



NIIR PROJECT CONSULTANCY SERVICES

INDUSTRIAL KNOWLEDGE · FEASIBILITY EXPERTISE · GLOBAL REACH

CLIENT SUCCESS CASE STUDY

Manufacturing of Activated Bleaching Earth from Bentonite

A Strategic Industrial Investment Study for M/s. Manaseer Group, Jordan

“Transforming Regional Resources into Global Industrial Value”

CLIENT

M/s. Manaseer Group

Jordan, Middle East

www.niir.org | www.entrepreneurindia.co | info@niir.org | +91 9097075054



01 About Niir Project Consultancy Services (NPCS)

Niir Project Consultancy Services (NPCS) is a globally recognized industrial consultancy organization dedicated to guiding entrepreneurs, MSMEs, and large-scale investors in establishing profitable, sustainable, and technically sound manufacturing ventures. Founded on decades of deep industrial expertise, NPCS delivers bankable Detailed Project Reports (DPRs), techno-economic feasibility studies, and strategic advisory services that help clients make confident, data-driven investment decisions across hundreds of industries.

■ Core Services

- ▶ Detailed Project Reports (DPR) — comprehensive investment blueprints covering technical, financial and market dimensions
- ▶ Techno-Economic Feasibility Studies — scientific evaluation of project viability across technology, cost and profitability axes
- ▶ Market Research & Analysis — demand assessment, competitive landscape, pricing trends and growth forecasting
- ▶ Engineering & Process Advisory — plant layout, machinery selection, process optimization and implementation guidance

■ Our Authority in Numbers

85 COUNTRIES SERVED	150K+ CLIENTS SERVED	150K+ SUCCESSFUL PROJECTS DELIVERED	30+ YEARS IN CONSULTING
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NPCS has earned the trust of investors, governments, development banks, and industrial institutions across Asia, Africa, the Middle East, and beyond. Our research-backed project reports are recognized as bankable, credible, and implementation-ready by financial institutions worldwide.

02 Project Snapshot

Client	M/s. Manaseer Group
Location	Jordan, Middle East
Industry Sector	Specialty Mineral Processing — Activated Bleaching Earth
Project Recommended	Manufacturing of Activated Bleaching Earth from Bentonite
Consultancy Scope	Techno-Economic Feasibility Study, Market Assessment, Project Costing & Strategic Advisory
Implementation Status	Client reviewed feasibility insights and confirmed implementation planning
End Markets	Edible oil refining, Petrochemicals, Lubricants, Biodiesel, Pharmaceuticals

▪ Client Overview

M/s. Manaseer Group is a prominent, diversified business conglomerate headquartered in Jordan. The Group has established a strong presence across multiple industrial and commercial sectors in the Jordanian economy and is consistently seeking new avenues for strategic investment and value creation.

Recognizing the growing potential of Jordan's mineral resource base and the region's strategic position as a bridge between European, Asian, and African markets, the Manaseer Group sought to identify a large-scale manufacturing investment opportunity that would leverage locally available natural mineral resources, address growing industrial demand in regional and global markets, generate strong long-term financial returns, and establish a competitive manufacturing presence in specialty industrial materials.

The client approached Niir Project Consultancy Services (NPCS) seeking independent, professional expertise in identifying the right manufacturing project, with deep industrial knowledge, proven market research capabilities, and the ability to deliver a rigorous, bankable feasibility study that could support final investment decisions.

03 Challenges & Problem Statement

Before engaging NPCCS, M/s. Manaseer Group faced a complex set of strategic, technical, and financial challenges typical of large-scale industrial investment decisions:

CHALLENGE	DESCRIPTION
Market Uncertainty	Identifying which manufacturing sector offered genuine, sustained demand — rather than short-term trends — required comprehensive global and regional market intelligence that the client did not have internally.
Technical Complexity	Evaluating the technical feasibility of mineral-based manufacturing processes — including chemical activation technologies, plant infrastructure, and production efficiency benchmarks — required specialized engineering knowledge.
Financial Risk Assessment	Without reliable cost modeling, investment estimates, and return projections, committing to a large-scale manufacturing facility carried substantial financial risk.
Raw Material Supply Chain	Confirming the availability, quality, and supply continuity of bentonite clay — the primary raw material — as well as associated chemical inputs required dedicated supply chain analysis.
Regulatory & Implementation Complexity	Understanding the regulatory environment in Jordan, plant permitting requirements, and building a realistic implementation roadmap required local and international experience.

04 NPCS Approach & Strategic Methodology

NPCS deployed a structured, multi-phase consulting approach to guide M/s. Manaseer Group from initial project identification through to implementation planning. This end-to-end methodology is designed to eliminate uncertainty and deliver investment-grade insights.

- ▶ Phase 1 — Industrial Opportunity Identification: A broad-based evaluation of manufacturing sectors aligned with Jordan's natural resource base and the client's investment objectives. Activated Bleaching Earth manufacturing was identified as the optimal recommendation based on resource availability, demand dynamics, and profitability potential.
- ▶ Phase 2 — Market Assessment & Demand Forecasting: A comprehensive global and regional market analysis covering demand trends, key end-use sectors, competitive landscape, import-export dynamics, and price benchmarks, with emphasis on Jordan's export potential to Middle Eastern, Asian, and African markets.
- ▶ Phase 3 — Raw Material & Supply Chain Analysis: Assessment of the availability, quality grades, pricing, and sourcing logistics of bentonite clay and chemical activating agents, confirming viable supply chain options within the region.
- ▶ Phase 4 — Technical Feasibility Evaluation: Detailed analysis of clay activation technology, reactor and kiln systems, quality control processes, and plant infrastructure requirements.
- ▶ Phase 5 — Financial Modeling & Investment Evaluation: A comprehensive financial model covering capital investment requirements, operating cost structures, revenue projections, profitability metrics (ROI, IRR, payback period), and break-even analysis.
- ▶ Phase 6 — Implementation Planning: Strategic guidance on plant location, capacity planning, phased implementation, equipment procurement, and operational setup.

05 Scope of Services Delivered by NPCCS

- **Techno-Economic Feasibility Study**
 - ▶ Complete assessment of the project's technical and economic viability
 - ▶ Process technology evaluation and recommended production model
 - ▶ Plant capacity planning and infrastructure layout guidance
- **Market Research & Demand Analysis**
 - ▶ Global activated bleaching earth market size, growth projections, and key drivers
 - ▶ End-use sector analysis: edible oils, mineral oils, lubricants, biodiesel, pharmaceuticals
 - ▶ Regional demand assessment and Jordan's export market potential
 - ▶ Competitive landscape and pricing benchmark analysis
- **Financial Modeling & Project Costing**
 - ▶ Capital investment estimation (land, buildings, machinery, utilities, working capital)
 - ▶ Operating cost modeling (raw materials, labor, energy, overheads)
 - ▶ Revenue projections and profit margin analysis
 - ▶ ROI, IRR, payback period, and NPV calculations
 - ▶ Break-even analysis and sensitivity scenarios
- **Raw Material & Supply Chain Assessment**
 - ▶ Bentonite clay availability analysis in Jordan and neighboring regions
 - ▶ Sourcing options for sulfuric acid and other chemical activating agents
 - ▶ Supply continuity risk assessment and procurement strategy
- **Implementation Roadmap**
 - ▶ Phase-wise project execution timeline
 - ▶ Equipment and machinery procurement guidance
 - ▶ Regulatory compliance and permitting framework
 - ▶ Organizational and staffing structure recommendations

06 Technical Insights: The Manufacturing Process

Activated bleaching earth is produced through a specialized acid-activation process applied to raw bentonite clay. This chemical treatment dramatically enhances the natural adsorption capacity of the clay, enabling it to effectively remove impurities — including pigments, phospholipids, trace metals, and odor compounds — from oils and industrial liquids.

STEP	PROCESS	DESCRIPTION
1	Raw Bentonite Extraction & Quality Testing	Bentonite clay is sourced, tested for mineral composition, and graded for suitability in bleaching earth production
2	Crushing & Pre-Treatment	Raw bentonite is crushed and dried to reduce moisture content to required processing levels
3	Acid Activation	Dried bentonite is mixed with dilute sulfuric acid (H ₂ SO ₄) under controlled temperature and duration conditions, expanding the clay's pore structure to increase adsorption capacity
4	Washing & Neutralization	Acid-treated clay is thoroughly washed with water to remove excess acid and neutralized to achieve the required pH specifications
5	Drying & Calcination	Washed product is dried in rotary dryers and, where required, calcined in kilns to achieve the desired moisture content and activity levels
6	Milling & Classification	Dried material is milled to required particle size distribution and classified using screening systems
7	Quality Testing & Packaging	Final product is rigorously tested for bleaching capacity, moisture content, free acidity, and particle size before being packaged for dispatch

▪ Key Machinery & Equipment

- ▶ Jaw crushers and impact mills for size reduction
- ▶ Rotary dryers and calcination kilns for thermal processing
- ▶ Acid activation reactors with temperature and agitation control
- ▶ Washing and filtration systems (filter presses, centrifuges)
- ▶ Ball mills and classifiers for particle size control
- ▶ Quality testing laboratory equipment
- ▶ Automated packaging and bagging systems

07 Financial & Market Analysis

Global Market Overview

The global activated bleaching earth market is one of the most stable and consistently growing segments within industrial mineral processing, underpinned by the fundamental necessity of edible oil refining and industrial purification operations worldwide.

MARKET INDICATOR	2023 / CURRENT	2030 PROJECTION
Global Market Value	~USD 3.13 Billion (2025)	~USD 4.1 Billion
Market CAGR	~5.5% per annum	Sustained growth trajectory
Global Consumption Volume	3.9+ Million Metric Tons	Projected to exceed 5 MT
Share from Edible Oil Refining	~72% of total usage	Maintaining dominant share
Key Growth Markets	Middle East, Asia-Pacific, Africa	High-growth export regions

Investment Outlook

- ▶ Moderate capital investment with scalable production capacity, enabling phased deployment and risk management
- ▶ Strong gross margin potential due to significant value addition from raw bentonite to high-value activated bleaching earth
- ▶ Attractive payback period driven by consistent industrial demand and stable pricing
- ▶ Export-oriented revenue potential leveraging Jordan's strategic trade connectivity
- ▶ Limited direct competition in the regional market, offering first-mover advantages

Strategic Financial Indicators

- ▶ Project Category: Medium-to-large scale capital manufacturing project
- ▶ Revenue Streams: Domestic sales to oil refiners + export to regional and international buyers
- ▶ Profit Margin Potential: Above-average for the mineral processing sector
- ▶ ROI Indicators: Positive NPV with attractive IRR relative to benchmark
- ▶ Risk Profile: Low-to-moderate — backed by stable, non-cyclical industrial demand

08 Results & Outcomes

The comprehensive consulting engagement by NPCCS delivered clear, measurable value across multiple dimensions for M/s. Manaseer Group:

OUTCOME	DESCRIPTION
Strategic Clarity	The client gained a clear, evidence-based understanding of the manufacturing opportunity — including market size, competitive dynamics, and growth drivers — eliminating ambiguity and enabling a confident investment decision.
Technical Readiness	A fully documented, technically validated manufacturing model — covering process flow, machinery requirements, plant layout, and production parameters — provided the client with a ready-to-execute technical blueprint.
Financial Confidence	Detailed financial projections, investment estimates, and profitability analysis gave the Manaseer Group a bankable financial model that could be presented to institutional financiers and internal stakeholders.
Risk Mitigation	By identifying and addressing key investment risks — including raw material supply, market demand, technical complexity, and regulatory requirements — before capital commitment, NPCCS significantly reduced the client's overall investment risk profile.
Implementation Momentum	With a structured implementation roadmap delivered by NPCCS, the Manaseer Group was able to immediately transition from feasibility review to active implementation planning — saving months of internal research and planning time.

Outcome: M/s. Manaseer Group reviewed the NPCCS techno-economic feasibility study and strategic analysis, expressed full confidence in the recommended project, and agreed to proceed with implementation planning for the Activated Bleaching Earth manufacturing facility in Jordan.

CLIENT TESTIMONIAL

“Niir Project Consultancy Services provided valuable expertise in identifying a viable industrial manufacturing opportunity aligned with our regional resources and global demand trends. Their feasibility analysis was thorough, data-driven, and clearly structured. The strategic guidance and market insights they delivered gave us the confidence to move forward with our investment decision. NPCS is a trusted partner for anyone serious about industrial project development.”

— Management Team, M/s. Manaseer Group, Jordan

WHY CHOOSE NIIR PROJECT CONSULTANCY SERVICES

Your investment deserves expert guidance — here is why NPCS is the right partner.

▪ 1. Proven Industrial Expertise

With decades of experience and a vast portfolio of project reports published, NPCS brings unmatched depth of knowledge across hundreds of manufacturing and processing industries — from specialty chemicals to mineral processing, food technology to renewable energy.

▪ 2. Global Market Understanding

NPCS combines deep local insights with a truly global market perspective. Our research teams monitor industrial trends across Asia, the Middle East, Africa, Europe, and the Americas — ensuring that every recommendation is anchored in current, credible market intelligence.

▪ 3. Data-Driven Feasibility Analysis

Every NPCS feasibility study is built on verified primary and secondary data, industry benchmarks, and quantitative financial modeling — not assumptions. Our reports are designed to be bankable, presentation-ready, and decision-ready.

▪ 4. End-to-End Project Support

From initial opportunity identification and market research, through technical feasibility and financial modeling, to implementation planning and post-investment advisory — NPCS is a true end-to-end industrial consulting partner.

▪ 5. Risk Mitigation Focus

NPCS’s methodology is explicitly designed to identify, quantify, and help clients mitigate investment risks before capital is committed — protecting our clients from costly mistakes.

▪ 6. Trusted Worldwide

Our clients include individual entrepreneurs, diversified business groups, development finance institutions, and government agencies around the world. NPCS reports are recognized and accepted by banks, investors, and industrial authorities worldwide.

CONCLUSION

The M/s. Manaseer Group case study illustrates the transformative value that a rigorous, professionally executed techno-economic feasibility study can deliver to industrial investors. By partnering with NPCCS, the Manaseer Group was able to move from investment aspiration to implementation confidence — backed by verified market data, sound technical analysis, and credible financial projections.

The Activated Bleaching Earth manufacturing project represents a compelling industrial opportunity — combining Jordan's mineral resource endowment, strong global demand from oil refining industries, and an attractive financial return profile. With NPCCS's guidance, the Manaseer Group is positioned to establish a competitive, export-capable manufacturing operation that creates long-term economic and industrial value for Jordan.

This case study exemplifies NPCCS's core mission: transforming investment ideas into profitable, sustainable, and technically sound industrial ventures — backed by rigorous research, proven methodology, and decades of industrial expertise.

READY TO BUILD YOUR NEXT INDUSTRIAL PROJECT?

Partner with Niir Project Consultancy Services (NPCS) to transform your investment idea into a profitable industrial venture.

www.niir.org | www.entrepreneurindia.co
info@niir.org
+91 9097075054