FEASIBILITY STUDY · FOOD PROCESSING & MANUFACTURING

Iodized Salt Processing Plant

Feasibility Study for a Salt Processing and Packaging Factory in Ethiopia

Market, technical, organizational, financial and socio-economic assessment of a 96,000-tonne-per-year plant sourcing raw salt from Lake Afdera.

- **7 chapters + 3 annexes**
  Market to socio-economics
- **10-year financial model**
  P&L, cash flow, NPV, IRR
- **Demand–supply analysis**
  Projections to 2034
- **Plant & equipment**
  Process, capacity, inputs



2026

REFERENCE EDITION

Anonymized illustrative case study (original analysis 2024).
Prices in 2024 Birr; see Edition Notice for updates.
Not investment advice.

Publication Information

Item	Details
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Location	Processing plant near Addis Ababa; raw salt from Lake Afdera, Afar Region

EDITION NOTICE (VERIFIED 1 NOVEMBER 2026)

This study was prepared in September 2024 for a specific private project. All costs and prices are in 2024 Birr. The birr was floated on 29 July 2024, and the National Bank of Ethiopia's foreign-exchange auction cleared at Birr 159.70 per US dollar on 27 October 2026. Imported equipment, vehicles and many inputs should be re-quoted at current prices.

Raw-salt supply from Afar was seriously disrupted in 2023–2024. In January 2025 the Ministry of Trade and Regional Integration re-issued its directive to allow processing plants outside Afar and lifted a naphthalene-treatment requirement. Current supply rules and prices should be confirmed.

Review of the financial model found that salaries and benefits are omitted from operating costs and that the reported NPV cannot be reproduced. The original results are retained; corrections, flags and an indicative recalculation are set out in Annexes A and B.

PREVIEW

Disclaimer and Conditions of Use

This publication is derived from a feasibility study prepared for a specific proposed project. The names, contact details, registration and tax numbers and other information identifying the project sponsor and the original adviser have been removed, and the exact plant site has been generalized. The sponsor is referred to as "the Project Company". References to named Ethiopian salt producers come from the original study's industry data and do not imply any relationship with, or endorsement by, those companies.

The market, technical and financial figures are project-specific assumptions and projections prepared at the time of the original study. They have not been audited or independently validated and are not forecasts of the results of any actual business. Where information was checked for this edition, the verification date and source are stated; other information is reproduced as in the original study.

The document is provided for educational, research and reference purposes. It is not investment, legal, tax or financial advice, and it is not a bankable feasibility study for any particular venture. Anyone considering a similar project should obtain current prices, supply arrangements and qualified Ethiopian legal, tax and technical advice.

Preview: selected pages only. The full report contains 70 pages.

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1. Executive Summary

1.1 The Project

This feasibility study assesses the establishment of an iodized salt processing and packaging facility on an industrial site near Addis Ababa, Ethiopia. The factory will source its raw material from Lake Afdera in the Afar regional state, known for its high-quality salt deposits. The processing facility will produce salt for three primary markets: human consumption, animal feed, and industrial applications. Products will be packaged in various sizes and forms to meet the demands of both local and international markets. The project aims to leverage Ethiopia's abundant natural resources to produce high-quality iodized salt while contributing to the country's economic growth and self-sufficiency in salt production.

The project is promoted by a private Ethiopian company (the "Project Company"). The original study describes the sponsor as an established enterprise with experience in the food processing and mining sectors and a management team with backgrounds in mining, production, logistics and marketing. Identifying details have been removed from this edition.

1.2 Amount of Financing Required

Table 1.1 Summary of Initial Investment Cost

Cost Item	Amount (Birr)
Initial Lease Payment	1,500,000
Civil Works and Construction	176,250,000
Machinery and Equipment	118,400,000
Vehicles	65,000,000
Utility Installation	9,600,000
Total Fixed Cost	**370,750,000**
Preproduction Expense	1,500,000
Working Capital Requirement	25,000,000
Total Initial Investment	**397,250,000**

Source: Study financial model. Amounts in Birr (2024 prices) unless stated.

The total initial investment cost for the project is Birr 397,250,000. This includes expenses for lease payments, civil works, machinery, vehicles, utility installation, preproduction, and working capital.

1.3 Sources of Finance and Financing Structure

The financing structure of the salt mining and processing project is designed to optimize the capital required while ensuring financial viability and sustainability. The project will be financed through a combination of equity from the project promoters and a bank loan specifically secured from the Development Bank of Ethiopia.

1. **Equity Financing:**
   - **Equity Contribution:** The project promoters will contribute 30% of the total investment requirement through equity, amounting to Birr 119,175,000. This equity investment will be used to cover initial costs such as land acquisition, civil works, and a portion of the machinery and equipment expenses.
2. **Debt Financing (Bank Loan):**

Year	Projected Demand (MT)	Projected Total Supply (MT)	Demand-Supply Gap (MT)	Gap as % of Demand
2027	1,010,640	374,277.13	636,362.87	63%
2028	1,041,499	385,505.35	655,993.65	63%
2029	1,073,344	397,070.49	676,273.51	63%
2030	1,106,210	408,982.73	697,227.27	63%
2031	1,140,137	421,252.24	718,884.76	63%
2032	1,175,168	433,889.21	741,278.79	63%
2033	1,211,353	446,905.84	764,447.16	63%
2034	1,248,744	460,313.34	788,430.66	63%

Source: Original study.

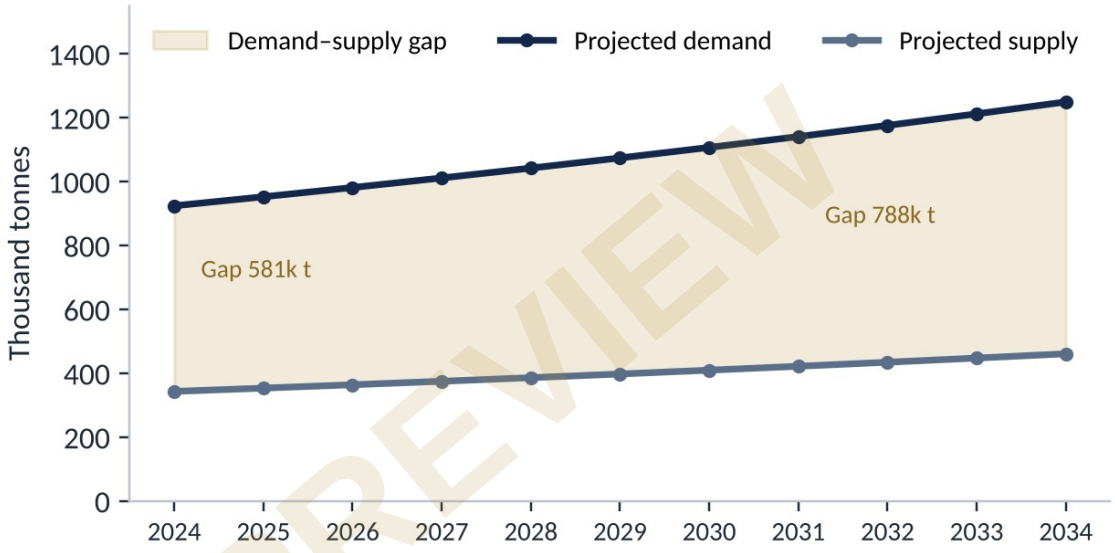


Figure 3.1 Projected Demand and Supply of Iodized Salt, 2024–2034

Source: Tables on projected demand and total supply.

- **Consistent Demand-Supply Gap**: The table demonstrates a significant and consistent demand-supply gap of approximately 63% throughout the period from 2024 to 2034. This indicates that domestic production alone is insufficient to meet the growing demand for iodized salt in Ethiopia.
- **Market Opportunity**: The persistent gap highlights a substantial market opportunity for additional salt production facilities, such as the proposed facility. The existing market conditions could accommodate new entrants who can help close this gap.
- **Support for New Facilities**: Given the consistent shortage, the market could support the entry and expansion of new processing facilities without oversaturation. This is particularly relevant as the demand continues to grow, driven by population growth and increased health awareness regarding iodized salt consumption.
- **Potential for Import Reduction**: Expanding domestic production capacity would reduce the need for imports, contributing to Ethiopia's economic self-sufficiency in salt production and potentially leading to cost savings and improved trade balances.

This analysis supports the viability of the proposed processing facility, as there is clearly a large and growing demand that is not being met by current production capacities.

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5. **Packaging**: Finally, the salt is transferred to the bag filling and packing machines. The packaging process is automated to ensure accuracy and efficiency. The plant offers various packaging options, including small sachets, big pouches, and bulk bags, catering to different customer requirements. The finished products are then stored in a dedicated area, ready for distribution.



Figure 4.1 Salt Processing Flow

Source: Study process description; diagram drawn for this edition.

4.5 Plant Capacity and Production Program

4.5.1 Plant Capacity

The proposed salt processing plant has an installed production capacity of 96,000 tons per year. This capacity is calculated based on a production schedule of 300 working days annually, with the plant operating in a single shift of 8 hours per day. The breakdown of the production capacity is as follows:

Table 4.2 Plant Capacity Calculation

Description	Unit	Capacity
Production Capacity per Hour	tons	40
Production per Hour	kg	40,000
Production per Day	kg	320,000
Production per Year	kg	96,000,000

Source: Original study.

4.5.2 Capacity Utilization Rate

The plant is expected to gradually ramp up its capacity utilization over the first few years of operation, achieving near-full capacity by the fourth year. The projected capacity utilization rates are as follows:

- **First Year**: 70%
- **Second Year**: 80%
- **Third Year**: 90%
- **Fourth to Tenth Year**: 95%

4.5.3 Production Programme

The production programme is structured to align with the projected capacity utilization rates. The plant will operate on a single 8-hour shift per day for 300 days a year. Below is the projected production programme over the first ten years:

Table 4.3 Production Programme

Year	Capacity Utilization (%)	Production (kg/year)	Production (tons/year)
Year 1	70%	67,200,000	67,200
Year 2	80%	76,800,000	76,800
Year 3	90%	86,400,000	86,400
Years 4-10	95%	91,200,000	91,200

Source: Original study.

Assumptions

- **Maintenance and Repair:** 0.5% of fixed investment cost (Estimated to be Birr 1,853,750 per annum)
- **Administrative Expenses:** 0.5% of operating cost
- **Marketing and Sales:** 1% of sales
- **Logistics and Distribution:** 1% of sales

Table 6.10 Projection of Operating Costs, Years 1–4

Year	Year 1	Year 2	Year 3	Year 4
Capacity Utilization (%)	70%	80%	90%	95%
Direct Costs				
Raw Materials (Birr)	552,104,000	630,976,000	709,848,000	749,284,000
Transportation (Birr)	315,000,000	360,000,000	405,000,000	427,500,000
Utilities (Birr)	27,865,000	27,865,000	27,865,000	27,865,000
Indirect Costs				
Maintenance and Repair (Birr)	1,853,750	1,853,750	1,853,750	1,853,750
Administrative Expenses (Birr)	4,474,845	5,094,205	5,713,565	6,023,245
Marketing and Sales (Birr)	11,424,000	13,056,000	14,688,000	15,504,000
Logistics and Distribution (Birr)	11,424,000	13,056,000	14,688,000	15,504,000
Total Operating Cost (Birr)	**924,145,595**	**1,051,900,955**	**1,179,656,315**	**1,243,533,995**

Source: Study financial model. Amounts in Birr (2024 prices) unless stated.

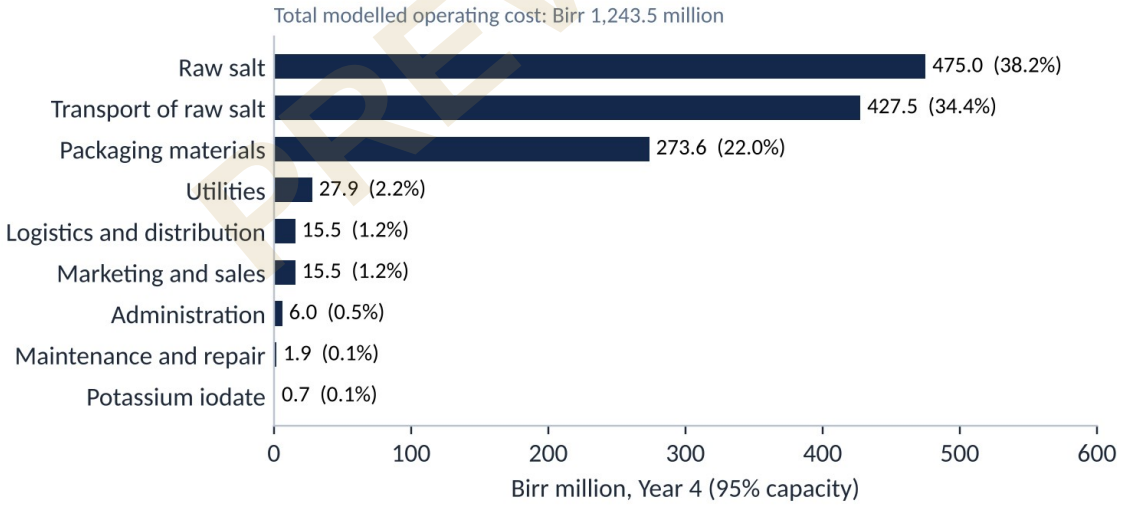


Figure 6.2 Year 4 Operating Cost Structure (as Modelled)

Source: Material, transport, utility and indirect cost tables. Salaries and benefits (Birr 17.98 million) are not included in the original model.

- **Year 1 (70% Capacity Utilization):** The total operating cost is Birr 924,145,595.
- **Year 2 (80% Capacity Utilization):** The total operating cost increases to Birr 1,051,900,955 as production scales up.
- **Year 3 (90% Capacity Utilization):** The operating cost continues to rise, reaching Birr 1,179,656,315.
- **Year 4 (95% Capacity Utilization):** At near full capacity, the operating cost is projected to be Birr 1,243,533,995.

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Table 6.13 Profit and Loss Summary, Years 1–10

Year	Profit Before Tax (Birr)	Profit Tax (Birr)	Net Profit (Birr)
Year 1	147,192,155	Grace Period	147,192,155
Year 2	182,636,795	Grace Period	182,636,795
Year 3	219,775,955	65,932,786	153,843,168
Year 4	242,016,993	72,605,098	169,411,895
Year 5	246,535,712	73,960,714	172,574,998
Year 6	264,354,431	79,306,329	185,048,102
Year 7	268,873,150	80,661,945	188,211,205
Year 8	273,391,868	82,017,560	191,374,308
Year 9	277,910,587	83,373,176	194,537,411
Year 10	282,429,306	84,728,792	197,700,514

Source: Study financial model. Amounts in Birr (2024 prices) unless stated.

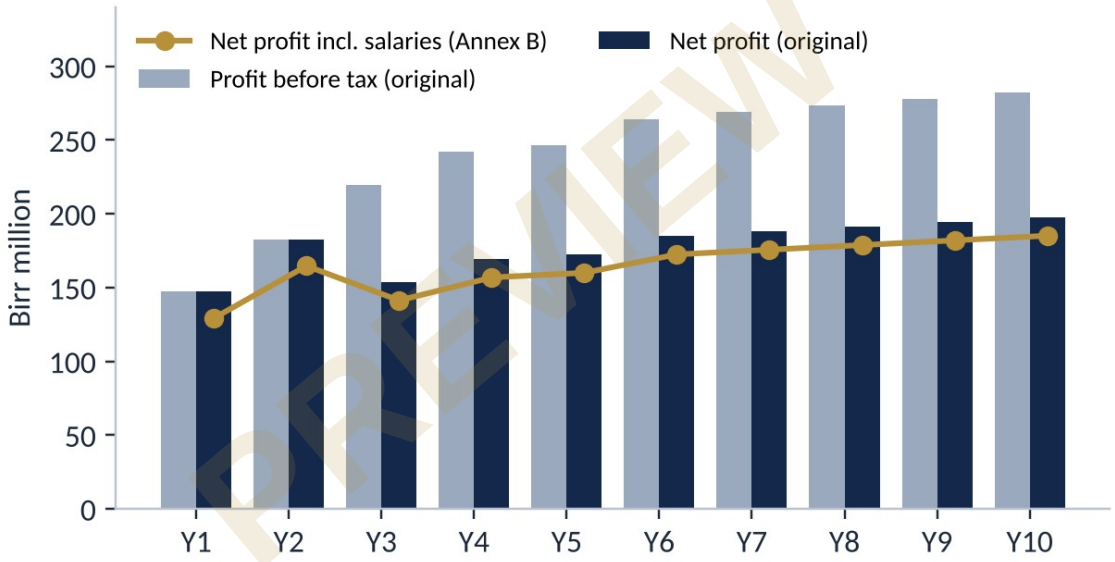


Figure 6.3 Profit Before Tax and Net Profit, Years 1–10

Source: Profit and loss summary; adjusted net profit from Annex B.

Edition note: profit before tax equals revenue less the modelled operating costs, depreciation and interest (reproduced from the original). Years 1–2 assume an income-tax exemption (labelled "grace period" in the original); eligibility under current investment incentives was not verified. Income Tax (Amendment) Proclamation No. 1395/2025 introduced a minimum tax of 2.5% of turnover that may apply where incentives reduce tax (EY, 17 December 2025); it is not modelled. Tax from Year 3 is 30% of profit before tax.

Year 1 and Year 2

- The project shows strong profitability from the first year, with profits before tax increasing from approximately Birr 147 million in Year 1 to about Birr 183 million in Year 2.
- During the grace period, no profit tax is applied, resulting in the entire profit before tax being recorded as net profit.

Year 3 to Year 5

- Starting from Year 3, profit tax becomes applicable, significantly reducing net profits. Despite this, the project continues to generate healthy profits, with net profit stabilizing around Birr 153 to 173 million.

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