea level rise in the coastal region and an exponential loss of ocean biodiversity. Both overfishing and climate change have brought about a large amount of immigration to Spain in search of economic stability but have impacted both countries culturally and politically.



Senegalese coastline. (Via Unsplash)



Pirogue after returning from a voyage. (Via Unsplash)

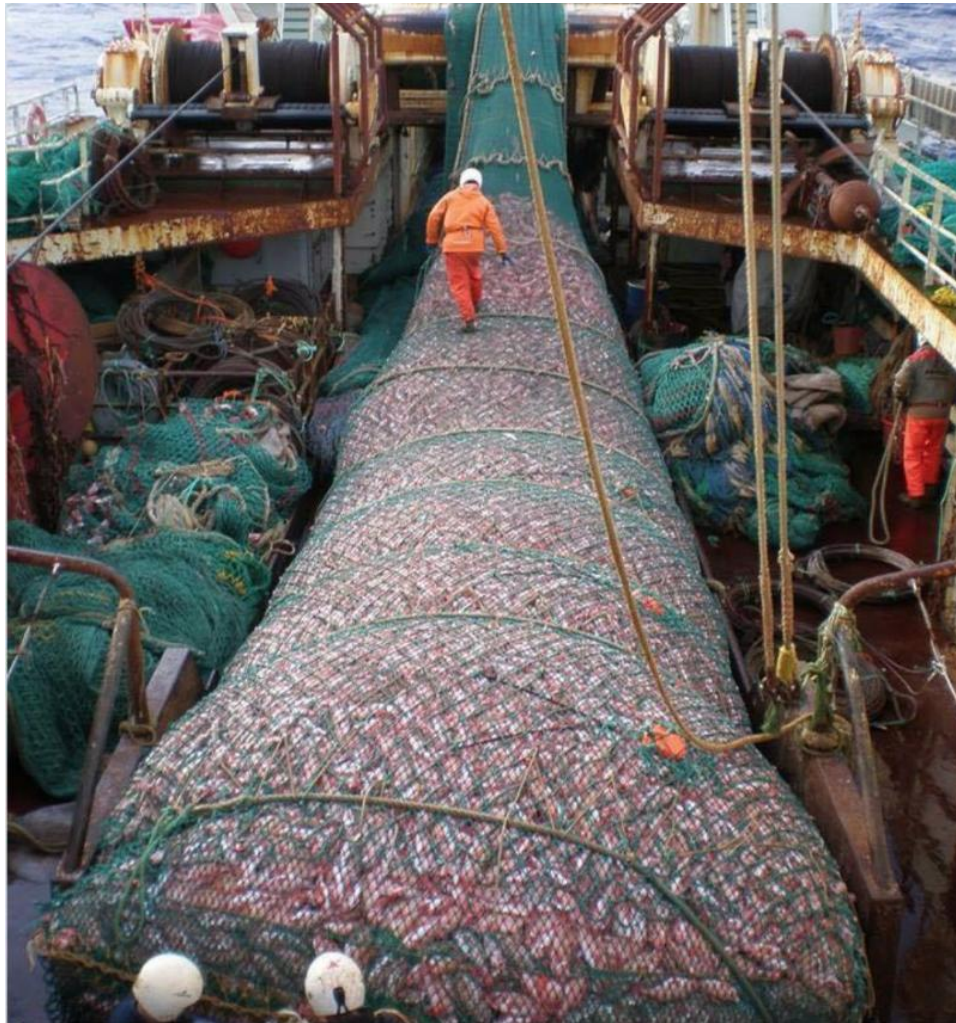
Fishing has a long and rich history in Senegal, dating back half a millennium. Fishermen typically use colorful and culturally significant wooden boats called pirogues ranging from 9 to 23 meters in length. Up until the 1980s and 1990s, the fishing industry was dominated by small-scale, artisanal fishermen who fished in pirogues using traditional methods such as hand lines and nets. The fish they caught were sold in local markets to families for local consumption.

In this period, however, the Senegalese government nevertheless undertook efforts to modernize the fishing sector by investing in infrastructure and providing technical assistance to fishing

communities. The government was aware of the growth of international fishing fleets beginning to proliferate worldwide, and its goal was to increase efficiency and competitiveness for the country's fishing industry.

Yet despite the attention paid by the government to improve the industry, foreign fishing fleets began to appear regularly off the Senegalese coast by the late 1990s. Many hardships arose for the fishing sector as other countries developed more advanced nautical technologies, their large vessels able to sail further distances, stay out at sea longer, and freeze fish faster to preserve freshness. By the second decade of the 21st century, Chinese fleets were trawling in large numbers and adding to a cascading amount of overfishing. Senegalese fishermen, similar to those in coastal communities around the world were overwhelmed by rapid industrialization and depletion. Senegalese fishermen unions asked the government to establish restriction periods of up to two months where no one would be allowed to fish, in order to give the stock a chance to repopulate. The unions further requested that the

government develop aquaculture for more reliable production of fish. To favor small fishing communities, the officials responded by implementing stricter regulations on foreign fishing vessels and by establishing marine-protected areas. Yet, the effectiveness of these regulations and initiatives was diminished by extensive corruption in the legal system. For example, bribery resulted in international vessels being prioritized over local boats for permits. Furthermore, a lack of adequate ocean patrol allows illegal operations to continue under the radar.



A Chinese industrial trawling haul. (Via AfricaDigest)



Industrial ports are becoming more popular along coastlines, overtaking small oceanic businesses in the area. (Via Unsplash)

Apart from overfishing, another challenge brought by the high production capacity of international fleets was the appearance in Senegalese markets of imported fish products. These cheap, imported fish made it difficult for local fishermen to sell their catch at a fair price. This has had a further effect on the employment of women, who typically play a major role in selling and processing locally-caught fish. Women have been forced to adapt to various non-fishing employment, bringing about a significant cultural loss in a society where fishing serves as a vital component of society. To address the import issue, the Senegalese government has made efforts to promote local processing and marketing activities and has worked with international organizations to increase the competitiveness of the Senegalese fishing sector.

In the face of adversity, the Senegalese fishing industry has still managed to grow and evolve and still serves as an essential source of income and employment for many communities, in addition to providing essential proteins and nutrients to the general population. The industry also has played a critical role in food



A port in Saint Louis, Senegal. (Via Unsplash)

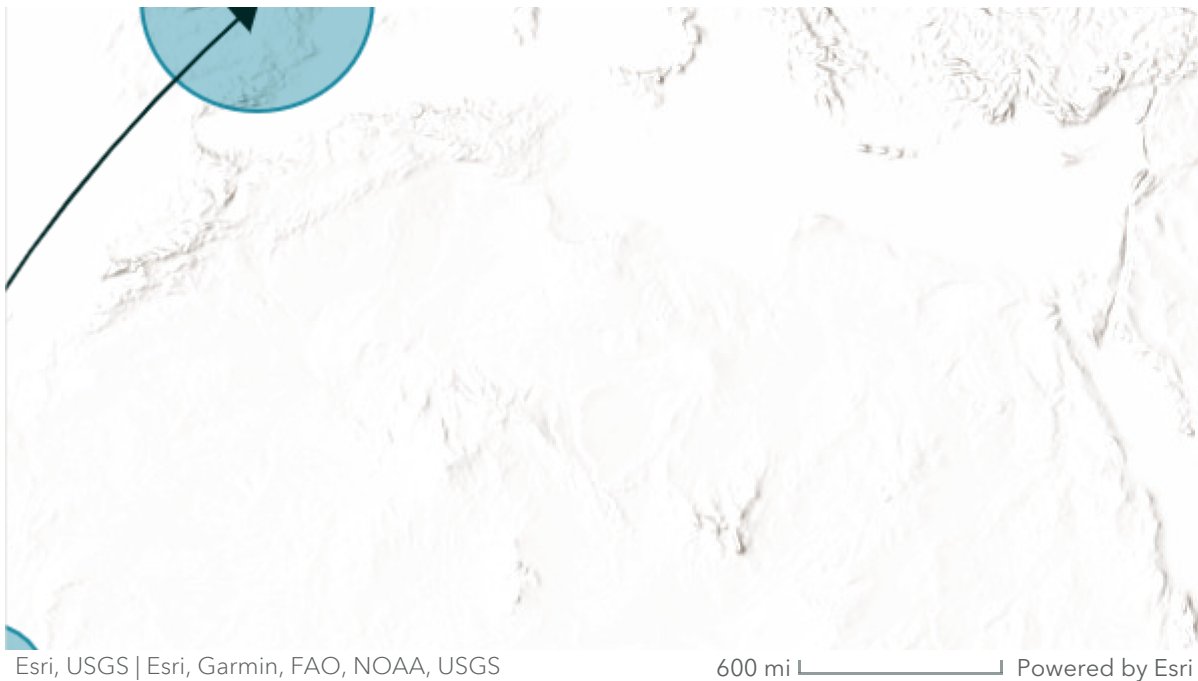
security and economic development, especially in focusing on sustainable fishing practices and the development of aquaculture. However, aquaculture has potential liabilities in terms of breeding inferior species of a given fish and environmental degradation, although the industry has yet to reach an industrial scale.

Beyond overfishing, climate change has become a pressing issue for the future health of fish breeds in the Atlantic area off-shore of Senegal. Countries like Senegal—those in low-lying coastal areas, or small island states, for example—are highly vulnerable to sea level rise. This human-caused climate change is resulting in a new type of migration: climate refugees. A climate refugee is defined as someone who is displaced from their home due to rising sea levels, extreme weather events, or declining access to food and water.



Plaza Mayor: a major public space in the heart of Madrid, Spain. (Via Nathan Huynh)

So while the industry continues to be an important source of livelihood and development for the country, a significant number of Senegalese fishermen do not have the privilege to wait for government intervention to succeed because they have to make a livelihood and support their families. As a result, many fishermen have been forced to migrate to other countries in search of better economic opportunities as climate refugees. While still small in number, some Senegalese who migrate can also be placed in the climate refugee classification. Spain has become a popular destination for fishermen, due to its proximity and the high demand for seafood in Europe.



Migrants typically take to sea when traveling to Spain.

The heavy flow of migration is generally not accepted by Spain. Many Spanish fishermen view the influx of foreign workers as a threat to their livelihoods. In response, the Spanish government has imposed stricter regulations on the sector and taken measures to limit the number of foreign workers.

Melilla and Ceuta, small sections of Spanish territory in Morocco, serve as vital port connecting Europe to Africa.



Ceuta and Melilla in relation to Spain. (Via InfoMigrants)

Many immigrants flock to these locations on pirogues or on foot in hopes of crossing the border. If they survive the 10-day journey across the open ocean, they are met with gates and wires patrolled by border officers as the final frontier to a new life. People recall that less than a decade ago, these territories were no more than scenic beaches. Aside from the physical dangers of migration, there is a psychological component as well. Abdoulaye Seck a prominent Senegalese activist in Spain has stated, “There is a large element of fear; fear for the ones who don’t know how their family is doing and fear for the family members who don’t know where their people are.”



Left: Melilla's vacation town. (Via InsideArabia) Right: Migrants met by border patrol at Melilla's gates. (Via InfoMigrants)

For those who enter Spain, another critical issue awaits: how to integrate immigrants into Spanish society– the bulk of the nearly 100,000 who have settled in Barcelona or Madrid because of economic opportunities. The lives of Senegalese fishermen who have moved to Spain can be extremely difficult. Many face significant challenges such as poverty, discrimination, and language barriers. After arriving in Spain, the process to get citizenship can take at least three years and the immigrants must be legally employed during that period.

In Spain, Senegalese fishermen fortunate enough to be employed by the ports often work in the small-scale, artisanal fishing sector,

which is less regulated and offers more flexible work arrangements. However, this sector is characterized by low wages, poor working conditions, and limited job security. Many Senegalese immigrants struggle to make ends meet and are often forced to live in poor and overcrowded housing conditions. Because their work requires them to be at sea for up to two weeks and their off time is spent resting, these work conditions create a sense of their everyday invisibility to the Spanish. That leads to little understanding of the economic and cultural hardships faced by the Senegalese.



Mercado Central de Atarazanas is Malaga, Spain's most important traditional market known for its fresh fish. Items range from stingrays to saffron, amongst other commodities. Most seafood products do not have information on where the item was caught or by whom (pictured in the bottom left) because it is almost exclusively locally sourced. (Via Nathan Huynh)



La Boqueria, located in Barcelona, Spain, has most of its marine items imported. Almost all seafood products have labels from what region or country they originated and they rarely say Barcelona. The city's local fishing fleet has almost halved its size within two decades due to overfishing and globalization. What was once a prosperous fishing port has turned into a docking station for what seems like an infinite number of yachts (bottom right). Pictured in the bottom middle, La Boqueria and other similar markets house abandoned seafood stands due to financial hardship. (Via Nathan Huynh)

Despite these challenges, many Senegalese fishermen immigrants in Spain are deeply committed to their work and to providing for their families. They view their migration as a necessary step to

improve their lives and to ensure a better future for themselves and their families.

In the past decade, there have been efforts to support and improve the lives of the Senegalese led by immigrant activists such as Seck. For example, nongovernmental organizations and advocacy groups have worked to raise awareness about the challenges and to provide immigrants with support and services, such as language classes, job training, and legal assistance. When asked about his work, Seck described it as “changing laws resulting in changing lives.”



Abdoulaye Seck participating in a protest for racial justice. (Via Abdoulaye Seck)



Nongovernmental Organization Volunteer World's Refugees and Immigrants Support program. This program provides young immigrant men with opportunities and access to help them successfully integrate into Barcelona. (Via Volunteer World)

Those Senegalese who are unable to secure a legal job, however, often take to street vending. They sell clothing items and accessories on large cloth sheets. Notwithstanding, it can become dangerous without having the proper permits. There are popular areas where they market in large plazas or beaches where many tourists congregate. Although there are many vendors alongside the Senegalese, the migrant community has heavily been criminalized because of anti-immigration campaigns throughout the country. This community has adopted the name Manteros which translates to “blankets” representing the sheets they sell on.



Manteros on the popular street of La Rambla in Barcelona, Spain. (Via The New York Times)

Many organizations argue that more needs to be done to help these immigrants become fully integrated members of Spanish society. One such group is the Sindicato Popular de Vendedores

Ambulantes (Popular Union of Street Vendors). Formed after the murder of Mo Sylla, a mantero, the party is a workers union of street vendors with a mission to highlight the institutional racism that plagues Spain and other first-world countries. Top Manta, is a financial project of the Sindicato created as an action manufacturer to provide an economic future to counter pervasive discrimination. Top Manta is a clothing company in Barcelona creating beautiful designs and items connected to Senegalese culture with the major purpose of employing immigrants. Many of their products are pieces of political activism questioning why clothing is considered legal but the people who produce it are not. Aside from a clothing company, they are simultaneously a cooperative. Seck clarifies it as an economic project within a community of solidarity. In its six years of operation, the company has gained international traction, its success attracting mention in The New Yorker magazine.

TopManta

We are the social and solidarity brand of the Barcelona mantero collective.

<https://topmanta.store/>



A few of Top Manta's clothing products. (Via Top Manta)

Top Manta represents a catalyst for social inclusion and serves as a beacon of hope for Senegalese immigrants. Seck, who is a representative of Top Manta said, “There is only one life and one world. This is a world that belongs to all of us, including animals and everything else. The world is about balance and without it, everything falls apart.” Seck and the company strive for civic duty where people must use their social position to fight for those who are discriminated against by virtue of their differences.

While self-help organizations like Top Manta are important, there is the larger issue of recognition of climate refugees which is expected to reach 1.2 billion in the next few decades. The concept is still not widely recognized by international law and there is currently no legal definition or protection for these individuals. There is growing recognition of the need to address the challenges faced by climate refugees. They highlight the growing impact of climate change on people and communities around the world, and the need for more significant action to address the root causes of this problem and to support those who are affected by its impacts.



Protests in hopes of political awareness and reform for climate-related policies become increasingly demanding as an exponential rate of climate migrants are displaced. (Via Unsplash)

The refugee debate in Spain reflects a complex interplay of social, economic, and political factors. The migration of Senegalese fishermen to Spain highlights the larger problem of overfishing in West African waters and the devastating impact it has on local communities. To address this issue, international organizations and governments must protect West African fishing grounds and promote sustainable fishing practices. In addition, climate change mitigation needs to be accelerated through the United Nations and other international entities. Many immigrants and their families have made Spain their home, and the country has become a culturally diverse society that continues to be shaped by the contributions of immigrants. Their contributions should be recognized and valued.