Diversified Salt Industries and Niche Salt-based Products:
The Experience of ILO ISEC Project

National Dissemination Event on Advancing Salt Sector in Bangladesh

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Background

- Cox’s Bazar supplies 95% of Bangladesh’s salt, employing 40,695 farmers and producing 2.48 million metric tons in 2023–2024.
- This volume is more than sufficient to meet the national edible salt demand, which stood at 0.9 million metric tons during the same period.
- While industrial sectors partially rely on local salt production, they continue to import due to the unavailability of high-purity salt required for some specific sub-sectors.
- Despite global trends towards niche salt products, Bangladesh has seen no diversification in this sector, largely due to limited research and low investment.
- Unlike edible salt, there is no reliable data on industrial salt demand, niche salt products, or their growth potential in the country.

Source: Bangladesh Small and Cottage Industries Corporation (BSCIC) , Ministry of Industry, Government of Bangladesh.

Objective

Quantify industrial salt demand across key sub-sectors, addressing existing knowledge gaps and informing demand-side policy

Assess the feasibility of value-added and niche salt-based markets, leveraging global trends to explore the untapped potential in Bangladesh

Map the sector’s dynamics and regulatory landscape, including production bottlenecks, trade flows, and quality standards

Identify strategic interventions to enhance resilience among salt farmers and processors while reducing import dependence and fostering sustainable sectoral growth

Methodology

Review of Secondary Documents:

- ILO Rapid Market Assessment of the Salt Value Chain (2024)
- National Salt Policy (2016 and 2022)
- Iodized Salt Act (2021)
- Excises and Salt Act (1944)
- Tariff Commission Report on Salt Sector
- Journal articles and Newspaper reports

Field Observations and Primary Interview:

- Field Visit (Cox's Bazar, Dhaka, Gazipur, Keraniganj, and Narayanganj) during February and March 2025
- Government Stakeholders
- Representative from Associations
- Private Sector Representatives
- Representatives from Industrial Units

Identified Salt-based Industries

Utilization of Salt in Different Industries (1/2)

Animal and Fish Feed	Ensure electrolyte balance and supports overall health, especially in poultry, aquaculture, and livestock systems.
Leather	Preserves raw hides, prevents decomposition, and allows safe storage and transport prior to processing.
Fish Processing	Acts as a preservative by inhibiting bacterial growth while enhancing flavor, texture, and visual appeal.
Food Processing	Functions as a preservative, flavor enhancer, and texture stabilizer in various food items.
Sugar Mills	Used for water softening, ion exchange regeneration, and pH control during sugar refining.
Textile Industry	Applied in washing, dyeing, and finishing processes to ensure color vibrancy and fabric durability.

Utilization of Salt in Different Industries (2/2)

Ice Plants	Used in brine solutions to lower the freezing point of water for efficient ice production.
Power Plants	Employed in water softening to remove minerals like calcium and magnesium, preventing scaling and corrosion in boilers and pipelines.
Chemical Processing	Utilized in producing caustic soda (NaOH), chlorine (Cl_2), and soda ash (Na_2CO_3), essential for manufacturing soap, paper, glass, and detergent.
Pharmaceutical	Applied in the production of saline solutions and widely used in IV fluids, wound irrigation, and dialysis treatments.
Cosmetics	Used to create natural exfoliants, therapeutic agents, preservatives, and formulations for hair care.
Jute	Used in the dyeing process to fix colors and enhance the durability of dyed jute fibers.
Paint Industry	Supports the production of key pigments, additives, and corrosion inhibitors.

Growth Trends and Projections

Salt Demand: Supply Side

In 2023-2024 fiscal year, a total of 2,437,890 MT of salt has been produced (BSCIC, 2024).

In the same period, 580,261 MT salt has been imported under the HS code 2501 (BTTC, 2025).

Salt has been imported from 38 different countries including India, China, Indonesia, and Pakistan (BTTC, 2025).

Fiscal Year	**Local Production** (Crude Salt)	**Local Production** (Refined, Considering the 17% Processing Loss)	**Import Volume** (Refined)	**Yearly Demand for Refined Salt**	**Growth Rate** (in Percentag
2021-2022	1,830,000	1,518,900	443,639	1,962,539	
2022-2023	2,232,890	1,853,299	598,408	2,451,707	24.93%
2023-2024	2,437,890	2,023,449	580,261	2,603,710	6.20%

Source: National Salt Policy, 2022, BTTC, 2025

References:

- Annual report 2023-2024, Bangladesh Small and Cottage Industries Corporation (BSCIC) , Ministry of Industry, Government of Bangladesh.
- Bangladesh Trade and Tariff Commission (BTTC), Ministry of Commerce, Government of Bangladesh

Demand Gaps

BSCIC Projection (in the National Salt Policy) of Refined Salt Demand in Different Sectors (in Metric Tons)

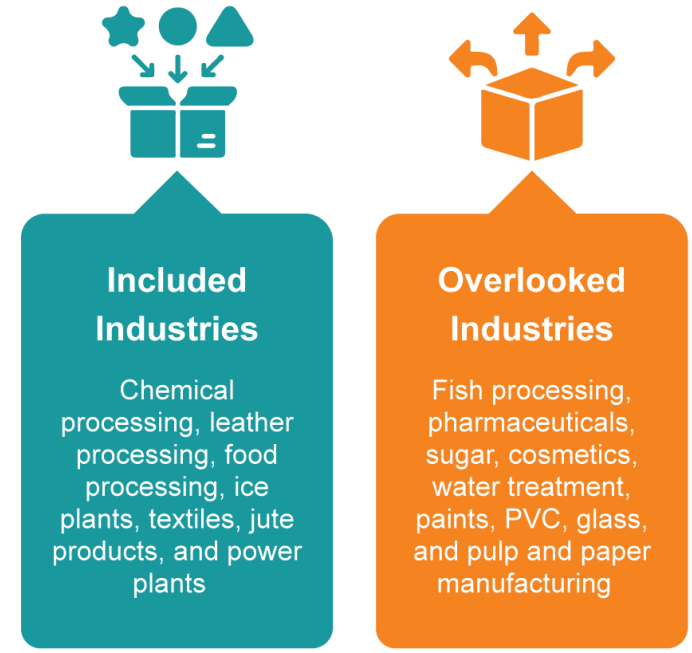
Sector/Year	Human Consumption	Industrial Sector	Livestock Sector	Fisheries Sector
2021-2022	876,000	692,000	336,000	34,000
2022-2023	888,000	796,000	341,000	36,000
2023-2024	900,000	915,000	345,000	38,000

Source: National Salt Policy, 2022 (BSCIC)

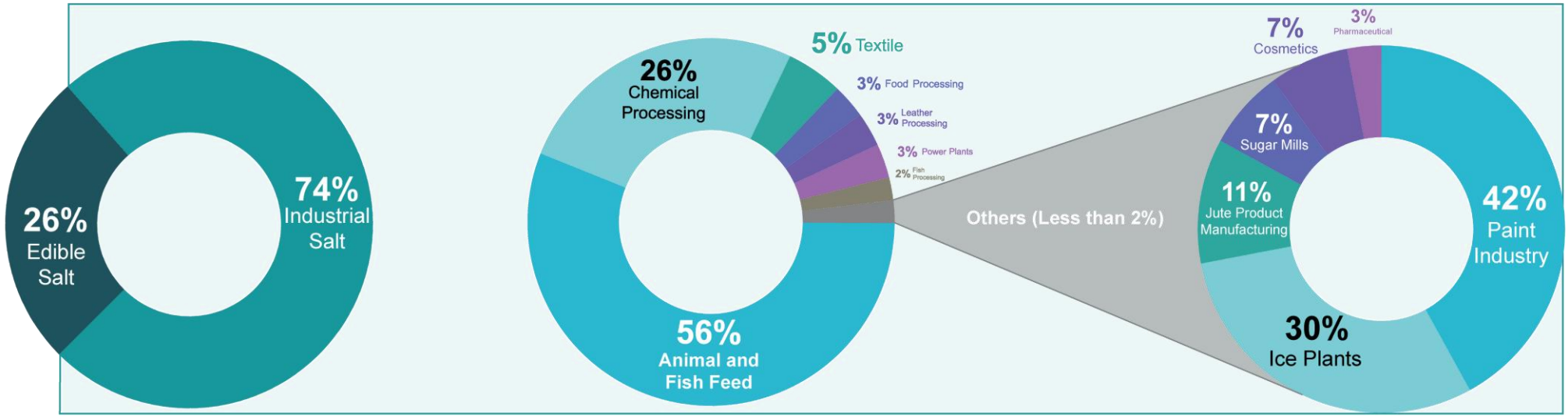
Comparison Between Local Refined Salt Demand and BSCIC Projection (in Metric Tons)

Fiscal Year	Local Demand	BSCIC Projection	Demand Gap
2021-2022	1,962,539	1,938,000	24,539
2022-2023	2,451,707	2,061,000	390,707
2023-2024	2,603,710	2,198,000	405,710

Sources: BSCIC and BTTC



Actual Demand Across Sectors



The study fund that $\frac{1}{4}$ demand between industrial salt (2,575,559 MT) and edible salt (911,929 MT).

The industrial sub-sector demand is dominated by feed consumption, which accounts for more than 50% of the total demand.

Market Actors in Salt Sector

Major Market Actors

Suppliers

- Local Salt Farmers
- Input Suppliers
- Finance Support Provider
- Importers

Processors

- Vacuum Millers
- Mechanical Millers
- Traditional Millers

Distributors

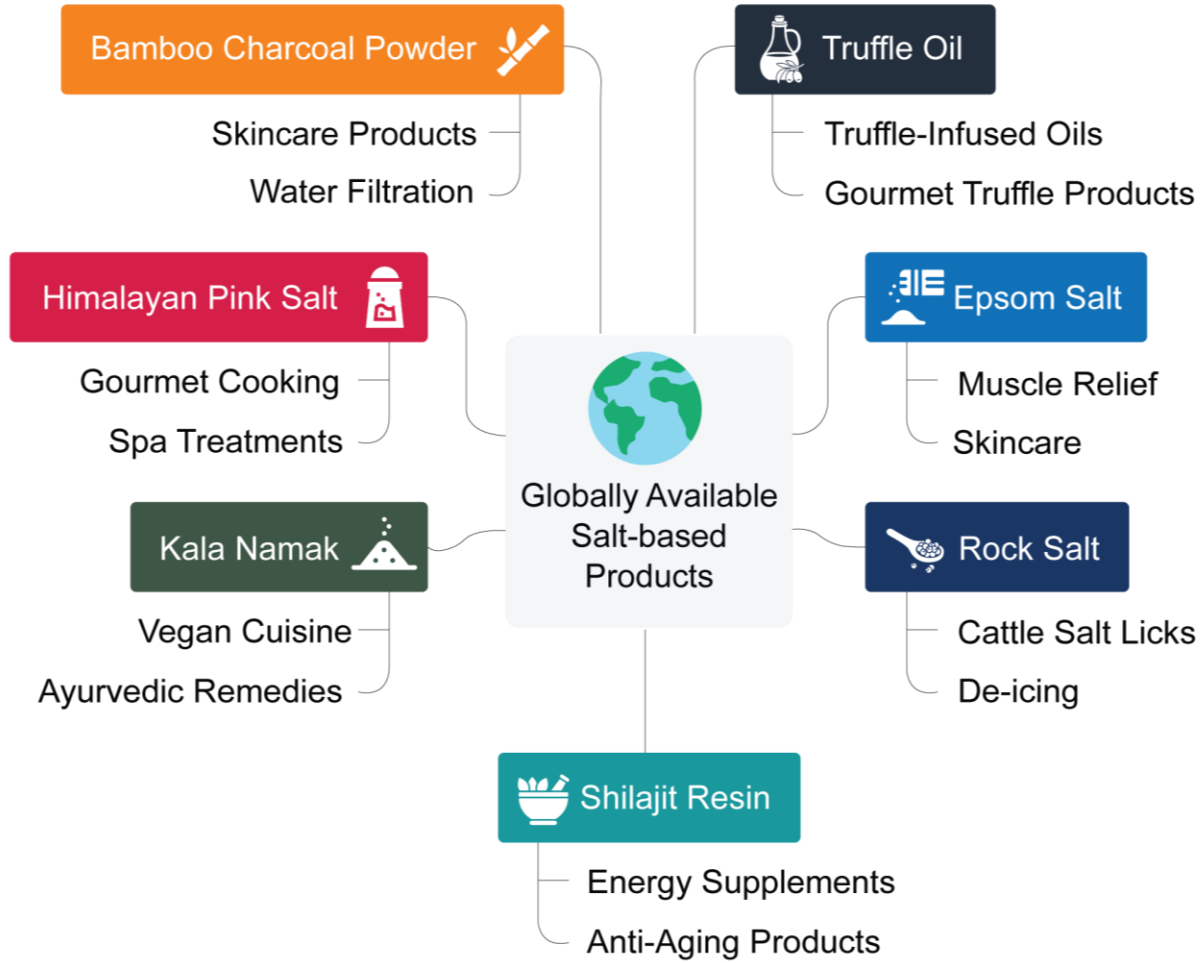
- Storage Operators
- Wholesalers
- Private Refinery Networks
- Specialized Distributors
- Retail Networks

Supporting Actors

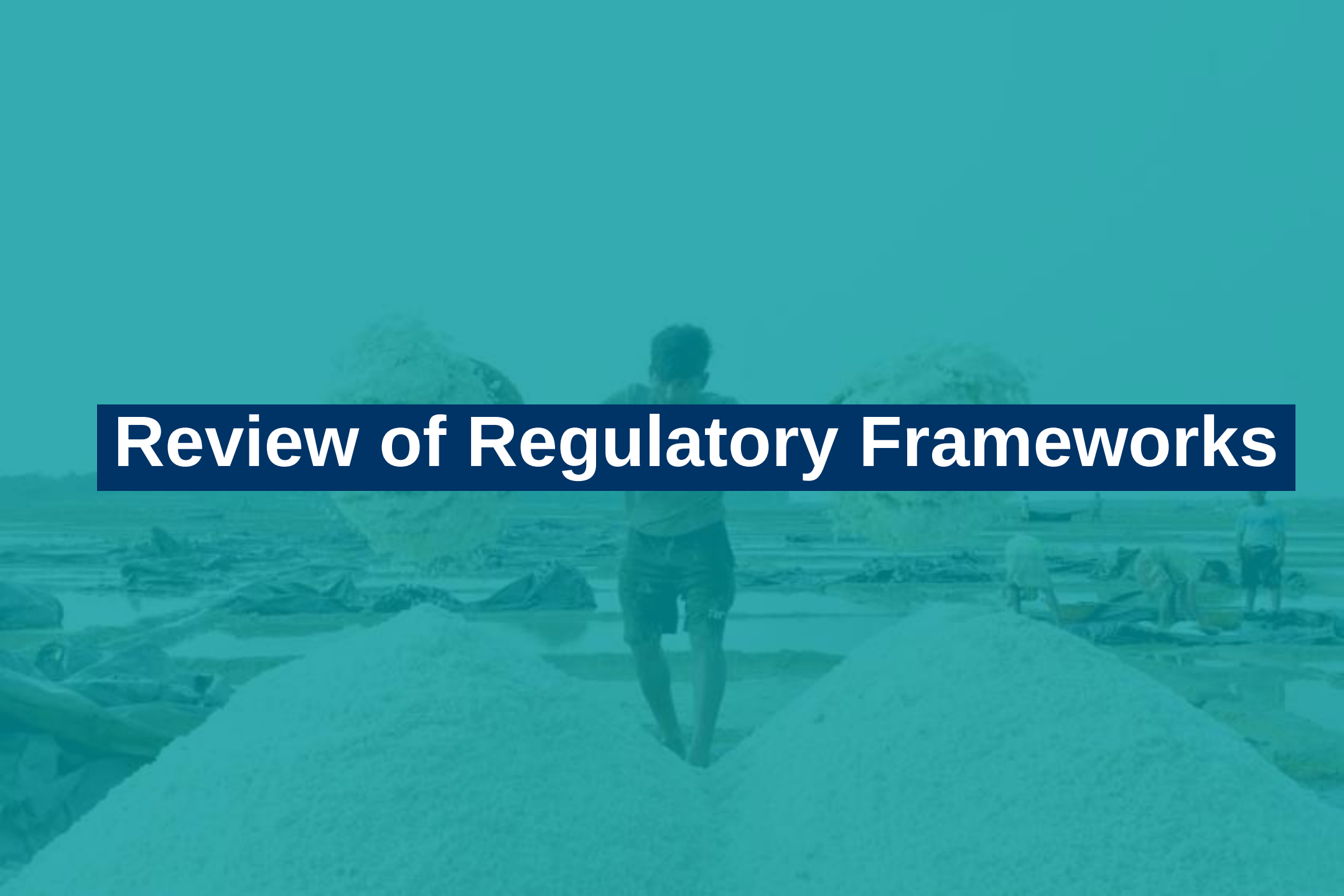
- Government Bodies
- Research Institutions
- NGOs
- Associations
- Advocacy Groups

Niche Salt Market of Bangladesh

Globally Available Salt-based Niche Products



Niche Salt Products in Bangladesh



Review of Regulatory Frameworks

Shortcomings of Existing Policies (1/2)

Fragmented Regulatory Oversight
Bangladesh's salt industry faces governance challenges due to overlapping authority among multiple agencies, causing delays, conflicting standards, and enforcement gaps.

Weak Enforcement of Iodization Laws
Despite legal mandates, inadequate monitoring allows widespread circulation of non-iodized salt, especially in rural markets, far below national targets.

Inconsistent Standards for Industrial Salt
While edible salt is regulated, industrial salt often fails to meet quality standards due to poor enforcement and sector-specific variations in requirements.

Shortcomings of Existing Policies (2/2)

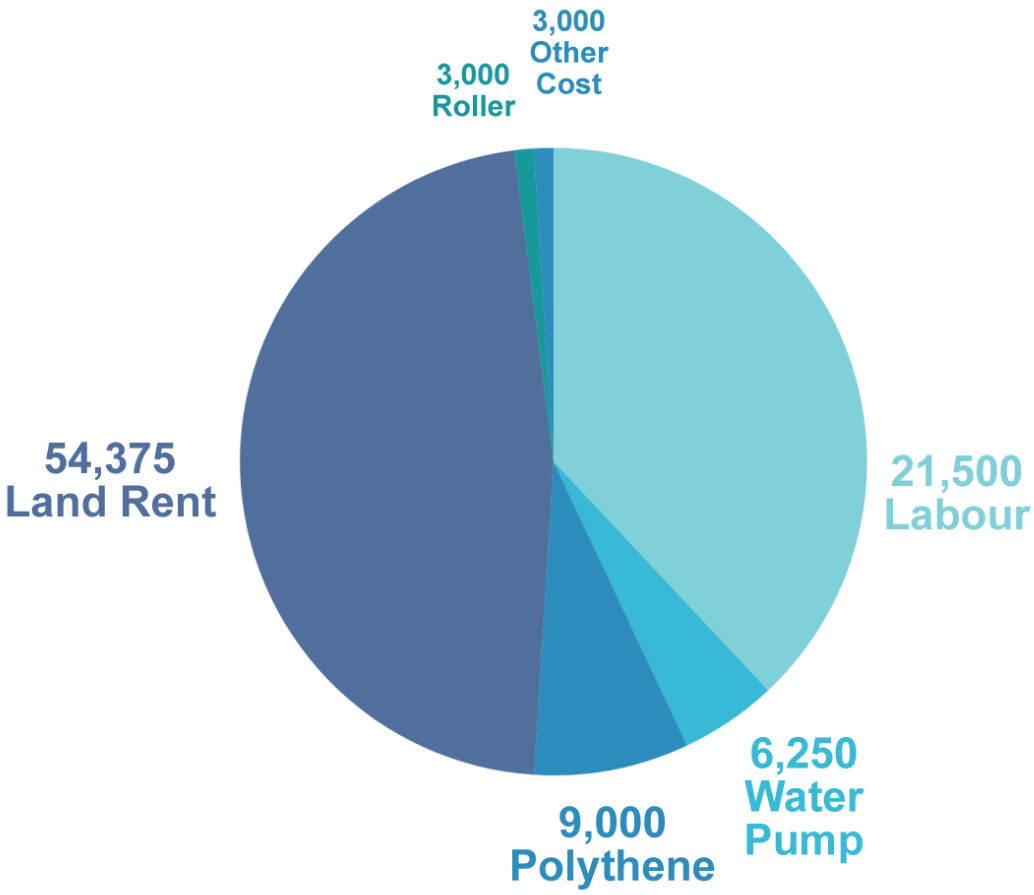
Inadequate Demand Estimation
Salt demand forecasts overlook several major industrial sectors and expatriate adjustments, resulting in significant underestimation and planning gaps.

Weak Penalties for Non-Compliance
Modest fines and limited enforcement fail to deter violations, making it difficult for Bangladesh to achieve universal salt iodization goals.

Tax and Tariff Discrepancies
Disparate tax rates between edible and industrial salt encourage misdeclaration, revealing a need for a more rational and transparent tariff structure.

Challenges and Opportunities

Production Cost (1/2)



Average Salt Production Cost Breakdown (Per Unit)
Source: Primary Field Data, 2025

- Data were collected from eight salt fields: Teknaf, Pochim Pokkhali, Moheshkhali, Islampur, and Shafolondi.
- The analysis is based on seasonal production on 2.5 to 4 Kani of land per unit.
- Land rent is the largest cost component, averaging 49% of the total production cost. More than double in last 5 years.
- Labor is the second-highest cost, accounting for 38% of the total production cost.

Production Cost (2/2)

The cost to produce one mon (40 kg) of salt ranges from 250 to 400 BDT.

This year, the market price at the field level is only 230 BDT per mon.

Cost Component	Total Cost (BDT)	% of Total Cost
Labour (21,500 × 6 months)	129,000	38%
Water Pump (6,250 × 2.875 kani)	17,969	5%
Polythene (9,000 × 2.875 kani)	25,875	8%
Land Rent (54,375 × 2.875 kani)	156,328	47%
Roller	3,000	1%
Other Costs	3,000	1%
Total Cost	**335,172**	**100%**
Salt Production per Kani (in MT)	12 – 19	
Cost per kg (If production is 12 MT/kani)	9.72 BDT	
Cost per kg (If production is 19 MT/kani)	6.24 BDT	

Production Cost and Cost Breakdown of a Salt Production Unit in Cox's Bazar

Source: Primary Field Data, 2025

Challenges (1/4)

Low Salt Quality & High Processing Losses

Bangladesh's salt industry suffers from poor-quality raw salt due to outdated farming practices and a focus on quantity over quality. Processing losses are significantly high (20–40%) due to weak crystal structure and impurities.

Imports of Sodium Sulfate

A large volume of sodium sulfate is imported during the off-season, some of which is inserted into the edible salt market, raising health concerns.

Poor Land Management

Land lease costs now account for nearly half of salt production expenses, worsened by annual renegotiations. Farmers are discouraged from long-term investment, and land used for shrimp farming during off-season.

Challenges (2/4)

Labor Shortages & Instability

The sector faces a growing labor shortage as rising costs and poor conditions drive workers to other jobs. This undermines production efficiency and adds pressure on the remaining workforce, with little institutional support to reverse the trend.

Utility and Storage Constraints

Lack of electricity and modern water infrastructure forces producers to rely on expensive diesel systems. Poor storage facilities expose salt to damage and quality loss.

Dependence on Dadon System

Most salt farmers rely on high-interest informal loans from middlemen, which force them to sell at below-market prices. This debt cycle severely restricts their income and bargaining power.

Challenges (3/4)

Lack of Farmer Unity & Education

Dispersed, uneducated salt farmers lack collective voice and access to modern practices, making them vulnerable to exploitation. Their limited advocacy capacity keeps them excluded from policy dialogue.

Underdeveloped Salt-based Products

Despite demand, Bangladesh's salt sector lacks innovation in niche products like iodized or specialty salts. This limits market growth and puts the country behind competitors in value-added offerings.

Data & Stakeholder Access Limitations

Restricted access to authentic data and weak coordination among stakeholders hinder effective planning and policy decisions. The resulting information gaps prevent a clear understanding of industry trends and needs.

Challenges (4/4)

Lack of Women Participation

Women’s involvement in the salt sector remains extremely limited, largely confined to packaging. Cultural norms and the absence of targeted opportunities restrict their participation, perpetuating gender imbalances in the workforce.

Child Labor

A significant number of children are engaged in salt field labor, often under harsh conditions. This practice not only violates labor laws but also deprives children of education and long-term opportunities, perpetuating cycles of poverty.

Opportunities

Freely available seawater reduces production costs	Low-cost labor can be trained for high quality salt	Public-private partnerships can enhance sector efficiency
Idle labor during off-season allows alternative livelihood options	Government regulation can stabilize prices and ensure quality	Potential to develop niche products for local and export markets

Recommendations

Short-Term Actions

Conduct a nationwide industrial salt demand survey within 6–12 months to address data gaps and improve planning.

Deploy BSTI mobile testing units and enforce penalties for non-compliance with iodization and quality standards.

Launch national anti-adulteration protocols focusing on inspections, labeling, and traceability, with targets set within 1–2 years.

Revise per capita salt consumption estimates within 12 months, aligning with WHO guidelines and excluding expatriates.

Enhance the salt sector monitoring dashboard to capture real-time data such as import, consumption data within 1–2 years.

Initiate microfinance and technical training for women and youth-led small producers within the next 12 months.

Medium-Term Actions

Scale up modernize salt production using vacuum evaporation technologies over a 2–4 years period to improve yield and efficiency

Build subsidized, weather-resistant storage facilities in major production zones over the next 2–4 years to reduce spoilage

Harmonize salt import tariffs and introduce traceability features such as coloration or liquid form within 2–3 years

Establish public-private R&D labs for salt refinement within 2 years to reduce import reliance and raise product quality

Launch innovation funds and technical support programs over 2–5 years to catalyze MSME-led niche salt product development

Long-Term Actions

Implement regulated land leasing based on a national audit over 3–5 years to ensure secure, fair access to salt farming lands.

Promote export of niche salt products through branding, trade fairs, and GI tagging beginning in 3 years and scaling over 5.

Pilot environmentally sustainable salt farming practices (biodegradable sheets, and water-saving technologies) within 3 years.

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