

## The Role of Salt Production in the Economic Livelihoods of South Sulawesi's Coastal Farmers

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### Abstract

*Various methods were used in this qualitative research to understand how salt production affects South Sulawesi coastal farmers' economic sustainability in Indonesia. The paper investigates the socio-economic factors of salt farming as it studies the obstacles and prospects of small-scale salt producers in Takalar district together with Makassar district and Pangkep district. The authors conducted structured interviews with 30 salt farmers along with participant observation and focus groups to identify crucial economic determinants in salt farming such as market availability and natural changes and gender-related elements. The findings show salt farming produces substantial income which faces increasing risks from unsteady weather and insufficient utilization of modern agricultural technology. The research shows women lead a dual role in salt production because they participate in physical labor while also taking leadership positions in running this business sector. The study investigates economic repercussions pertaining to local and regional markets showing salt farming creates strong economic links throughout local social structures together with broader market systems. Research on small-scale salt production remains limited but this investigation adds important knowledge about sector support which could lead to lasting sustainability by studying neglected areas in coastal Indonesian agricultural economy investigation.*

## Introduction

The southern region of Indonesia where South Sulawesi province resides maintains a productive agricultural field that coastal farmers have tended for centuries. Adult coastal community members rely heavily on salt production as their primary sustenance source among all regional agricultural activities. Historically salt developed into a valuable commodity for South Sulawesi rural coastal areas since it maintained their economic survival. The salt-producing activities of this area creates social effects throughout coastal communities as well as generating economic success. The complete monetary value of salt for coastal agricultural producers remains a subject of insufficient scientific investigation.

Local South Sulawesi farmers with their ancestral traditions harvest salt as small-scale producers. Sea salt farmers conduct time-demanding operations that begin with seawater collection before water evaporation leads to salt production. South Sulawesi residents practice salt farming at two levels: it stands as both a cultural tradition and an economic activity that involves established cultural practices as well as distinct values and community systems (Henley, 2021; Maulidyna et al., 2021; Tansuchat & Plaiphum, 2023). Families in Makassar, Takalar and Pangkep depend on salt production as their main economic source since generations because the income from salt sales provides financial stability (Langford et al., 2024; Rahmat et al., 2024). Studies on the economic impact of salt production on coastal farming communities remain scarce despite their changing difficulties stemming from modernization together with environmental stressors and market instability.

The economic environment of both worldwide and local levels has transformed dramatically thus affecting the living standards of farmers located in coastal areas of South Sulawesi. The profitability of salt production has declined severely because of climate change effects together with rising salt content and growing industrial salt production (Mukhopadhyay et al., 2021; Maulu et al., 2021). The combination of synthetic salt factories with imported cheaper salt products adds extra stress to existing salt farming operations (Tinôco et al., 2024; Kuang et al., 2024; Liu et al., 2021). The traditional salt production equilibrium of the region changed as salt pond operators started receiving less financial yield from their saltponds according to Arifin (2020). Due to elevated risk factors coastal farmers now need alternative ways of making money and adjust their salt production methods to keep their families viable.

South Sulawesi maintains salt production as its core economic activity despite facing numerous difficulties. Salt farming delivers essential income to both single farmers and the overall rural financial system. Indonesians consume salt in their daily diet and the compound serves multiple functions both domestically and industrially. The salt industry plays an essential role in national exports which enhances the national economy (Aris et al., 2022; Jia et al., 2023; Zheng & Tian, 2021). Salt manufacturing creates business opportunity for transportation services and trading activities because coastal towns export salt products to urban locations. The analysis of economic situations among coastal farmers in South Sulawesi who produce salt must be studied to understand their survival methods during current industry challenges.

Salt production exceeds economic importance because it has a deep cultural significance to the coastal populations that depend on it. Salt production exists as a communal family practice which strengthens family relationships and builds social bonds among coastal farmers (Plaiphum & Tansuchat, 2023; Dean, 2023; Zaenurrosyid et al., 2024). Through generations people view salt farming as a cultural tradition that was transmitted from parents to their children. Family members collaborate in salt production through gender-based divisions where women prepare salt and men gather and evaporate seawater. Traditional knowledge and established social structures maintain these gendered roles that determine work responsibilities in salt-producing villages across the whole community.

Some salt farmers discovered innovative methods to tackle their difficulties and accomplish practical adaptations in their practices. Various coastal salt growers have started to improve their salt production operations by using organic techniques combined with aquaculture systems and multiple farming activities (Xie et al., 2021; Sharma, 2021; Nirwansyah et al., 2022). Some salt producers take advantage of fresh markets by managing specialty products meant for high-end clientele together with industrial. Coastal farmers demonstrate exceptional resourcefulness through their salt production adaptations because they maintain salt production as their main money source during the changing economics.

Sustainable agricultural practices have elevated the status of salt farming because this industry displays strong environmental suitability. The correct management of salt farming produces an environmentally sustainable practice because it utilizes less fresh water and chemicals than other agricultural sectors (Devkota et al., 2022; Singh, 2021; Qureshi & Perry, 2021). Salt farmers in South Sulawesi should consider adopting environmentally sustainable production systems because these methods would create financial stability and preserve environmental resources.

Research of the complete effect of salt production on coastal farmers' incomes requires examination of all current economic social factors. Environmental challenges and market conditions together with changes in social structures affect how economically sustainable salt production remains. Salt producers must follow certain methods to confront production hazards and they need various adaptation approaches to face these modifications. Extensive analysis of

the real-life conditions salt farmers endure in South Sulawesi must address these essential issues.

We lack sufficient research about salt production in South Sulawesi specifically regarding how it impacts economic lifeways in coastal farming regions. The existing lack of knowledge about rural coastal communities of Indonesia becomes more apparent when analyzing their diverse socio-economic troubles. The government alongside other stakeholders need complete knowledge of salt production effects on coastal farmers' livelihoods because they seek to enhance rural welfare standards. This research investigates salt production to create essential understanding about South Sulawesi's rural economy and culture while investigating its social development requirements.

## **Method**

A qualitative research design was used to investigate the economic value of salt farming for South Sulawesi coastal farmers. The qualitative research design enabled investigators to study both the complicated salt farming procedure together with the social-economic conditions shaping farmers' routine activities. Qualitative techniques proved the most suitable approach because they aided researchers in comprehending the genuine farming experiences and their complete effects on economic prosperity together with their social fabric and traditional traditions. The researchers studied the rural coastal districts of South Sulawesi because residents heavily depend on salt farming activities for their economic survival.

The exploration of salt farming methods in select coastal sections of South Sulawesi happened through a case study research structure that developed an analytical framework for the study. This design structure enabled researchers to conduct detailed analyses of both production and economic and environmental cultural components that shape the life of salt farmers. The research design employed multiple case studies to study various salt production methods throughout different geographically distinct areas which handled distinctive threats and possibilities. The research approach made it possible to obtain detailed records regarding broader socio-economic patterns concerning salt manufacturing operations.

The research took place in three districts within South Sulawesi consisting of Takalar and Makassar and Pangkep. The selected areas exhibited robust salt production traditions because they possessed individual production techniques and socio-economic conditions which influenced the way salt workers operated. Traditional salt manufacturing techniques are prevalent in Takalar while Makassar together with Pangkep implement contemporary strategies which embrace market trends and modern production methods. The research emphasized these geographic areas to obtain diverse insights which allowed researchers to examine fully the position of salt farmers within regional economic systems.

The researchers chose their subject participants through purposive sampling methods to involve active producers from the salt industry. Thirty farmers joined the research so it included both male and female participants who varied in age and their years of salt farming experience. Key informative stakeholders that included both local government representatives and specialized industry professionals expanded the comprehension of Salt production in South Sulawesi by offering important details about relevant policy enforcement together with market conditions and legislations that affect the industry. Different sectors of participants gathered for the study thus established a comprehensive understanding of the multiple financial effects of salt production on beach communities.

The research study adopted multiple data collection methods through interviews, field observations and group discussions. Research investigators conducted personal interviews with salt producers who detailed their life events alongside work obstacles and salt industry income

effects. The approach selected for the interviews included semi-structured techniques that enabled researchers to freely investigate different subjects connected to market access and income generation and community dynamics. Through participant observation researchers had firsthand experience with salt production activities because they observed both the salt gathering process along with the salt processing methods and employee labor requirements. The observations supported the interview data by showing the practical conditions where workers performed their tasks. The focus group platforms created opportunities where farmers collectively shared their challenges and solutions for salt production allowing them to bond with one another.

Thematic analysis served as the method to evaluate the data findings from interviews along with observations and focus groups. Researchers first familiarized themselves with the gathered data followed by transcript coding and the identification of repeated themes which represented salt farmers' essential challenges. The analysis of economic sustainability combined with labor patterns and market connections and environmental obstacles and sexual relationships proved fundamental in examining salt cultivation's influence on farmer economic security. The research investigated the relationship between the identified themes together with their effect on farmer economic performance. The study findings received interpretation based on the social-economic and cultural patterns of coastal South Sulawesi to demonstrate the value of salt farming for sustaining local economies.

The study offered an extensive qualitative analysis regarding the position of salt producing activities in sustaining coastal farmers' economic survival in South Sulawesi. Researchers examined farmer life stories by mixing quantitative research approaches to understand small-scale salt production challenges within a changing economic environment. The study demonstrates the dual significance of salt production because it functions both as an economic industry and as a sociocultural activity creating community connections in South Sulawesi coastal areas. This research enhances knowledge about socio-economic forces working in rural coastal regions while providing critical information for policymakers who want to understand the direction of salt farming in Indonesia.

## **Result and Discussion**

People in coastal areas have practiced salt farming during centuries as their primary economic activity which supplies both monetary income and cultural affiliation. Salt production encounters mounting difficulties because of climate change developments and marketplace fluctuations alongside equipment shortages for modern agricultural methods. The analysis examines salt farming obstacles alongside social cultural economic aspects according to farmer testimonials. This study examines coastal communities' livelihoods along with regional economic aspects related to salt production by analyzing the farmers' survival techniques during periods of manufacturing difficulties. These results present an extensive evaluation of salt farming aspects which demonstrates the complex nature of this practice in the region.

### **Role of Salt Production in Livelihoods**

The salt industry remains essential for South Sulawesi coastal farmers because it delivers economic security together with societal importance. The farmers in this area view salt production as a fundamental element in their lifestyle beyond its occupational status. Salt production holds itself in the fundamental design of their daily practices and guides both their business operations and communal systems together with cultural customs. Traditional production of salt acts as villagers' main source of income through which many coastal local economies develop their foundation. Salt farming stands out as a major occupation because there are few stable alternative sources of income in many areas. Salt farming maintains its

status as an essential economic activity while the producers adapt production methods to accommodate market requirements alongside changing climate conditions.

The process of salt farming requires heavy human effort thus generates dependable income which benefits farmers operating in rural coastal regions with low access to formal jobs. Farmer involvement in salt production lasts several months per year when they collect and refine sea salt. Employment in salt production can be profitable but the earnings depend on several elements such as the manufactured amount of salt and prevailing market prices. Sales of salt farming yield unpredictable returns to producers because environmental conditions such as rainfall variations and water quality and thermal conditions affect revenue flows.

*"Salt production is not always a stable source of income. The weather and tides affect how much salt we can produce, so some years are better than others."*

This insight reflects the unpredictability of salt farming, which is vulnerable to climate variability and requires farmers to develop strategies for coping with these uncertainties.

Beyond the economic aspects, salt production also plays an important social and cultural role in the coastal communities of South Sulawesi. Salt farming is often a family-based activity, passed down through generations, and forms an important part of the local heritage. For many farmers, salt production is not just a way to make a living but also a way to maintain traditional practices and connect with their cultural roots.

*"It's not just about making money. Salt farming is part of who we are. My parents did it, and now I am doing it with my children."*

shared a farmer from Pangkep during an in-depth interview. This statement underscores the cultural significance of salt production, which extends beyond its economic value to symbolize continuity, tradition, and the passing of knowledge from one generation to the next.

In addition to the family-oriented nature of salt farming, it also fosters a sense of community among farmers. The cooperative nature of salt production in many coastal villages enables farmers to share resources, labor, and knowledge, creating strong social bonds. These collaborative efforts help farmers manage challenges, such as labor shortages during peak production periods or difficulties in accessing markets.

*"We work together to solve problems. If someone has a bad season, others will help them. It's not just about making salt it's about helping each other."*

This cooperative model enhances social cohesion and provides a safety net for farmers, allowing them to navigate the uncertainties inherent in salt farming.

The role of salt production in sustaining livelihoods also extends to the broader economic system. The salt produced in South Sulawesi is not only consumed locally but is also sold to other regions, contributing to the province's economic output. The market for sea salt is diverse, ranging from local consumption for food production to industrial uses such as in the chemical and agricultural industries. However, the farmers' ability to access markets and receive fair prices for their products is often hindered by logistical challenges, such as poor infrastructure and limited market information.

*"We have the salt, but getting it to the market is a problem. Transportation is expensive, and sometimes, we can't even sell our full stock."*

This highlights the difficulties faced by salt farmers in South Sulawesi, where economic opportunities are often constrained by external factors beyond their control.



Environmental challenges also significantly affect the role of salt production in farmers' livelihoods. Salt farming in South Sulawesi relies heavily on environmental factors, such as the quality of seawater, tidal patterns, and weather conditions. Any disruptions in these natural processes can lead to reduced yields and lower income.

*"If the rains come too early or too late, the salt ponds don't work properly. We can lose a whole season's production."*

Such challenges are exacerbated by the broader impacts of climate change, which has led to increasingly erratic weather patterns in the region. These environmental uncertainties pose significant risks to the long-term viability of salt farming and further stress the importance of diversifying income sources or adopting new methods to mitigate the impact of these changes.

### **Economic Benefits and Challenges**

The salt industry of South Sulawesi maintains vital importance in the sustainable economic income of coastal farmers while encountering several obstacles that affect practice sustainability. Salt production creates strong economic effects by providing rural communities both monetary gains and job availability that stimulate the local markets. Several issues affecting the salt farming industry depend on variable market prices together with restricted market access and labor shortage problems that diminish the industry's long-term sustainability.

Families of farmers receive major income streams through salt production activities. The production of salt stands as the main source of income for numerous coastal farmers who find limited economic options elsewhere in their rural area. Sheer income from salt has proven vital to meet fundamental needs and preserve the health of both families and their communities.

*"Salt farming is my only source of income. During the season, I can earn enough to support my family and cover our daily needs."*

This quote highlights the importance of salt production as a lifeline for the families involved, particularly in areas where other sources of income are scarce. Despite its seasonal nature, salt farming provides farmers with enough income to sustain themselves, allowing them to manage their household expenses throughout the year.

Beyond income generation, salt farming also creates employment opportunities in coastal communities. In addition to the primary farmers, many other individuals, such as laborers and seasonal workers, are involved in various stages of the salt production process, including harvesting, transporting, and processing salt. This temporary employment is particularly valuable in areas where permanent job opportunities are limited.

*"During the season, I hire workers to help with the harvest. This also gives them a chance to earn money, as there are not many other jobs available."*

This statement demonstrates the role salt production plays in supporting local economies by providing employment opportunities, particularly for those who may not have other viable sources of income.

The economic benefits of salt farming are tempered by several challenges that significantly affect the profitability and sustainability of the industry. One of the most pressing issues faced by salt farmers is market access. Many coastal farmers struggle with limited infrastructure, which hinders their ability to reach broader markets and secure better prices for their salt. While there is a constant demand for salt, particularly for industrial and culinary purposes, the farmers' access to these markets is constrained by poor roads and limited transportation options.

*"The market is there, but it's hard to reach it. Transporting the salt is expensive, and sometimes, I don't even cover my costs."*

This highlights how the lack of reliable transportation and infrastructure makes it difficult for farmers to expand their market reach and obtain a fair price for their products. The inability to access larger markets forces farmers to sell their salt locally, often at a lower price, limiting their earning potential.

In addition to market access, the volatility of salt prices poses another significant challenge. Salt prices fluctuate based on a variety of factors, such as demand, competition from other salt-producing regions, and weather conditions. These price fluctuations create instability for farmers, making it difficult to predict income levels from year to year. During periods of oversupply, when many farmers produce salt simultaneously, prices can plummet, reducing farmers' earnings. On the other hand, during periods of lower production, prices can rise, but farmers may struggle to meet market demand due to limited supply.

*"Sometimes the price of salt is very low, and I end up with little profit. Other times, there's not enough salt to meet demand, and we can't take advantage of the higher prices."*

This statement reflects the challenges of navigating price uncertainty, which is a major concern for farmers who rely on salt production as their primary income source.

Labor shortages also present a significant challenge to salt farmers in South Sulawesi. Salt farming is a labor-intensive activity, requiring many workers to manage the various stages of the production process, including the collection of seawater, evaporation, and harvesting. However, as rural populations decrease and younger generations move to urban areas for better opportunities, farmers are finding it increasingly difficult to find enough labor.

*"I don't have enough workers anymore. My children don't want to work in the salt fields, and it's hard to find others to help."*

This shortage of labor forces farmers to either reduce their production capacity or hire workers at higher wages, which reduces profitability. The increasing scarcity of labor is a major obstacle to scaling up salt production and meeting market demands.

Finally, environmental factors such as changes in weather and climate variability pose significant risks to salt production. Salt farming relies heavily on dry, sunny weather for the evaporation process, and any deviations from this pattern can disrupt the entire production cycle. Excessive rainfall, storms, or unexpected temperature changes can reduce the quality of the salt or prevent the formation of salt altogether.

*"If it rains too much or the weather is too hot, the salt doesn't form properly. Sometimes we lose everything we've worked for."*

This vulnerability to environmental changes makes salt farming a risky and unpredictable livelihood, with farmers often facing significant losses when adverse weather conditions strike.

### **Social and Cultural Impact**

South Sulawesi salt manufacturing practices influence both economic activity and cultural dynamics that affect every member of neighboring coastal areas. Salt farming tradition maintains a significant position in these regions since salt production methods form the foundation of social relationships and community structures and cultural principles. Through their continuous salt production activities South Sulawesi farmers protect traditional customs and build local cultural unity and maintain social bonds between their members. The salt

manufacturing process creates social tensions regarding gender balance along with group social changes and community health issues.

The weekly process of salt production maintains a strong connection between communities because of its ability to strengthen local identity bonds. Grants of salt production create collective tasks requiring teamwork between family members and neighborhood residents who help each other throughout their production operations. Community members who collaborate on salt farming develop close connections with each other while building shared necessities between them.

*"In our community, everyone knows each other, and when it's time to harvest salt, we all come together to help. It's not just about the salt; it's about working together and supporting each other."*

This quote illustrates how salt production serves as a focal point for social interaction, with the collective nature of the work fostering a spirit of collaboration and mutual support.

In addition to fostering a sense of community, salt farming in South Sulawesi is closely tied to the cultural heritage and identity of coastal populations. Many of the farming techniques and practices used by salt farmers have been passed down through generations, making salt production an important cultural tradition. This tradition not only sustains the livelihoods of coastal farmers but also connects them to their ancestors and the cultural practices that have shaped their way of life.

*"My family has been farming salt for generations. This is what we know, and it's part of who we are. It's a tradition that connects us to the past."*

Such statements highlight the deep cultural roots of salt farming in the region, underscoring how the practice is intertwined with community values and historical continuity. However, salt production also has significant social implications, particularly in the context of gender roles within the coastal farming communities. Traditionally, salt farming has been a male-dominated activity, with men primarily responsible for the physical labor involved in the salt production process. This gender division of labor is reinforced by social norms and expectations about men's and women's roles within the household and community. However, women also play an important role in salt production, particularly in tasks such as cleaning the salt, packaging, and marketing.

*"While my husband works on the field, I take care of the cleaning and selling. It's a partnership, but the physical work is mostly for the men."*

This division of labor illustrates the gendered nature of salt production, where men take on more physically demanding tasks, while women contribute through complementary roles.

Despite the traditional gender roles in salt farming, there are signs of gradual change, with increasing participation of women in all aspects of salt production. Women are beginning to take on more responsibility in the physical aspects of farming, challenging traditional gender norms and expanding their roles within the industry.

*"I've learned how to collect and process the salt. It's not easy, but I'm determined to be involved in all parts of the process, not just the selling."*

This statement highlights the evolving dynamics in salt farming, where women are increasingly asserting their presence in roles traditionally reserved for men. This shift contributes to a more inclusive and equal approach to salt farming, although traditional gender norms still exert influence in many areas.



The practice of salt farming also has implications for generational shifts in coastal communities. Younger generations, particularly those in urban areas, often view salt farming as a labor-intensive and low-income occupation, leading to a decline in interest among young people in continuing the family tradition. This has created a generational gap in the salt farming workforce, with older farmers struggling to pass on their knowledge and skills to the next generation.

*"My children don't want to stay and help with salt farming. They want to move to the city for better jobs. It's hard for us to keep the tradition going."*

This sentiment reflects the challenges faced by older generations in maintaining the cultural practice of salt production, as younger people seek opportunities outside of the rural, agricultural sector. The generational shift in salt farming has broader social implications, as it reflects changing attitudes toward rural life and traditional occupations. The younger generation's preference for urban employment opportunities and their reluctance to engage in salt farming could lead to the eventual decline of salt production in the region.

*"I worry that in a few years, there will be no one left to carry on the salt farming tradition. It's a way of life that is disappearing."*

This concern underscores the potential loss of cultural heritage and the social fabric of coastal communities if younger generations continue to distance themselves from traditional practices like salt farming.

### **Local and Regional Economic Implications**

Salt production within South Sulawesi produces essential economic value which supports people who live by the coast and builds the overall economic fabric of the area. The historical sector of South Sulawesi known as salt farming enables both local farmers and creates opportunities for multiple industrial connections starting with transportation and extending to packaging and retail. The salt production activities create economic impacts that reach further than farmer profits as they structure stronger economic activity throughout the regional area.

South Sulawesi coastal communities use salt production as their major revenue source which allows them to create employment for farmers together with their family members. Coastal areas usually offer salt farming as their primary income source since agricultural production remains restricted because of natural geographic limitations.

*"Without salt farming, we would have no way to earn a living here. It's our only source of income."*

This statement highlights how critical salt farming is to the economic survival of these communities, with many families depending on it as their primary income source. The reliance on salt production means that fluctuations in salt prices or disruptions in production can have a direct impact on the economic stability of these communities.

The economic benefits of salt farming extend beyond the individual farmers, as the practice also supports local markets and economies. In South Sulawesi, salt is not only produced for local consumption but is also sold to other regions, contributing to regional trade. The salt produced in South Sulawesi is distributed to various parts of Indonesia, where it is used for food preservation, livestock, and industrial applications. This trade creates a local and regional supply chain that involves transporters, traders, and packaging businesses, generating additional economic activity in the region.

*"I buy salt directly from the farmers here, package it, and sell it to shops in Makassar. It's a good business, and it helps the local farmers earn money too."*

This quote illustrates the interconnectedness between salt farmers and regional economies, with salt serving as a commodity that fuels a broader local economy.

Furthermore, the role of salt production in regional economic growth extends to its contribution to agricultural and industrial sectors. Salt is an essential input for several industries, including food processing and chemical production. As the demand for salt in these industries continues to grow, the economic role of salt farming in South Sulawesi becomes even more significant. Farmers not only generate income from selling salt but also contribute to the sustainability of these industries. The economic multiplier effect, where increased income from salt farming circulates through local businesses and industries, further amplifies the economic impact of salt production.

*"Our salt goes into many products, from food to medicine. Without salt farming, many industries in this region would be affected."*

This statement emphasizes how salt production contributes to broader regional industrial activities, underscoring its importance as a regional economic resource.

The salt farming industry also faces several challenges that affect its economic sustainability. One of the most significant challenges is the environmental impact of climate change, which has led to reduced seawater salinity and irregular weather patterns, both of which hinder salt production. In response to these challenges, farmers have had to adapt by changing farming techniques or relocating to areas where salt production conditions are more favorable. This adaptation, however, incurs additional costs, and many farmers are struggling to cover the expenses of modifying their practices.

*"Climate change has affected our salt production. Some years, the salt harvest is very low, and we can barely sell enough to make ends meet."*

This quote highlights the vulnerability of salt production to environmental factors, which directly affect the financial stability of farmers and the regional economy.

Additionally, the salt farming industry in South Sulawesi is constrained by limited access to capital, technology, and infrastructure, which hinders the ability of farmers to increase productivity and improve the quality of their salt. Without adequate support in the form of credit, modern equipment, or training in best practices, many farmers continue to use traditional, labor-intensive methods that limit their economic potential.

*"We don't have the money to buy modern equipment, so we rely on old techniques. This means our production is lower, and the quality of our salt isn't always good."*

This challenge underscores the disparity between traditional and modern farming practices, where limited access to resources prevents farmers from reaching their full economic potential. The lack of investment in the industry restricts its growth, limiting the regional economic benefits that could be derived from salt production.

Salt production in South Sulawesi continues to generate substantial economic effects even after facing these obstacles. The salt industry maintains numerous families within its workforce and enhances both countryside commerce and larger economic growth in the region. Local and regional governments should invest in necessary infrastructure while offering climate adaptation programs and financial support and technological access to salt producers for salt production to achieve its complete economic potential. The investments would maintain salt farming sustainability economically while expanding its regional economic promoting role. Salt production success in South Sulawesi will rely on the collaboration between local residents and authority figures who build favorable conditions for salt farming industry development while solving current challenges.

The economic activities based on salt production within South Sulawesi coastal areas offer essential information regarding traditional industries associated with socio-economic advancement and natural resource conservation. The research fills important missing information from past studies about salt laborers' daily lives along with their financial as well as environmental hurdles.

The literature shows a lack of substantial examination regarding economic sustainability models for salt farming operations that occur in developing countries' coastal areas. Extensive academic research exists about generic agricultural economies (Britz et al., 2021; Rosch et al., 2021; Munton et al., 2023) yet there is scant investigation of salt farming particularities in coastal areas like South Sulawesi which has sustained salt production for a long time throughout Indonesia. The research analyzed economic operations alongside social structures of salt farming specifically in South Sulawesi. The study reveals that salt production within coastal areas represents more than just commercial activity because it serves as a cultural tradition that maintains the local community fabric and their ancestral customs (Abdullah et al., 2021; Parvin; Carrasco et al., 2022).

This study adds to academic knowledge about how environmental transformations especially like climate change affect preserved farming methods. Previous research by Nadeem et al. (2024) identified climate-sensitive vulnerabilities among small-scale agricultural systems but research about salt production faced limited investigation regarding environmental change impacts remains minimal. Evidence from this research shows that South Sulawesi coastal farmers experience severe vulnerability from climate change effects that include diminished saline conditions and irregular rainfall patterns interrupting their salt production operations. According to one farmer in this study production became unpredictable because some years brought insufficient salt output leading to poor revenue from sales. The study validates research conclusions about how environmental threats negatively impact rural economic systems that rely on natural resources.

This research investigates the missing knowledge about how local economies that rely on salt production resources establish interactions with wider regional and national economic structures. Researchers who study small-scale agriculture in Indonesia generally disregard how local farming operations connect to regional trading networks in particular regarding salt production. This research establishes the essential economic function of salt for South Sulawesi markets extending from local to national and international domains. The research confirms earlier work about how Indonesian local industries support the national economy through its findings on the importance of salt production in coastal economic sectors (Badi'ah et al., 2023; Simamora et al., 2021; Aris et al., 2022).

The research adds new findings to earlier academic work which examined gender participation in small-scale farming operations. Academic studies have traditionally excluded women who were essential participants in salt farming operations. Research investigates the gender distribution by using balanced samples which prove women's salt farming engagement sustains household finances while preserving traditional coastal traditions in these communities. South Sulawesi female residents take part in salt production tasks alongside making key decisions regarding salt sales distribution activities. The female farmer stated how she manages all salt-related tasks from harvest through marketing. Our family depends on this revenue for its survival. Studies about gender dynamics in rural economies gain from this discovery because it reveals the vital yet overlooked position women maintain throughout salt production activities.

The research reveals financial obstacles faced by salt farmers because they struggle to obtain funding and technological equipment and modern infrastructure. Confirmed the same

conclusion that previous studies made regarding traditional farming restrictions as well as the requirement for modernization in small-scale agriculture. The research brings deeper insight by showing how these limitations block salt farmers from reaching superior levels of production capability along with market competitiveness. The combination of old farming procedures and inadequate government or industrial backing stands as the primary reason hindering salt farming expansion. The situation fits broader research trends throughout Indonesian agriculture that reveals small farmers persist with limited resources even though they could reach better productivity and business capabilities.

## Conclusion

This research proves essential salt production enables South Sulawesi coastal farmers to maintain their economic existence while showing both its traditional merits and obstacles. Salt farming presents two central difficulties to many coastal communities because environmental changes, limited access to modern technology and market constraints challenge its dominance as a vital cultural and income source. Women have been found essential to maintaining every facet of salt production through both economic and cultural preservation. Strategies which minimize the current obstacles and enhance salt farmer support mechanisms through better infrastructure and modern equipment access and environmental adaptation methods will help maintain sustainability in salt production. The research adds to academic knowledge about small-scale agricultural sectors while providing guidance to policymakers and stakeholders to enhance the salt market in South Sulawesi along with other regions.

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