

**Feasibility Study Report
Aquaculture Project
Investor/ Fahd Saeed Radda Al-Maliki
Yanbu - KSA**



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- Minor differences may occur in the tables within this report due to rounding.

Recommendations of the study:

- Adopting this promising project and working on supplying the financial and technical needs required to establish it in a way that leads to developments in the type and quality of the products that this project hopes to provide aside from the added developmental, social, and economic value of this project, the economic indicators point to an excellent potential performance both medium-term and long term if we took into consideration the size and nature of this project and its vital products.



Contents	Page
Executive Summary	3
Market Study	9
Technical Study	32
Financial Study	47



Part I

Executive Summary




1- Executive Summary



1.1 Project Idea:

The project is to establish a floating cage fish farming project with an annual production capacity of 7,000 metric tons in Yanbu city on the shore of the Red Sea. The initial license for the aquaculture project was obtained from the General Directorate of Fisheries at the Ministry of Environment, Water and Agriculture with the number 177273/208/1439, dated 1/06/1443 AH. In the name of Mr. Fahad bin Saeed bin Rada Al-Maliki.

Below is the detailed information about the project:

1	Details of the project location	The project is located in Yanbu, Saudi Arabia, about 4 kilometers from the beach, with a total area of 3 thousand dunums. The approval of the Border Guard was obtained by letter (661598) dated 12/21/1442 AH.
2	Project Location Plaque	 <p>Site coordinates:</p> <p>N 24 13 23.75 E 37 40 33, 47</p> <p>N 24 14 9,52 E 37 40 49, 19</p> <p>N 24 13 47, 27 E 37 41 58, 79</p> <p>N 24 12 19, 65 E 37 44, 85</p>
3	Number of floating cages	<p>A total of 200 cages (20 m diameter, 60 m circumference, 15 m depth) will be installed. The location of the floating cages within the sea will be chosen according to the following criteria:</p> <ul style="list-style-type: none"> - Depth: 25-50 meters. - Bottom: Sandy, muddy or rocky and in the path of tidal movement. - Current strength: 0.5 - 1 meter/second. - Surface water temperature: 28 - 30 m. - pH: 7.8 - 8.6. - Dissolved oxygen concentration: More than 5mg/L.



4	Types of fish that will be cultured in the cages	<p>First: Sparus aurata (Gilthead Sea bream)</p>  <p>Bream is one of the European fish that has been successfully farmed in Saudi Arabia, and it was chosen for the following reasons:</p> <ul style="list-style-type: none"> - Great tolerance to temperature differences. - Providing larvae in Saudi hatcheries throughout the year. - High growth rates and harvesting are done within 14 months (harvest weight 400-450g). - They can be farmed at high density with no predation phenomenon. - Characterized by a prestigious taste, rich in omega-3 vitamins, and a very affordable price. <p>Second: Asian sea bass (Barramundi) (Lates calcalifer) Asian sea bass</p>  <p>The Asian Sea bass is one of the fish that has also been successfully farmed in Saudi Arabia, and it was chosen for the following reasons:</p> <ul style="list-style-type: none"> - Tolerance to high temperatures and salinity. - Providing larvae in Saudi hatcheries throughout the year. - High growth rates and harvesting is done within 10 months (harvest weight 700-750g). - Used in diets for slimming and weight loss, as it does not contain saturated fats, only unsaturated fats such as omega-3. - It is characterized by a prestigious taste and a very affordable price.
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2.1 Project Objective:

- To reduce the food gap resulting from the decline in the production of traditional fisheries as a result of the increase in fishing operations and their poor production, and to meet the steady increase in demand for aquatic life as a result of population growth and changing consumption patterns as a result of health awareness of the nutritional value of fish.
- Contributing to the tremendous renaissance witnessed by the Kingdom in general and the northwestern region in particular, and the market's need for the products produced by the project. This is in support of the objectives of Ruya 2030 to reach 600,000 tons by 2030.
- The project also aims to keep pace with the high demand in the export sector of this growing sector, with reference to the Kingdom's strategic geographical location close to local, regional and global marketing centers, the prosperity of the national market, the availability of good infrastructure, communications, and the availability of cadres.
- Achieving high profitability rates that exceed the interest rates in the Saudi market.

3.1 Reason for selecting the project:

- The economic and social development achieved by the Kingdom in general and the western region in particular in recent years, which is an investment guarantee for the success of projects in various sectors. Increased production will lead to significant socio-economic benefits for the Kingdom, increasing the potential to create more than 200,000 direct and indirect jobs by 2030.
- Rising income rates in the Kingdom, and hence rising demand for various food products in Saudi Arabia to help raise the average consumption from 11.5 kg to the global average of 22 kg of fish.
- The Kingdom's legislation and laws do not conflict with the establishment of such projects that are necessary for all members of society, and the Kingdom is working to support such projects. It aims to attract investments from the private sector worth SAR 50 billion until 2030 to establish aquaculture projects, feed factories, processing factories, and other facilities.

4.1 Objective of the study:

- The study aims to investigate the current and future feasibility of the floating cage fish farming project in the Kingdom of Saudi Arabia as a preliminary step to consider the safety of entering into an investment decision related to these products in Saudi Arabia.
- It also examines the trend of fish and marine life consumption and demand in the Saudi market compared to similar and alternative products in general.
- Analyze the competitive situation among producers and marketers of fish and marine life in the Saudi market, and identify the real opportunities available to new investors in this field.
- Identify the sectors and policies affecting the consumption of fish and marine life in the Kingdom of Saudi Arabia and know the statutory requirements for establishing the project according to the statutory requirements issued by the concerned authorities.



5.1 Methodology:

The following is an explanation of the methodology followed by the consultant to carry out the different phases of the study:

1.5.1 Desk research:

The desk research represents the first line of the study methodology. This desk research aimed at an integrated work in collecting the definitional and statistical information required for the study from its documented sources. All library and statistical information were collected from references, scientific periodicals, governmental and non-governmental institutions, and specialized research companies, as follows:

- General Authority for Statistics.
- Ministry of Environment, Water and Agriculture.
- Ministry of Finance.
- Ministry of Commerce.
- Saudi Aquaculture Association.
- Agricultural Development Fund.
- Food and Agriculture Organization of the United Nations (technical paper on fisheries and aquaculture).
- Saudi Central Bank (SAMA).
- Riyadh Chamber of Commerce and Industry.
- Information provided by the investor about the project.
- The Internet.
- Previous studies available with the consultant.

2.5.1 Field research:

The field research represents the second axis of the study methodology. This field research included identifying the nature and specifications of the products, then researching their availability, the status of internal competition, the nature of the markets and consumers of the products under study, and the trends and causes of future demand in this sector.

2.5.1 Data analysis and report writing:

This stage dealt with analyzing the data obtained and reviewing them to ensure the degree of reliability by comparing them with each other and then selecting the most logical and based on that, the bases for preparing forecasts, estimates, and data presentation were determined.



6.1 Summary of the project's financial indicators:

The study concludes that the financial indicators of the project are considered very excellent despite the great conservatism that was assumed when estimating revenues. Based on the above, the study recommends adopting this vital project and working to provide the necessary financial and technical needs for its implementation:

Summary table of financial indicators in case of full operation

Item	(SR) Cost
The Port (Marina)	32,000,000
Buildings and civil works	21,762,500
Machinery and equipment	106,575,000
Transportation and Logistics	14,450,000
Office Equipments	804,000
Furniture	1,736,000
Pre-operating expenses	10,626,768
Total Assets	187,954,268
Working Capital	112,045,733
Total Investment Costs	300,000,000
Annual operating expenses	
Raw Materials	52,015,000
Salaries and wages	27,552,000
Rent	7,141,000
Maintenance	4,533,575
Insurance	3,438,958
Utilities	10,584,000
Marketing	4,615,200
Administration Exp.	2,166,000
Depreciation & Amortization	24,436,143
Total annual operating expenses	136,481,875

Item	Cost (SR)
Sales	205,585,881
Total of CGS	124,299,511
Gross Margin	81,286,370
Estimated Zakat	15,193,959
Net profit for the year	67,136,240
Financial Summary	
Gross Profit Margin (GP)	59.6%
Net Profit Margin (NP)	26.7%
Return on Assets (ROA)	13.8%
Return on Equity (ROE)	11.4%
Current Ratio	13.0
Leverage Debt Ratio	0.2
NPV (10 Years)	72,021,718
PI (10 Years)	1.39
IRR (10 Years)	%17.0
Payback Period (years)	5y-1m
Break Even Point	40%
Economic Value Added	129,406,464
Economic value added per worker	499,639
Economic value added / project cost	0.43
Number of employees	259



Part 2

Market Study



2- Market Study:

2.1 Sector Overview

2.2.1 Saltwater aquaculture with floating cages system:

The national program for development of fisheries in the kingdom, which was approved by the Council of Ministers by Resolution No. (514), and is supervised by the Ministry of Environment, Water and Agriculture of Saudi Arabia, is considered A comprehensive national strategy to develop the fisheries sector and enhance its economic and sustainable development role. The program aims to achieve total optimization regarding the natural resources found in the kingdom's fisheries and to support the aquaculture sector to increase the gross national product and to achieve self-sufficiency and to cover the kingdom's needs regarding seafood. And to diversify sources of income and boost the economy of the kingdom.

Aquaculture

Aquaculture is defined as rearing certain aquatic species (Fish, crustaceans, shellfish, algae, and more) with human supervision in controlled environments, in certain areas in cages, racks or bags that are floating. It is of two types: inshore which could be conducted in an internal body of water on your own farms and the second is onshore wherein the fish are reared in saltwater bodies inside the floating cages.

Its start in Saudi Arabia

Aquaculture started in Saudi 35 years ago based on recommendations made by international bodies to those in the kingdom. Including studies done on the status of fisheries in Saudi Arabia. The first steps were conducted in collaboration with Food and Agriculture Organization (FAO) to establish an aquaculture center in Jeddah (now known as the Fisheries Research Center) in 1982 and that is to research the local species suitable for aquaculture in addition to providing technical support and consult to the budding aquaculture farms at the time.

Development and achievement

This sector developed over time until its exports became higher than the exports in the Kingdom of Saudi Arabia, and the kingdom became one of the main exporters of white shrimps internationally with a production power that reached 60,000 tons in 2018, 50,000 of which were exported to over 32 countries in the world. The Ministry of Environment, Water and Agriculture targets that the production of seafood products would reach 100,000 tons in 2020 and 600,000 tons in 2030.

Strategic goal

The Ministry of Environment, Water and Agriculture seeks to develop the aquaculture sector and compete with it worldwide because it seems a promising sector for the role it could play in boosting and supporting the national economy and it is one of the fastest growing sectors at a rate of 6% annually. And the ministry aims that through the sector it would achieve sustainable development and food security throughout the kingdom and cover its needs of sea food and develop coastal rural areas and to limit the migration of their citizens to major cities in addition to the maintenance of their natural resources through minimizing the pressure on fisheries .It also aims to establish paths for partnerships with the private sector and pull internal and external investments to establish aquaculture projects along with feed and seafood



preparation factories, in addition to finding job opportunities for all genders reaching up to 24,000 direct and indirect jobs and getting to a Saudization rate of 50% in the sector.

Why Saudi Arabia?

The aquaculture sector has a large potential to grow in the kingdom due to having plentiful natural resources on the coastline which stretches over 2,600 kilometers and it is carrying capacity up to 5 million tons of fish. The kingdom is also known internationally to be per the International Biosecurity Standards Programs where It seeks to ensure that all companies operating in the sector have a certificate of Best Aquaculture Practices (BAP)

Vision 2030 Initiatives

Included in the initiatives of the National Industry Development and Logistics Services Program launched recently by His Royal Highness Prince Mohammed bin Salman bin Abdulaziz Al Saud, Crown Prince and Prime Minister, the Ministry of Environment, Water and Agriculture of Saudi Arabia had five pioneering initiatives relating to the aquaculture sector which will contribute to an increase in the national output and supporting the local economy and achieving food security and the initiatives consist of:

- The “Marketing Campaigns” initiative: which seeks to introduce the health benefits and nutritional value of seafood and the encouragement of eating it and increase personal consumption from 9kgs to 13kgs. It also looks to increase the public awareness of fish species that are cultivated locally and highlight their quality when compared to imported fish.
- The “Engage Investors” initiative: which aims to increase the investment in the aquaculture sector through attracting budding local and international investment firms in the market which would aid in the betterment of the production locally and increase exports and decrease imports and achieve perfect competition which would decrease the production costs of fish.

The “Developing the infrastructure to support marine communities” initiative:

Which aims to find an attractive investment environment and provide comprehensive logistic services in addition to developing fishing ports and floating docks and ice factories and petrol stations and boat maintenance workshops, etc. and making it locations that contain the primary services which would serve the beneficiaries directly aside from creating an inviting tourism environment

The “Developing infrastructure to support aquaculture”: which aims to prepare the foundations of aquaculture (fish hatcheries, feed and preparation factories) to get production to 600,000 tons of fish by 2030. It also aims to sustain aquaculture and provide job opportunities for cadres of all genders, in addition to encouraging foreign investments, and reducing the imports of the aquaculture industry.

The “Support research and development to improve fisheries productivity” initiative: which is done in collaboration with famous local and international research facilities with the goal of introducing new fish species with economic feasibility and develop feeding systems and ensuring their quality and additionally decreasing mortality in fish and improving them



2.2.2 Investment opportunities in aquaculture in saltwater with floating cage systems:

The kingdom of Saudi Arabia excels by having a strategic location with a coastline that stretches for 1,800 kms along the red sea. And due to its neighboring of the red sea it has perfect conditions for aquaculture and producing high quality seafoods and of its characteristics:

- Pure water with 7.04mg/l of dissolved oxygen
- Low wave amplitudes: 0.5m to 1m
- Suitable wave base: 20m to 50m (depending on the location)
- appropriate water salinity: 35 to 41 parts per thousand (depending on the location)
- Varying water temperatures along the coast: 18°C (in the north) 38°C (in the south)

Furthermore, the kingdom took the initiative of developing multiple opportunities for investment and laid down the groundwork for investors to establish their own aquaculture projects in 15 locations that the Saudi government had selected after detailed analysis of the red sea coastlines and were found to be suitable for aquaculture. Additionally, there locations are of the approved standards that the marine fisheries department of the Ministry of Environment, Water and Agriculture of Saudi Arabia (MEWA).

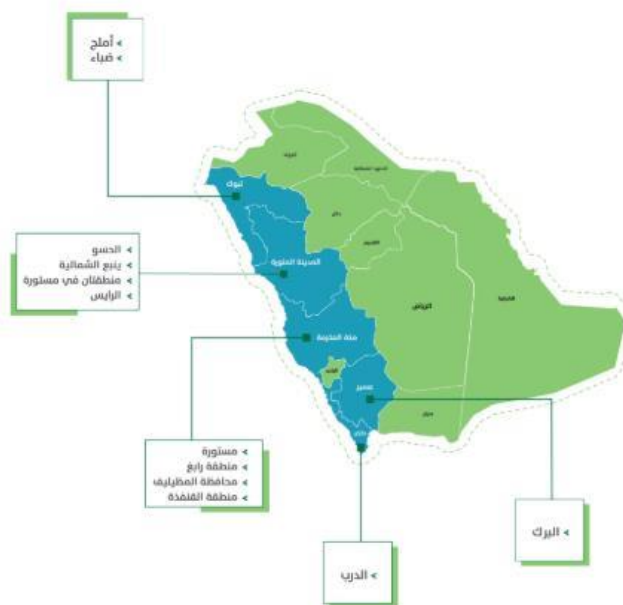
It was also taken into account that these investment opportunities are in line with the aquaculture value chain and are equipped with everything an investor needs, including feed factories, hatcheries, and care and breeding ponds.

The locations that were specified are:

- Tabuk (2 locations)
- Jazan (1 location)
- Asir (1 location)
- Mekkah (4 locations)
- Madinah (5 locations)
- These investment opportunities aim to:
 - Produce seafood such as bream and barramundi
 - Develop the value chain of aquaculture
 - Increase the production power from 80,000 tons in 2019 to 600,000 tons by the year 2030

It is expected that the consumption of seafood in Saudi Arabia will rise by 7.4% yearly by 2030 and this increase

in local consumption is attributed to the increase in population and the increase in the rate of individual consumption which is expected to generate increasing demand on seafood to around 500,000 tons in 2030.



1. Tabuk

This investment opportunity requires the construction of aquaculture with floating cage system sites in Umluj and Duba in the city of Tabuk. And that is because these locations have geographical advantages and a suitable environment as they both contain a network of roads connected to the Yanbu-Jeddah highway. They are also close to the Yanbu seaport which is located on the coastline of the red sea. Duba, which is in the northwest of the Kingdom, and Umluj, located south of Al-Wajh Governorate and north of Yanbu both overlook the red sea. And they are characterized by a tropical desert coastal climate affected by the presence of the Red Sea, and the temperatures there reach 36 degrees Celsius in the summer, and 22 degrees Celsius in the winter. The geographical location of the project is unique because it fulfills the required conditions and is located 20 km from the port and marine moorings, as well as from the international and regional maritime navigation routes, and the site is in accordance with the chemical standards approved by the Ministry of Environment, Water and Agriculture. Fish farming; Bream and Barramundi: The projects are located on a total area of 1 square kilometer and contain 24 cages with a production capacity of 21 tons each, while the total production capacity of the project is 500 tons.

2. Jazan

This investment opportunity requires the establishment of aquaculture sites with a system of floating cages in Al-Darb Governorate in Jazan because it is suitable for aquaculture geographically and environmentally. Al-Darb is one of the governorates of the city of Jazan, which expanded very quickly due to its exceptional location. It has a network of roads connected to the Jazan-Jeddah highway, and it also provides easy access to the Red Sea coast.

3. Al-Darb Governorate:

One of the governorates north of the city of Jazan, which is in the southwest of the Kingdom. Al-Darb Governorate expanded very quickly due to its unique location throughout the southern region, as it is located at an important international crossroads, a triangle where commercial and service facilities, restaurants and car service facilities intersect in Makkah. The geographical location of the project is unique in that it fulfills the required conditions and is located 40 km from the port and marine moorings as well as from the international and regional maritime navigation routes. The site also conforms to the chemical standards approved by the Ministry of Environment, Water and Agriculture. fish farming; Bream and Barramundi: The projects are located on a total area of 1 square kilometer and contain 24 cages with a production capacity of 21 tons each, while the total production capacity of the project is 500 tons.

4. Asir

This investment opportunity requires the establishment of aquaculture sites with a floating cage system in Al-Barak Governorate in Asir, one of the governorates of the Tihama region located on the Red Sea coast, which makes it a suitable area geographically and environmentally for aquaculture. The area has a network of roads connected to the Jazan-Jeddah highway, and it is close to the port. Bahri, thus providing easy access to the Red Sea.



5. Al-Barak Governorate

It is in Al-Barak Governorate, one of the governorates of the city of Asir, located on the Western Coast Road, southwest of the Kingdom, within the Tihama region overlooking the Red Sea. The geographical location of the project is unique, as it fulfills the required conditions and is located 40 km from the port and marine moorings, as well as from the international and regional shipping routes. The site also complies with the chemical standards approved by the Ministry of Environment, Water and Agriculture. fish farming; Sea Bream and Barramundi: The projects are located on a total area of 1 square kilometer and contain 24 cages with a production capacity of 21 tons each, while the total production capacity of the project is 500 tons.

6. Makkah

This investment opportunity requires the establishment of aquaculture sites with a floating cage system in several areas in Makkah Al-Mukarramah, such as the village of Mastoura, Rabigh Al-Muzilif, and Al-Qunfudhah. All these areas are geographically and environmentally suitable for aquaculture. Makkah has a network of roads connected to the Yanbu-Jeddah Highway, and is close to the main seaport, thus providing easy access to the Red Sea shore.

7. Al- Mastoura

Al-Mastoura is located on the western coast. It overlooks the Red Sea and extends from the Red Sea in the west to the desert in the east. It has seven valleys, including: Wadi Al-Kalbi and Wadi Al-Dan. Al-Mastoura village is characterized by a dry tropical coastal climate affected by the presence of the Red Sea. - The geographical location of the project is unique in that it fulfills the required conditions and is located 40 km from the port and marine moorings, as well as from the international and regional shipping routes. It also conforms to the chemical standards approved by the Ministry of Environment, Water and Agriculture fish farming; bream and barramundi.

8. Rabigh Governorate

Rabigh is in the northern part of the city of Makkah, and it is one of its coastal governorates that extends along the Red Sea coast. Rabigh enjoys a strategic location due to its being on a coastal regional axis that joins Makkah Al-Mukarramah, Jeddah, Al-Madinah Al-Munawwarah and North Yanbu. The geographical location of the project is unique because it fulfills the required conditions and is located 30 km from the port and marine moorings, as well as from the international and regional shipping routes. The site also meets the chemical standards approved by the Ministry of Environment, Water and Agriculture. fish farming; bream and barramundi.

9. Al-Muzaylif Governorate

Al-Muzaylif is strategically located, as it passes through the road that connects the southern cities of Saudi Arabia, such as Abha and Jazan on one side, and Yemen on the other. Al-Muzaylif also has a dry tropical coastal climate influenced by the presence of the Red Sea. The geographical location of the project is unique as it fulfills the required conditions and is located 40 km from the port and marinas, as well as from the international and regional shipping routes. The site also meets the chemical standards approved by the Ministry of Environment, Water and Agriculture. fish farming; bream and barramundi.



10. Al-Qunfudhah

Al-Qunfudhah is in the southern part of Makkah, and it is considered one of the coastal governorates of Makkah due to its extension along the Red Sea coast. Al-Qunfudhah has a dry tropical coastal climate influenced by the presence of the Red Sea. The geographical location of the project is unique as it fulfills the required conditions and is located 40 km from the port and marinas, as well as from the international and regional shipping routes. The site also meets the chemical standards approved by the Ministry of Environment, Water and Agriculture fish farming; bream and barramundi.

11. Madinah

This investment opportunity requires the establishment of aquaculture sites with a floating cage system in several areas in Al-Madinah Al-Munawwarah, such as Al-Hisu, Al-Rayis, Al-Mastoura, as well as in the north of Yanbu. All these areas are suitable geographically and ecologically for aquaculture. Makkah has a network of roads connected to the Yanbu-Jeddah Highway, and is close to the main seaport, thus providing easy access to the Red Sea shore.

12. Al Hisu

Al-Hisu is located in the Al-Madina region on the Shaaban coast, which is located within the Red Sea coast. Al-Hisu is characterized by its exceptional geographical and coastal location. It therefore provides an essential location for investment in aquaculture. The geographical location of the project is unique as it fulfills the required conditions and is located 91 km from the port and marinas, as well as from the international and regional shipping routes. The site also meets the chemical standards approved by the Ministry of Environment, Water and Agriculture. fish farming; bream and barramundi.

13. North Yanbu

North Yanbu is in the northern part of Medina along the Red Sea coast. North Yanbu is characterized by its exceptional geographical and coastal location. It therefore provides an essential location for investment in aquaculture. North Yanbu also has a dry tropical coastal climate influenced by the presence of the Red Sea. The geographical location of the project is unique as it fulfills the required conditions and is located 40 km from the port and marinas, as well as from the international and regional shipping routes. The site also meets the chemical standards approved by the Ministry of Environment, Water and Agriculture. fish farming; bream and barramundi.

14. Two locations in Mastorah

Al-Mastoura is in the Rabigh Governorate of Medina, on the Red Sea coast north of Jeddah. The geographical location of the project is unique as it fulfills the required conditions and is located 100 to 103 km away from the port and marine moorings, as well as from the international and regional shipping lanes. The site also meets the chemical standards approved by the Ministry of Environment, Water and Agriculture. Fish farming; bream and barramundi.

15. Ar Rayis

Ar Rayis is in the Badr Governorate of Medina on the Red Sea coast. It is considered a major investment site for aquaculture projects. The geographical location of the project is unique as it fulfills the required conditions and is located 20 km away from the port and marine moorings, as well as from the international and regional shipping routes.



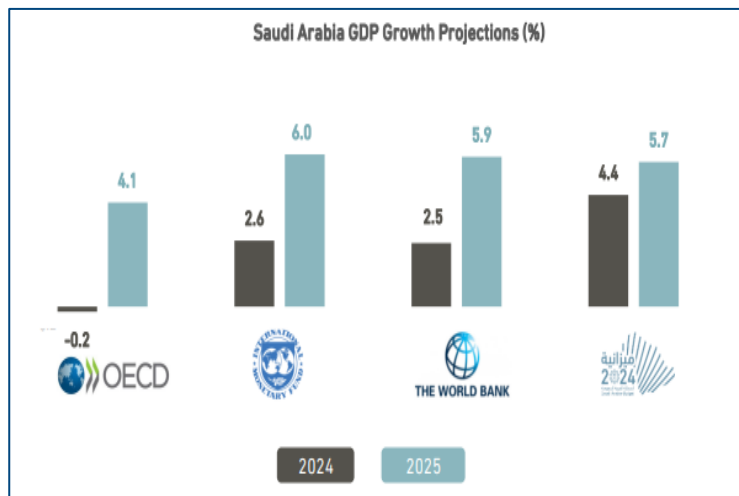
2.2 Factors affecting demand

The demand for the project's products is influenced by:

2.2.1 Saudi Arabia's Economy:

1- GDP Growth:

Saudi Arabia's economy has witnessed a profound positive transformation over the past years, due to the economic reforms that began since the launch of Saudi Vision 2030, which in turn has helped to improve the performance of many economic, financial and investment indicators, which underpinning the Kingdom's goal to be among the top 15 economies worldwide by 2030. Despite geopolitical tensions in the Middle East, the IMF projections, in the WEO April 2024, indicate a 2.6% growth in Saudi Arabia's GDP for 2024, 0.1 percentage points lower than the WEO January 2024, and a 6.0% growth for 2025, up from 5.5% in WEO January 2024, reflecting the strength of Saudi economy.



The Organization for Economic Cooperation and Development (OECD), May 2024, projects Saudi real GDP to decrease by 0.2% in 2024 and to grow by 4.1% in 2025. The World Bank, in April 2024 report, projects real GDP rise by 2.5% in 2024 and 5.9% in 2025. The 2024 Budget Statement issued by the Ministry of Finance (MoF) projects growth in Saudi real GDP by 4.4% in 2024 and 5.7% in 2025, driven by increased non-oil activities' GDP due to the efforts made to enhance the role of the private sector and increase its contribution to the Saudi economy growth. Fitch affirms Saudi Arabia's rating at "A+" with a stable outlook, in its February 2024 report. The agency estimates growth in the non-oil private sector by 4.5% between the years 2024-2025, given Saudi Arabia's continued fiscal reforms. Standard & Poor's (S&P) confirms Saudi Arabia's rating at "A/A-1" with a stable outlook, in its March 2024 report. The agency indicates that this rating is a result of the continuation of the Kingdom's reform agenda in recent years that will improve the Kingdom's economic resilience and will continue to underpin the development of the non-oil sector and fiscal receipts. The agency forecasted GDP growth to average 3.3% from 2024 to 2027.

2- Monetary Sector:

▪ Money Supply and Reserve Assets:

According to SAMA data, the money supply increased by 8.3% YoY in Q1 2024, driven by a rise in time and savings deposits of 20.7% (growth in government time and savings deposits by 13.3%, companies and individuals by 28.1%). Reserve assets rose by 3.8% YoY in Q1 2024, due to an increase in foreign currency and deposits abroad by 14.6% for the same period.



▪ **Interest Rates:**

The average Interbank Offered Rate (SIBOR) recorded 6.2% in Q1 2024, up by 0.75 basis points compared to Q1 2023. The rate of Repurchase Agreement (Repo) increased to 6.0%, and the rate of Reverse Repurchase Agreement (Reverse Repo) to 5.5% for the same period, following the increase of the US Federal Reserve interest rate.

▪ **The volume of lending:**

The volume of lending in Saudi Arabia remains high, as bank claims on the public sector increased by 21.2% YoY in Q1 2024. The credit to the private sector also increased by 10.1% YoY. The real estate loans by banks, also, grew by 11.5% YoY in Q4 2023.

▪ **Inflation:**

Inflation according to GASTAT data, the inflation average, Consumer Price Index (CPI), recorded 1.7% in Q1 2024 compared to 3.0% in the same quarter of the previous year, driven by higher prices of housing, water, electricity, gas and other fuels by 8.4% and restaurants & hotels by 2.4%. In March 2024, the inflation rate, (CPI), reached 1.6% compared to the same period in the previous year, driven by higher prices of housing, water, electricity, gas and other fuels by 8.8% and restaurants & hotels by 2.4%. The Wholesale Price Index (WPI) increased by 3.7% in Q1 2024, compared to the same quarter last year, due to higher prices of other transportable goods — except metal products, machinery and equipment by 9.1% (33.7% of the index weight), and food, beverage, tobacco & textiles by 2.3% (17.3% of the index weight). In March 2024, the WPI increased by 3.8% compared to the same month last year, as a result of higher prices of other transportable goods — except metal products, machinery & equipment and food products, beverages, tobacco & textiles by 9.2% and 2.4%, respectively. Overall, inflation rates are directly affected by geopolitical repercussions and disruptions in supply chains on the supply side. On the demand side, the rise of domestic demand, driven by private consumption, has affected the inflation rate in Saudi Arabia.

3- Capital Market

- Capital Market Tadawul All Share Index (TASI) closed at 12,401 points by the end of Q1 2024, up by 17.1% compared to the same quarter in the previous year. The total market capitalization recorded SAR 10,9 trillion, an increase of 9.6% YoY in Q1 2024. The Parallel Market Index (NOMU) recorded a growth of 30.9% in Q1 2024 compared to the same quarter in the previous year, closing at 26,030 points. The market capitalization of NOMU reached SAR 50.8 billion, up by 31.2% for the same period. The total number of newly listed companies in Q1 2024 reached (9) companies, with 3 companies listed in the main market and 6 companies listed in NOMU.
- The value of the GCC and foreign investors' ownership increased by 36.2% YoY and 20.7% YoY, respectively, in Q1 2024.

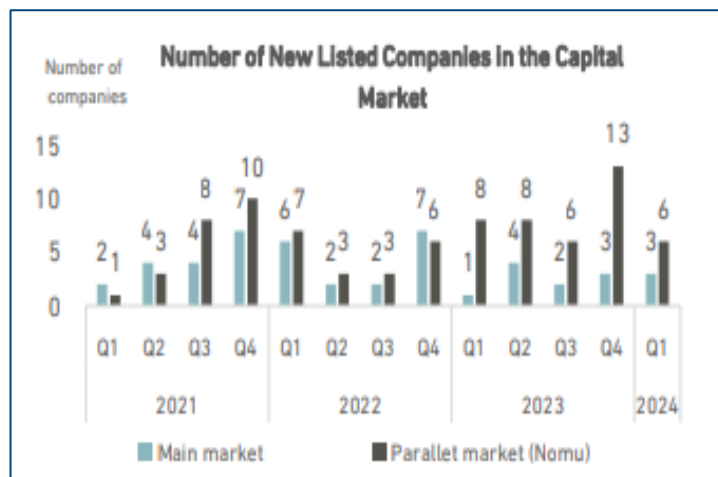


- External Sector (Balance of Payments)

According to the SAMA data for the balance of payments in Q4 2023, the current account recorded a surplus of SAR 16.3 billion, or 1.6% of nominal GDP, compared to a surplus of SAR 76.9 billion for the same quarter in the previous year.

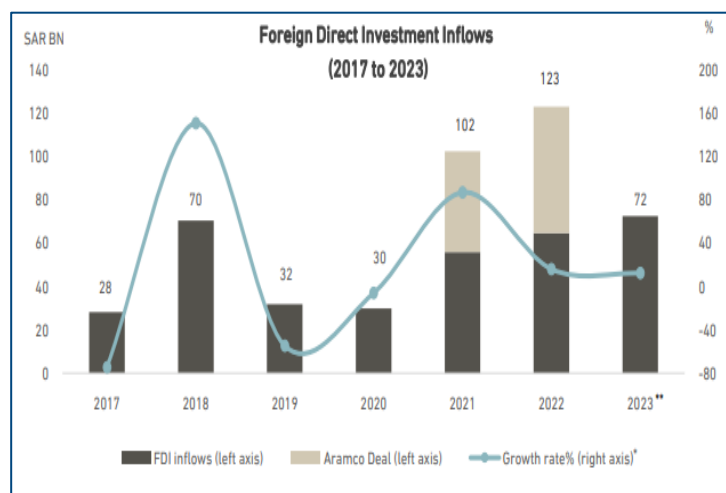
- For international trade performance in Q1 2024, the trade balance recorded a surplus of SAR 90.6 billion, a decline of 24.8% compared to a surplus of SAR 120.5 billion in the same quarter of the previous year.

- Merchandise exports decreased by 5.7%, reaching SAR 291.7 billion for the same period, driven by a decline in oil exports, recording SAR 221.8 billion in Q1 2024 compared to SAR 241.8 billion in the same quarter of the previous year. Non-oil exports (including re-export), on the other hand, increased to SAR 69.8 billion compared to SAR 67.6 billion for the same period in 2023. Similarly, imports increased by 6.4%, reaching SAR 201.0 billion in Q1 2024, compared to SAR 188.9 billion for the same period of previous year. The share of non-oil exports to imports was 34.7% for the same period.



4- Investment in Saudi Arabia

- The nominal GFCF reached SAR 283 billion in Q4 2023, a growth of 6.4% YoY due to a rise in the fixed capital formation of the non-government sector by 5.7%, representing 80.3% of the total fixed capital formation for the same period. The fixed capital formation of the government sector rose by 9.5% for the same period. In addition, the GFCF rose to 27.8% YoY of nominal GDP in Q4 2023, compared to 26.0% in Q4 2022. In 2023, the



nominal GFCF increased by 9.0% YoY, or SAR 1,117 billion, reaching the NIS target for the year. This increase was mainly due to a growth in the fixed capital formation of the nongovernment sector by 10.0%. FDI inflows witnessed an increase of 32% YoY in Q4 2023, reaching SAR 19 billion, reflecting an improvement in investment in Saudi Arabia. In 2023, the FDI recorded SAR 72 billion, a growth of 12.1% compared to 2022 (excluding the Aramco deal with the consortium led by BlackRock Real Assets and Hassana Investment Company, worth SAR 58.1 billion,

announced in 2022. The FDI stock recorded SAR 808 billion in Q4 2023, a growth of 1.7% QoQ. For 2023, the FDI stock recorded a growth of 6.1% compared to 2022, reflecting the fruits of the reforms that took place in recent years to strengthen the investment ecosystem. MISA's investment data show a closing of 64 investment deals in Q1 2024, compared to 104 deals in the same quarter in the previous year. Looking at economic activities, the distribution of deals shows that innovation and entrepreneurship attracted the most attention from investors in Q1 2024, with 34 deals, followed by sports with 12 deals. As for countries, the top investors in Saudi Arabia in Q1 2024 are: the US with 11 deals, the UK with 5 deals, followed by the UAE, Egypt and Singapore with 3 deals each, and the rest of the deals were distributed across 6 countries.

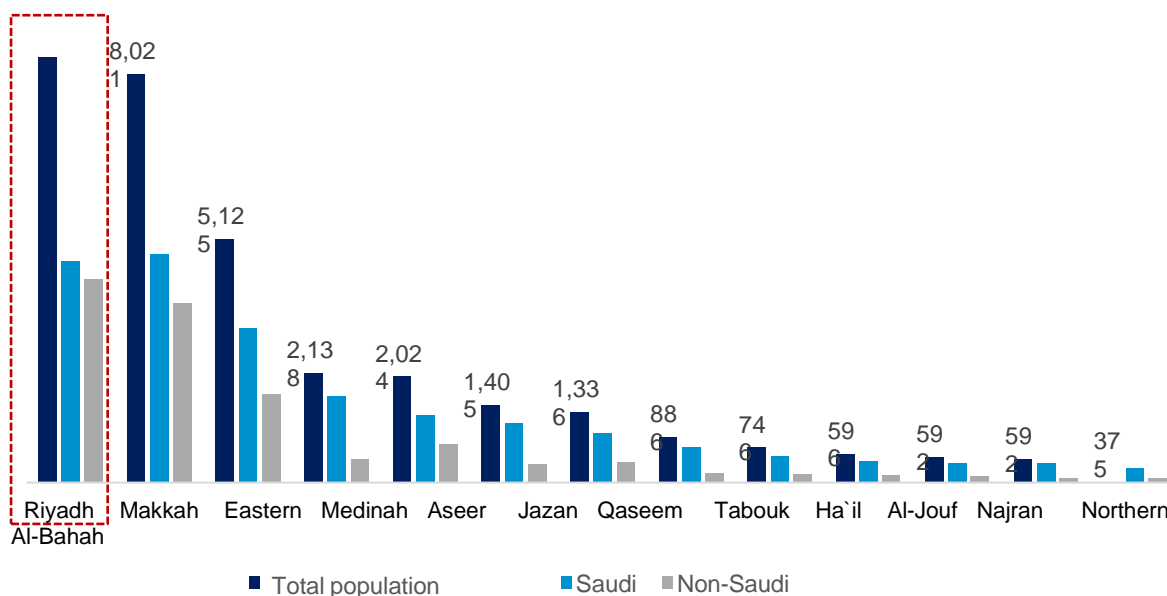
5- Government Expenditures – Budget Outlook

- The Budget Statement for FY 2024 represents the government's continuous effort in implementing structural economic and fiscal reforms under Saudi Vision 2030. The Budget Statement also presents the development process of the financial sector in achieving fiscal sustainability in the medium and the long term. In so doing, the Kingdom's economy will be robust and capable of facing global economic challenges and developments. The budget outlook for 2024 shows that around 50% of all budget expenses. The initial estimates for FY 2024 indicate 4.4% growth of real GDP, supported by the growth of non-oil activities GDP resulting from the economic reforms as well as efforts that will further accelerate the process of economic diversity while enhancing sustained economic growth. Total revenue for FY 2024 is expected to be approximately SAR 1,172 billion, and is projected to reach SAR 1,259 billion in FY 2026. These are conservative estimates as per the approach adopted by the Government in estimating oil and non-oil revenues in the Budget in case of any new developments that could impact the domestic and global economy. Total expenditures for FY 2024 are predicted to reach nearly SAR 1,251 billion, which is an increase of 14.5% compared to the approved budget. This rise is mainly a result of the Government's keenness to protect citizens from the global inflation through enhanced social spending. This increase is also attributable to the development of public services for citizens and residents, in addition to completing the implementation of many sectoral and regional projects and strategies that will achieve positive structural changes as well as expand and diversify the economic base.

	Actual 2022	Budget 2023	Estimates 2023	Budget 2024	Projections	
					2025	2026
Total Revenues	1,268	1,130	1,193	1,172	1,227	1,259
Total Expenditures	1,164	1,114	1,275	1,251	1,300	1,368
Budget Surplus\Deficit	104	16	-82	-79	-73	-109
As percent to GDP	2.5%	0.4%	-2.0%	-1.9%	-1.6%	-2.3%
Public Debt	990	951	1,024	1,103	1,176	1,285
As percent to GDP	23.8%	24.8%	24.8%	25.9%	26.2%	26.9%

6- Population and Demographics – KSA

- The population and its growth rate are one of the most important factors affecting the demand for various services in the Kingdom, and young people constitute the largest segment of the Kingdom's population. Health indicators show an improvement in the quality of health care services in the Kingdom over the past years, becoming comparable if not superior in some cases.
- The General Authority for Statistics announced today the first results of the Kingdom's 2022 census, which puts the population of Saudi Arabia at 32,175,224 million. Of the total number, Saudis make up 18.8 million (58.4%), while non-Saudis, 13.4 million, constitute 41.6% of the population.
- The census also shows that the Kingdom has a young population, with the median age of 29 and a population of Saudis under 30 making up 63% of the total.
- Minister of Economy and Planning, Chairman of the Board of Directors of the General Authority for Statistics Faisal bin Fadel Al-Ibrahim said "the Saudi census 2022 is an important national project, and its outputs will be a key pillar for planning and decision making, developing economic and social policy, creating development plans for various sectors and services, and supporting the investment environment in the Kingdom and achieving the Vision 2030 goals."



The analysis of the environment surrounding the project's business sectors and the surrounding political, economic, social and technological factors indicates that the project's business environment will be positively affected in terms of political, legal, social and cultural aspects, except for the effects of the COVID-19 pandemic. While it will be positively and negatively affected in terms of economic aspects. As for the technological aspects, the expected effects are a mixture, some positive and others unknown due to the rapid changes in the world of floating water cages.



2.3 Estimating the project's share of the future demand

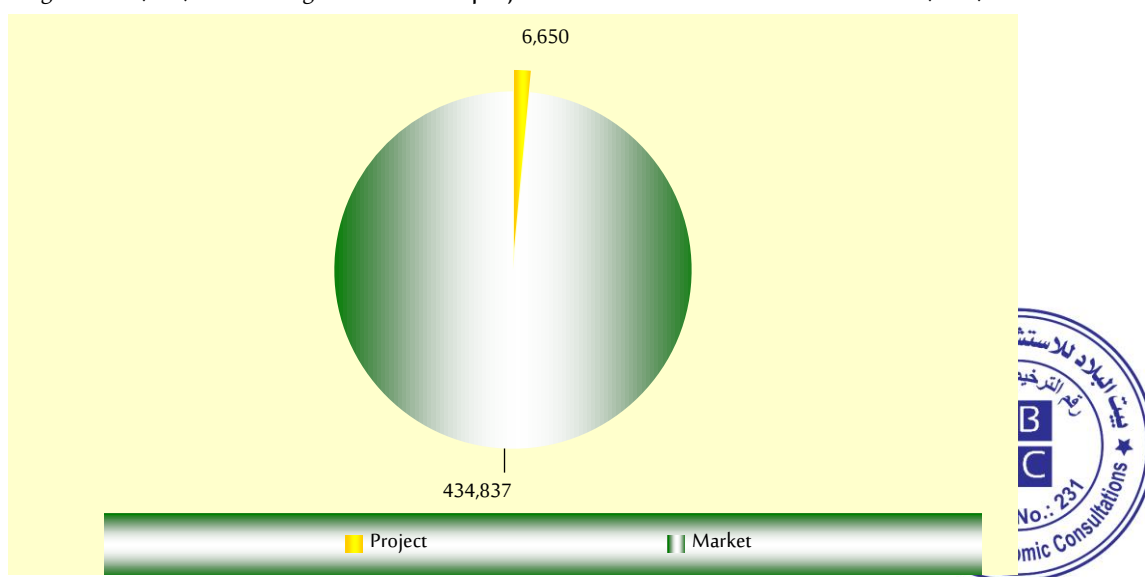
In light of the number of cages nominated for purchase (200 cages), it is suggested that the production capacity of the project be within the limits of 7,000 metric tons of various products during its productive life, provided that it concentrates on marketing them in the western region and the rest of the Kingdom, which we have seen consume large quantities of the project's products. We expect that the proposed project will gradually increase its productivity until it reaches its maximum capacity within 7 years from the date of the year of operation. Accordingly, the project's market participation rate, or the project's share of the market, can be estimated as follows:

Table No. (2/1): Estimating the size of the project from the volume of future demand (tons)

Year	Market size	Occupancy rate	Production (Tons)	Project share
2025	313,123	50%	3,500	1.1%
2026	325,309	55%	3,850	1.2%
2027	337,792	60%	4,200	1.2%
2028	350,585	65%	4,550	1.3%
2029	363,706	70%	4,900	1.3%
2030	377,171	75%	5,250	1.4%
2031	390,998	80%	5,600	1.4%
2032	405,205	85%	5,950	1.5%
2033	419,811	90%	6,300	1.5%
2034	434,837	95%	6,650	1.5%

It is noted that the share of the above project is small in the size of the market for all the products concerned at the level of the Kingdom, which positively impacts the ease of marketing products in both current and expansion quantities in the future.

Figure No. (1/2): Estimating the size of the project from the volume of future demand (tons)



2.4 Competition in the Market

Competition in the market is considered medium, since the number of companies operating in the market and their production is not large, and there is room for companies to enter the market. In general, the most important competing companies are:

1. Tabuk Fisheries

- Tabuk Fisheries Company, is a closed joint-stock company with a capital of 100 million riyals and subject to the Companies Regulation of the Ministry of Commerce. The company's projects are in Tabuk, north of the village of Al-Muwailih, about 50 km from the northern side of Daba Governorate. It was established in 2005 AD corresponding to (1428 AH) and started its actual activity in 2008 AD to cultivate multiple types of fish with a system of floating cages in seawater, and since then it has expanded in the number of farms and cages and reached three farms with a target production volume of approximately 5000 tons annually of fish. Noting that the current production capacity of the project is in the range of 2000 tons annually.
- Today, the company is working on studies and research on new varieties of fish. Tabuk Fisheries Company is one of the leading companies in aquaculture in the Kingdom of Saudi Arabia, as it is considered one of the first companies to work in seawater farming (floating cage projects).
- The company's projects aim to contribute to the development of the economy of the region and its resources and to achieve food security in the Kingdom with the support and encouragement of the government of the Custodian of the Two Holy Mosques represented by the Ministry of Environment, Water and Agriculture. The company seeks to support the Kingdom's Vision 2030 initiative, which is based on achieving sustainable development, including the development of the fisheries sector to produce 600 thousand tons of fish annually within the next 15 years.
- Additionally, the creation of fish hatcheries on land to supply the company's farms and the farms of investors in this field. I also trade wholesale and retail, export fish and seafood products, open sales outlets belonging to the company, and catering services for preparing fish meals through sales outlets and delivering them to customers.
- Among the most important achievements of Tabuk Fisheries are the following:
 - It is one of the first aquaculture companies in Saudi Arabia in the sea, it is always working on developing studies and research in this field on new varieties
 - The Aquaculture company in Saudi Arabia, Tabuk, seeks to strengthen the national economy, achieve food security in the Kingdom, and achieve Vision 2030 by providing a great wealth of fish at a rate of up to 600,000 tons every year to achieve sustainable development in the Kingdom
 - The Tabuk Aquaculture Company is establishing fish hatcheries far from the sea to be a supplier for the farms within the company, as well as the farms of investors.
 - In this field, the company exports fish and other seafood products through wholesale or retail, with distribution by sales outlets of the company, as well as delivering ready-made meals to customers.



2. Naqwa Company

- The company's projects are considered one of the most important projects funded by the Agricultural Development Fund, which achieved the success that exceeded the borders of the Kingdom and reached all markets of the world. Its products have become needed in many countries around the world, whether they are in Europe or eastern Asia, as its products reach more than 32 countries around the world.
- The project is considered one of the specialized projects supported by the Fund, as the Fund provided a financial loan over 329 million Saudi Riyals to support the shrimp breeding project and the aquaculture project with the floating cage system.
- The Naqwa Company is considered one of the most important aquaculture companies in Saudi Arabia and the world. Naqwa fish farms are located 180 kilometers from Jeddah on the southern side, and it is the first company that allowed the Kingdom to be classified globally as a producer of seafood. Among the most important achievements of the Naqwa Company for aquaculture in Saudi Arabia are the following:
- Naqwa is one of the fish farming companies in Saudi Arabia, which specializes in the production of shrimp and fish, with a huge investment volume of 4 billion Saudi riyals.
- Naqwa Company contributes to sustainability as it uses sensitive and environmentally friendly production methods to preserve marine life and the aquatic environment in the Kingdom.
- The operating capacity of the company is about 4 thousand workers from up to 32 nationalities from around the world
- The production capacity reaches 100,000 tons annually of seafood products.
- Naqwa Company exports seafood products such as fish and shrimp to many countries around the world such as Japan, Korea, China, Australia, and the United States, as well as European and Arab countries.
- The company works on local distribution for wholesale or retail trade in all parts of the Kingdom

Among the most important projects of the Naqwa Company

- The sea cucumber project
- The feed projects
- 16 shrimp farms
- 3 fish farms that work in floating cage systems of the circular type. Each farm contains 14 to 24 cages.
- Each of the company's farms operates with a capacity of 6,500 tons of fish and feeds directly from the bounty of the Red Sea waters.
- The company produces white leg shrimp, as well as barramundi of varied sizes, to suit the demands of customers and the product market.
- seafood products are distributed by the company either locally within the Kingdom of Saudi Arabia or globally in Spain, Italy, Japan, Korea, the United States, the United Kingdom, Australia, and others.
 - The group's projects that received support from the Agricultural Fund:



- Shrimp project: The shrimp project consists of 17 farms, equivalent to 547 pounds. The project also includes a production unit for mother shrimp, and larvae production units (production of 960 million larvae per month, equivalent to 32 million larvae per day). The project also includes a shrimp processing plant, which is one of the largest in the world, with a production capacity of about 560 tons per day, which the group is currently working on raising to 700 tons per day. The shrimp project is the main pillar of the group and one of the most important sources of income. The production capacity during the past year (2017) reached about 41,500 tons of shrimp, with a target of producing 60,000 tons of shrimp during the current year (2018).
- Fish project: The fish project currently consists of 3 marine farms that include about 42 cages with a production capacity of 12,000 tons annually. It also has a special unit to take care of mother fish, a modern hatchery that produces 4 million fish fry per month, Incubation for rearing fry, and pre-marine farming period. The company also owns a special unit for raising fish in the closed culture system, and this is considered among one the modern aquaculture methods such as farming with the floating cage system.
- The company obtained all the international certificate ISO 9001/14001/ as well as HACCP and consortium certificates.

3. Saudi Fisheries Company

- It is a Saudi joint-stock company of aquaculture companies and the field of fishing in the Kingdom. The company relies on its objectives to expand in terms of investing in aquatic resources of all kinds and all related industries while providing marketing on a global or local basis.
- Among the most important achievements of the Saudi Fisheries Company are the following:
- It is considered one of the first aquaculture companies in the Kingdom, and it is one of the specialized companies in the field with extensive experience and advanced structure.
- The company mainly contributes to each of the fields of aquaculture or marine fishing and logistics services, as well as the fields of seafood processing, and depends on the commercial field in terms of retail or through wholesale, as well as managing and operating restaurants
- The Saudi Fisheries Company works to achieve food security and enhance fisheries in the realization of the Kingdom's Vision 2030 initiative by reaching the highest quality in aquaculture and food safety.
 - Among the most important projects of the Saudi Fisheries Company are the following
- Fish and Shrimp farms
- 3 factories to produce seafood, ice, and preservation boxes.
- Warehouses with a capacity of 8,000 tons each year.
- A fleet of refrigerator trucks
- A research and development center that specializes in everything related to the cultivation and manufacture of marine products, in terms of study.



4. Global Marine Center

- Global Marine Center is a national limited liability company established in Riyadh, Kingdom of Saudi Arabia. It is one of the most important houses of expertise in the field of aquaculture in cooperation with the largest international and local organizations leading in this industry.
- The work team has more than 25 years of experience and success in the Kingdom of Saudi Arabia, Egypt, the Gulf countries and North Africa. The center is also proud to be a successful partner for a group of clients including aquaculture industry leaders, and various other economic activities.
- Memberships of the Global Marine Center for aquaculture include the following
 - World Aquaculture Society
 - Member of the European Aquaculture Society
 - Member of the Saudi Aquaculture Society
 - Member of the Saudi Food and Drug Authority.
- The center's mission is to provide high-quality fish products to consumers locally and internationally from aquaculture projects, using the latest technologies, and to achieve returns and economic feasibility for investors in said projects.
- Among the most significant achievements of the Global Marine Center for aquaculture are the following:
- The center worked to introduce varieties of marine wealth to Saudi Arabia in the history of the Kingdom, such as the cultivation of Asian seabass fish, as well as freshwater shrimp, tilapia of both types, saline and river, and carp and catfish.
- The center works to provide support to all investors in the field of aquaculture to expand the work of coastal projects or freshwater projects while providing the latest technologies that help in this.
 - Projects and research centers:
- Over the past twenty years, the Global Marine Center has been able to localize aquaculture technology in the Kingdom, with the support of research centers specialized in that, such as King Abdulaziz City for Science and Technology which has research stations in Dirab and Al-Muzahimiyah, as well as the Fish Farms Research Center in Jeddah, where species of aquatic organisms were introduced in the Kingdom, such as Asian seabass, freshwater shrimp, and several species, including river and sea tilapia, carp, and catfish.
- The center is interested in supporting investors to establish medium and large marine and coastal projects and suggesting appropriate technologies for them.
- Breeding fish of varieties and with techniques suitable for countries with hot climates in tropical, subtropical, and temperate regions.
- The aquaculture projects designed by the Global Marine Center are located in some countries in the Middle East around the equator, between the Tropic of Cancer and the Tropic of Capricorn, at 23 degrees north and 23 degrees south to include all regions of the Kingdom, Kuwait, Egypt, the United Arab Emirates and Yemen and the center is still receiving invitations to provide its expertise in this field, both locally and internationally.



5. Jazan Energy and Development Company

- Jazan Energy and Development Company (JAZADCO) is a Saudi joint-stock company in Jazan. Its current capital is 500,000,000 divided into fifty million shares, and the par value is ten riyals per share. The company's activities are distinguished by their diversity in several vital fields, as JAZADCO has achieved impressive results and achievements in the field of aquaculture, agricultural, industrial and real estate sectors. JAZADCO is also keen on multiplying sources of income through the optimal utilization of the company's resources. Focusing on investing in economically feasible projects that support its financial position and add value to its investment portfolio.
 - At the end of 2002, in implementation of the company's expansion strategy, the aquaculture project was launched in the village of Al-Sawarmah, 40 km south of the city of Jazan, because of the added value that the region enjoys due to the mild weather throughout the year and the distance of the beaches from the industrial areas. During the first six years of operation, an integrated hatchery complex with a capacity of 200 million larvae, a dirt area of 440 hectares, a processing plant operating with a capacity of 20 metric tons per day, engineering and logistical support services, and administrative and service facilities for 300 employees were established as well as meeting their accommodation, living, and entertainment needs.
 - The project obtained the ISO 22000 international quality certificate, which includes the Hazard Analysis Certificate at Critical Points for Food Safety (HACCP). It also obtained the SASO Certificate of Conformity, in addition to the Best Aquaculture Practices (BAP) Certificate.
 - The factory produces approximately 3000 metric tons annually of Head-on shell-on (HOSO) white leg shrimp, which are exported to several countries around the world.
 - Among the most significant achievements of JAZADCO in the field of aquaculture is the following
 - Establishing an integrated community of hatching, which is estimated at 200,000,000 larvae, on an area of 440 hectares.
 - Establishing a factory with a capacity of up to 20 metric tons per day, and an operating capacity of up to 300 employees, while providing engineering and logistical services, providing administrative and service facilities, and meeting their daily and living needs easily.
 - The factory excels with a huge production capacity of 3000 tons each year of whiteleg shrimp, which are exported around the world.
 - The shrimp project, which was launched by JAZADCO, obtained the ISO 22000 quality certificate, as well as the HACCP certificate related to food safety.
- ## 6. Tharwat Seas Company
- Tharwat Seas is one of the most important names of Saudi companies for aquaculture in the Kingdom. It is a holding company that was established in 2008 and it is a multi-investment company. The company's fields diversified into aquaculture services and water resources, which would enhance the economy in the Kingdom and expand local and global production through successful trade and fruitful partnerships.



- The Kingdom of Saudi Arabia has embarked on a diversified, comprehensive, and far-reaching economic program that provides this thriving country with the opportunity to prosper in the global capital markets through rich and diversified investment offers, and a broad industrial base capable of employing skills, expertise, and work at the global level in the financial and media services sector.
 - Expanding the horizons of economic opportunities considering the rapid population growth will constitute the greatest challenge to the greatest economic power in the Gulf region during the coming years. Concrete reforms will continue to lay the foundations for building a stronger economy.
 - And because the economic environment is facing rising challenges today, while some institutions are struggling to survive, others will be able to overcome this crisis, especially since Tharawat will take this matter upon itself by giving companies a special advantage that helps them to make fundamental decisions based on their unique strength, which has become Now more important than ever. Whether the goal is to maintain or improve their market positions.
7. Al-Istrizra' Alma'i Al-Mutaqadima Company (The Advanced Aquaculture Company)
- The Advanced Aquaculture Company was formed because of the merger of four companies in the aquaculture sector in a deal worth 500 million riyals (133 million dollars).
 - Eng. Abdul Rahman Al-Fadhli, Minister of Environment, Water and Agriculture, witnessed the first merger in the aquaculture sector between 4 companies, which included "JAZADCO's aquaculture sector", "Tabuk Fisheries", "Al Sharq aquaculture" and "Tharwat Seas" under the name of Al-Istrizra Alma'i. Al-Mutaqadima Company, with a market value of 500 million riyals.
 - The Minister of Environment, Water and Agriculture confirmed that this merger will contribute to achieving the ministry's goals in raising the productivity of local aquaculture, explaining that the second phase will witness the merger of several local and international companies in the sector. Eng. Abdul Rahman Al-Fadhli added that aquaculture is one of the sectors that attract local and international investments. Indicating that this effort was achieved under the auspices of the Ministry, with the support and empowerment of the Agricultural and Industrial Development Funds, and the sincere desire of governmental and semi-governmental funds to enter this field, which has become a promising market for investors.
 - The merged entity, Al-Istrizra' Alma'i Al-Mutaqadima Company, will start its expected production at 60,000 metric tons in the first phase. This will double to 120,000 metric tons in the second phase and the company aims to reach 300,000 metric tons by 2035.



2.5 SWOT Analysis

SWOT analysis in English: SWOT Analysis or the quadruple swot matrix, or the quadruple analysis tool is one of the strategic analysis tools, and it is an analytical method that helps to identify points of weakness and strength and to realize the quality of threats and the nature of opportunities available and affecting the facilities, and the SWOT analysis is one of the important systems for preparing and designing strategies for the business sector by presenting a set of plans. studies that economic establishments must carry out from time to time, as follows:

SWOT analysis of strengths and weaknesses

	Strengths		Weaknesses
S	<p>The strengths reflect the internal characteristics of the project, and therefore all or some of the following points may help in the growth of its activities:</p> <ul style="list-style-type: none"> - A distinguished team with vast experience in management - Initial license and site studies - Having an American technical partner to manage the project. 	W	<p>Weaknesses reflect the internal characteristics including conflicts that can arise during the work of the project, including:</p> <ul style="list-style-type: none"> - The cost of attracting qualified technical personnel is high, which puts pressure on liquidity and profits. - The brand is new, and it will take time to make a name across the Kingdom. - Reliance on fingerlings from two suppliers.
	Opportunities		Threats
O	<p>Opportunities express the circumstances or changes that occur in the environment surrounding the project in the present or that may occur in the future, and thus have an impact in one way or another on its work, and therefore its management must consider all or some of the following points:</p> <ul style="list-style-type: none"> - The presence of high demand indicators for the project's products. - Government support for the private sector to invest, start projects, and provide loans to owners at a low cost. - Export using government subsidies. 	T	<p>Threats and risks reflect the external characteristics that may arise during the work of the project, and thus have an impact in one way or another on its work. Therefore, its management must consider all or some of the following points:</p> <ul style="list-style-type: none"> - The continuing threat of the Corona pandemic and the emergence of new variants. - The entry of new competitors since the demand for the project's products is high. - Imposing modernization requirements on the sector from the regulatory authorities.

2.6 Marketing strategy

Marketing and its research aim to advance the products that are introduced by companies. Effective marketing requires researching the *size of the order*, identifying the consumers/clients -e.g., construction companies, government agencies or individuals- and the desired product types by said consumers.

The establishment of a project, its development and its ability to attract contractors, project owners and customers are tied to how successful its marketing is; which is why it is considered an indispensable tool in the development of projects.

The importance of marketing stems from the fact that it commences simultaneously with a project, as products need to be developed based on *market demand* along with customer orders. These are then collected and examined through a *market analysis* which includes researching the market, recording and compiling data from current consumers as well as projected customers of the products/services provided.

The quality of *Information System Marketing (IMS)* is tied to:

- The quality of the infrastructure (sea fishing ports, fish markets, fish production, and preparation companies)
- The quality of the marketing services supporting it (ice producers, cold stores, fish transport means).

Below, we present the essential pillars of the marketing strategy referred to as the Marketing Mix; it consists of what is known as the 4Ps:

Analysis of the Marketing Mix

	P	Explanation
1	Product	setting the specifications of the product to what is needed in the market.
2	Price	Setting a price based on certain aspects e.g., the buy ability/Purchas ability according to the consumer.
3	Place	Choosing locations to showcase the products that are within reach of consumers
4	Promotion	Is a group of activities aiming to introduce the product and ultimately, sell it.

2.6.1 Product Strategy

The project will work to provide a distinctive quality of products that have the ability to compete and attract the target segment of customers to the project, by following the following:

1. Maintaining the quality of the products that will be characterized by the project. By installing modern equipment that ensures the continuity of maintaining quality in the event that production increases beyond its current range and always think about modernizing cages and production equipment.
2. Increasing the survival and growth rate is one of the most important elements of increasing production. It is done through good management of fish cages, genetic improvement and selection of good varieties that are characterized by high resistance to diseases and tolerance to different environmental conditions. Proper management is summarized in the optimal selection of fish storage equipment. Adding the most appropriate types and quantities of feed, and maintaining the quality of cages, cleanliness and water quality.



3. One of the most important goals of the project is to obtain local, regional and international quality certificates, as well as the necessity of good design for product packaging, as this plays a major role in the marketing of the project because of its ability to attract the attention of consumers and thus create curiosity, which makes them ask about the project implementer. And the constant endeavor to ensure that the project's products that are cultivated to be:
 - Within the highest health standards and in accordance with local and international regulatory requirements for safe food.
 - Endless focus on customer satisfaction by raising the quality of the project's products while creating an environment that encourages the production of healthy food, Therefore, the management considers our customer base as its best asset, so the project will continue to apply permanent health requirements for the products it offers.

2.6.2 Price Strategy:

With the competition in the market and the entry of new competitors in the market, a business should always consider revisiting its cost of production and pricing policy. Lower cost of products than competitors is a key issue for the pricing strategy. To achieve this, the business needs to have a good market share and the ability to obtain primary raw materials at low prices.

The factors required to achieve a leading position in production costs are:

- High ability to finance.
- Development and innovation in the cultivation and production process.
- Strong control of the labor force.
- Low distribution system costs.

The project can enter all regions of the Kingdom, and this can only be achieved by increasing the production capacity, which serves two purposes, the first of which is to increase the volume of production and the second is to reduce the cost of producing the unit, and the project strategy depends on offering competitive prices, but it is not its policy to enter into a price war with other projects.

2.6.3 Distribution Strategy

Increasing the geographical area of the market is one of the most important objectives of the project. Sales and distribution channels are the chain that connects producers to final consumers, and this function is performed by:

- Fishermen and producers: Fish marketing for fishermen and producers depends on direct sales to the trader (fish transporters, retailers, fish companies) or the consumer, they do not want to market their products under the contract system, but prefer to sell now, even if prices are low, and they do not have any ability to set prices (they consider prices to be a factor that determines outside their control).
- Traders (fish transporters, fish companies and factories, fish shops and supermarkets, fish market retailers). They are the most important wholesale buyers of fish for the fisherman, and they often control price setting.



- Fish transporters: Fish products are transported and distributed after purchasing them from the wholesale fisherman, and among their most important marketing outlets locally: (fish companies and factories, brokers for large supermarkets, restaurants, retailers in local markets or consumers directly) or exported (to markets in neighboring countries).
- Fish shops and supermarkets: They are linked to fish marketing and processing companies or separate stores, which buy fish from fishermen or transporters and then display them to the consumer, and may perform some processing operations on the fish before displaying them.
- Fish market retailers: They are those who buy fish (directly from fishermen in coastal markets, and from transporters directly in inland markets) and sell them directly to the consumer.

2.6.4 Promotion strategy:

Promotion is any communication that attempts to influence people to buy products or services. Companies generally promote their brand, products, and services by identifying their target audience and finding ways to communicate their message to that audience.

A promotion has three specific purposes: Communicating marketing information to consumers, users, and resellers. Promotional efforts serve as powerful tools of competition that provide state-of-the-art marketing programs, and effective promotional methods include:

- ✚ Open communication channels in social media (Twitter - Instagram - Google - Facebook).
- ✚ Provide symbolic gifts such as calendars for companies and stores ... etc. as a kind of publicity and reminder.
- ✚ Make encouraging offers and discounts for customers.
- ✚ Follow an encouraging policy such as contests to encourage customers.
- ✚ Four sources are relied upon to increase the number of users of the project application:
 - Via Google Play Store.
 - Through the App Store.
 - Through the project's website.
 - By interacting and integrating with the target audience at specialized events, such as festivals and chambers of commerce events.
- ✚ Brand Personality: It is a framework that helps the project to shape the way people feel about its product and increases the likelihood of customers buying the brand if its personality is similar to their personalities, and building brand personality is reflected in the process of building advertising messages and marketing communication processes in general.
- ✚ Integrated Marketing Communications: The integration of all promotional tools, marketing methods and resources within a project so that they work together in harmony, maximizing the impact on the consumer's mind and leading to maximum profit at minimum cost and building a relationship with the target customers.



Part 3

Technical Study



3- Technical Study:

Technical studies, when conducted, depend on the data and information obtained from market studies and marketing feasibility, as according to the latter, the total demand for the commodity and the total available supply of it have been determined, and then the unsaturated market gap has been identified, which the project can contribute to satisfying it, that is, the technical feasibility studies start from where the market and market feasibility studies left off, rather based on their results. The technical feasibility studies, in their entirety, aim at examining whether the investment project is technically feasible, in addition to providing those in charge of the economic feasibility studies of the project with a specific basis that helps to identify and analyze the investment costs and operating costs of the investment project. Its details are as follows:

3.1 Technical description and working method:

3.1.1 Number of floating cages and how to establish them:

The annual production capacity of one cage is estimated at about 35 tons of marine fish per year. Therefore, the total annual production capacity of 200 floating cages is expected to be about 7,000 metric tons per year. The water quality in the project area has been assessed and water samples have been collected from the proposed project site and other sites surrounding it, and analyzed for the physical, biological and chemical quality specifications, as well as the causes of pollution.

This project will be implemented using a system of circular cages inside the Red Sea, numbering 200 cages, including nets, buoys, and anchors. Cages with a diameter of 20 m, a diameter of 60 m, and a depth of 15 m were selected, and the volume of water in one cage is about 4710m³. The stocking density is about 15 kg / m³, and the productivity of one cage is about 35 tons / year, and the average weight of the fish at harvest ranges from 400-750 grams.

Asian seabass (barramundi) and bream fish will be farmed due to the availability of farming techniques and high growth rates, in a way that achieves the economic objectives of the project in record time.

Features of aquaculture in floating cages:

1. Allows optimal use of water bodies where cages are placed in streams, lakes, seas, rivers, estuaries or water dams.
2. Reducing the pressure on the lands needed to establish fish farms using traditional methods.
3. It is used in intensive farming due to its low investment costs compared to other farming methods.
4. High production rate per unit size to more than 100 kg / m³ per year.
5. its location could be changed from one place to another.
6. It is easy to observe, care for and feed the fish.
7. Uses natural water currents in replenishing water and disposing of fish waste without wasting energy in irrigation and drainage operations.
8. No lack of oxygen or spoilage of water as issue.
9. Breeding fish in their natural environment gives fish the opportunity for good growth.
10. Ease of harvesting fish at the lowest costs and according to the quantities required for marketing.



11. Good marketing of fish, where the agreement to sell could be made while the fish are still alive in their cages, and thus the breeder could bargain with the merchant without the fear of the speed of spoilage of the harvest, thus the breeder guarantees to obtain the appropriate price.
12. Ensuring that the breeder obtains continuous returns throughout the year.

The following figures show the picture of the cages proposed to be used in the project, and illustrations of the components of one cage, along with how the cages are distributed and the distances that must be considered in all directions between the cages. The cages are installed in the chosen location in two groups consisting of five cages each

The space between each group and another of the cages is about 100 m, and the space between cages within one group is about 50 m.

Disadvantages of floating cages:

1. The chance of diseases occurring may be great, and the spread of the disease may be rapid due to the high density. In this case, the losses will be great.
2. They may be subject to vandalism or theft, so it must be guarded throughout the day.
3. The fish could escape from openings that may occur in the net.
4. amounts of food could be lost because of it leaking out of the cages through the net, which is a financial burden.
5. growth of algae and fouling on the net, which results in a decrease in the speed of the water current due to the narrowing of the openings of the net, this would lead to the accumulation of residues at the bottom of the cages and would decrease in the rate of water and oxygen renewal.

Choosing the location of the cages:

1. The site should be away from maritime routes or swimming and picnic beaches.
2. The water current speed should be suitable (from 5-15 cm/sec) to allow changing the water inside the cage and getting rid of unwanted organic matter while maintaining the rate of dissolved oxygen concentration in the water so that it is sufficient for the requirements of the fish.
3. A deep-water body is preferred, and the distance between the bottom of the cage and the bottom of the waterway should not be less than a meter or more to allow the water current to carry organic waste and not accumulate it under the cages.
4. The bottom of the water body should be sandy or muddy, and it should not contain biological, industrial, or chemical pollutants. When placing cages in agricultural drains, the area should be far from places where pesticides are used.

Cage Components:

1. The frame (body of the cage): It is made of high-density polyethylene (HDPE) pipes, which are a type of high-density plastic. HDPE is more rigid than other types of polyethylene and is heavier and stiffer when compared to LDPE. HDPE is lighter than water. And it is filled with cork material, so that water does not enter it and it also helps them to float.



2. Stents: These are what hold the cage pipes and are also made of High-Density Polyethylene (HDPE).
3. The net: It is the part dropped into the water which holds the fish. It can be made of plastic, nylon, or galvanized wire.
4. Floats: The function of the floats is to keep the cage floating so that its upper part is above the surface of the water not less than 15-30 cm. For this purpose, the following materials are used: plastic pots (barrels) and iron drums in the case of large-sized cages.
5. Cover: a cover prevents the fish from jumping out of the cage as well as protects it from birds that feed on the fish.
6. Feeding ring: It is made of plastic pipes that are supplied to the cages to contain food.

Feeding the fish in the floating cages:

Fish in cages depend on artificial feed, preferably in the form of granules, the size of which is commensurate with the weight of the reared fish, to reduce losses. They also need to have the ability to stay whole and buoyant, and to have high transformative efficiency. Their availability on the local scale should be taken into consideration. Using the food system to reduce the loss of the diet; it is worth noting that 60% of the expenses go towards nutrition. It must contain a higher percentage of protein, not less than 40-50%. The prescribed diet is divided into several feeds per day, the amount of which is calculated based on 3-5% of the total weight of the fish, which can be known by taking a sample from the cage and weighing it every 2-3 weeks. The diet is provided based on several factors Such as temperature of the water, percentage of dissolved oxygen in the water, age of the fish, and size of the fish.

Manual feeding

Two times should be set to provide the feed for the fish inside the cages, so that the fish get used to a fixed place and time for providing food, provided that the first is in the early morning and the second in the afternoon. The amount added must also be determined accurately, preferably according to the average weight of the fish, it should also be added in batches with short intervals between them, as the increase in food may lead to a loss of water, and its breakdown will often affect the percentage of dissolved oxygen in the water.

- The first is a continuous one that works throughout the day at a constant rate, and it is preferable to use this type with small fish.
- The second works only when a part of the food is lifted, as it dispenses the quantity that is set on it.
- Determining the optimal feeding strategy for fish candidates for breeding
- Determining an effective feeding strategy is essential to achieving optimum feed conversion rates and maximum growth rates. Developing a proper feeding strategy for each type of cultured species would contribute to reducing production costs and reducing negative environmental impacts.

Cleaning the nets and waste disposal

To clean the nets, the cages are turned over, so that the dirty section is above the water and is exposed to the air, so organisms leave it, dry and die out, and this may require about a week, and the peeled parts are removed with a rough brush.



Dirty nets may be crumpled and covered with black linoleum to damage the organisms before they are cleaned. Some prefer to soak the net to get starfish and other predators to remove the stuck shellfish. In most cage farms, the net is usually hung or thrown to dry for several days, so it is easy to clean. Coarse hairbrushes, sticks, or high-pressure hoses may be used to get rid of stuck materials. If the latter method (high-pressure hoses) is used, then it is utilized on a sloping concrete floor so that water and pollutants drain away. In general, unused nets should be stored carefully under clean and dry conditions. Cage nets are usually sold with treated antifouling materials, so when buying them, make sure they are treated, and ask about any compounds that can be used to treat nets (by soaking in their solutions for at least 24 hours) before storing the fish in them. And if old nets need to be treated with antifouling, the producer's instructions should be followed to take the necessary precautions before reusing the nets. Moorings are regularly inspected, especially after hurricanes.

3.1.2 Vital, technical and operational objectives:

First: Vital Goals

1. Determining the growth rate of candidate species for floating cage aquaculture
2. Determine feed conversion efficiency.
3. Develop effective standardized disease monitoring and treatment
4. Evaluation of the impact of varying storage densities on growth performance and profitability
5. Evaluation of changes in the chemical composition of the produced species

Second: Technical goals

1. Cage design assessment
2. Net model evaluation
3. Evaluation of the design of the anchoring and strapping system
4. Support facilities

Third: Operational Objectives:

- The materials used in the manufacture of net bags for floating cages differ in their advantages and the economics of their operation. Recently, the process of designing nets has gained immense importance with the increasing need to use nets resistant to predators and materials against the growth of marine fouling. The net bag is manufactured according to the project site and the species to be cultured. The efficiency of the bag depends on the degree of strength of the yarn, its design, manufacture, components, use and storage.
- In general, a hunting net bag is made of flexible yarns, such as polyamide, whose use provides economic and technical advantages such as durability, corrosion resistance and fouling resistance, compared to polyester (PES) and polypropylene (PP) yarns.
- Or polyethylene (PE). The shape of the net bag is cylindrical, closed from the bottom and has a cover. In general, nylon fibers (polyamide) are used to manufacture nets for fingerling cages, while Dyneema fibers are used to manufacture nets for breeding cages.



- Nylon fibers are among the most widely used industrial compounds in the manufacture of nets and ropes used in aquaculture cages, because these fibers are insoluble in water, have good chemical resistance, have a higher density than water, have high resistance to tearing and friction, and are extremely flexible (the percentage of elongation is 23% at fracture), and its ability to absorb various resins. Which makes them suitable for use in the marine environment. The collection of nets, especially those made of synthetic fibers, must be stored away from direct sunlight due to their weak resistance to ultraviolet rays, which makes them easy to tear. Therefore, the nets are coated with a layer of a chemical substance to protect them from sunlight, and the nets are coated with anti-fungal materials (Aquasafe CCT100) according to standards enforced within the Kingdom by the competent authorities (General Authority of Meteorology and Environmental Protection).

3.1.3 Support facilities

- Crushed ice production and packaging plant: An ice factory will be built, as the volume of production is large annually which increases the cost of ice, and thus the building of a factory will reduce these costs. It also ensures the continuity of the project throughout the year as it is not subject to price fluctuations of ice in the summer. The product will also be packed in the factory units.
- Maintenance and repair workshop: It is one of the most important vital facilities in the project's operation, as its performance reflects in the continuity of work performance of the cages and reaching the targeted production capacity. Its mission: maintenance and repair of nets with an accessory for cleaning, washing, and maintaining nets.
- warehouses and so on:
 - It is one of the important facilities within the project system, as it contributes to saving time and effort and raising performance, and requires the allocation of the following:
 - Warehouse for storing equipment, tools, and all cage supplies.
 - A warehouse for storing feed that meets all proper storage conditions.
 - Feed processing unit: for handling feed by receiving an insured feed from their sources and distributing allotments for feeding needs.
- Transport unit: Freight trucks: equipped with refrigeration equipment to transport the product (refrigerator trucks).
- Boats for transporting anglers and for supply work, boats: to collect fish from cages with refrigerators and freezers, boats: for the work of the maintenance team, supported by a towed roof for maintenance work on-site, equipped with the appropriate tools and equipment for the maintenance of cages and nets.
- Maintenance team unit
- Monitoring the condition of the cages according to the predetermined work schedule, by making two tours of the cages area.
- Examine the nets by diving for restoration.



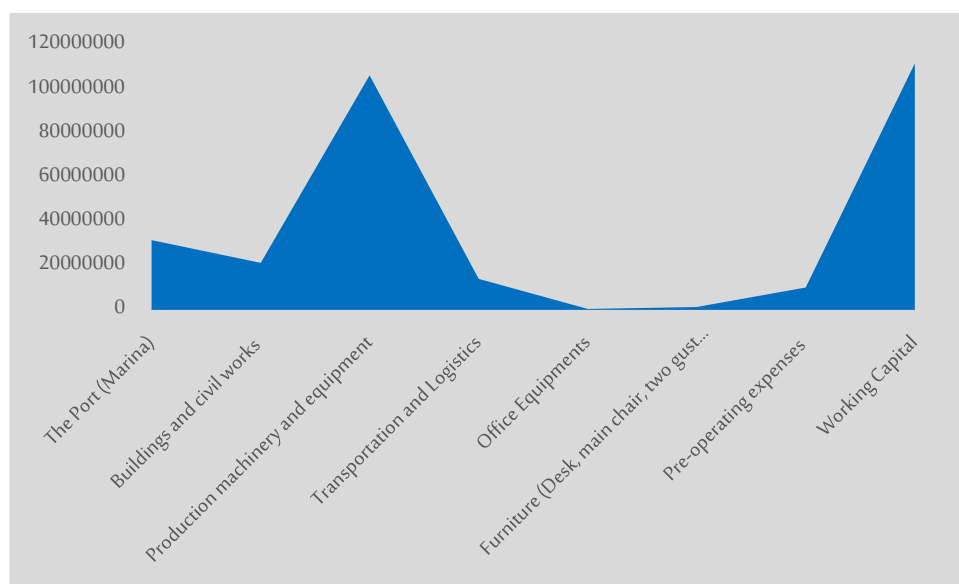
3.2 Fixed Assets:

The total investment amount for the project is SR 300,000,000 with details as presented in the following table. This section presents the capital requirement for the project and their costing:

Table 3-1: Capital Requirement

Category	Project Cost
The Port (Marina)	32,000,000
Buildings and civil works	21,762,500
Production machinery and equipment	106,575,000
Transportation and Logistics	14,450,000
Office Equipments	804,000
Furniture (Desk, main chair, two guest chairs, file cabinet)	1,736,000
Sub-Total Fixed Assets	177,327,500
Pre-operating expenses	10,626,768
Working Capital	112,045,733
Sub Total Intangible Assets	122,672,500
TOTAL INVESTMENT	300,000,000

Chart 3-1: Capital Requirement



3.2.1 The Port (Marina):

Table 3-2: The Port (Marina)

Item	Unit	Unit Price	Cost (SR)
General location (site leveling, fences, ground tanks, Etc.)	8,000	4,000	32,000,000
Total	8,000		32,000,000

3.2.2 Buildings and civil works:

Table 3-3: Buildings and civil works

Item	Unit	Unit Price	Cost (SR)
Main Building	6,000	2,500	15,000,000
Warehouses	8,000	750	6,000,000
Administrative Offices	650	1,000	650,000
External auxiliary rooms (Guard and electricity rooms)	75	1,500	112,500
Total	14,725		21,762,500

3.2.3 Production machinery and equipment:

Table 3-4: Production machinery and equipment

Item	Unit	Unit Price	Cost (SR)
Cages (diameter 20m, circumference 60m, depth 20m)	200	200,000	40,000,000
Means of marine transport (ships and boats)	22	2,000,000	44,000,000
Care, custody and safety unit	8	1,000,000	8,000,000
Safety unit Power generation and water pumping stations	1	2,000,000	2,000,000
Production units (cranes, nets, auxiliary equipment... etc.)	40	150,000	6,000,000
Crushed ice production unit	2	750,000	1,500,000
Delivery and installation fees 5%	5%	101,500,000	5,075,000
Total	273		106,575,000

3.2.4 Transportation and Logistics:

Table 3-5: Transportation and Logistics

Item	Unit	Unit Price	Cost (SR)
5-ton Truck for logistic dep.	40	225,000	9,000,000
Pickup car for maintenance and warehouse dep.	40	125,000	5,000,000
Normal sedan car for sales	6	75,000	450,000
Total	86		14,450,000

3.2.5 Office Equipments:

Table 3-6: Office Equipments

Item	Unit	Unit Price	Cost (SR)
Computers	30	6,000	180,000
Multipurpose printers	12	5,000	60,000
Photocopiers	6	8,000	48,000
Fax machine	4	4,000	16,000
ERP accounting and admin.	1	500,000	500,000
Total	53		804,000

3.2.6 Furniture (Desk, main chair, two guest chairs, file cabinet):

Table 3-7: Furniture (Desk, main chair, two guest chairs, file cabinet)

Item	Unit	Unit Price	Cost (SR)
Managers' offices 180 cm with accessories	30	10,000	300,000
Staff offices Work station	10	8,000	80,000
Leather sofa sets for 7 people	8	8,000	64,000
Meeting room (meeting table and 10 chairs)	4	10,000	40,000
Reception offices	4	8,000	32,000
labor housing (one bed and clothing cabinet)	5	244,000	1,220,000
Total	61		1,736,000

3.2.7 Pre-operating expenses:

Table 3-8: Pre-operating expenses

Item	Unit	Unit Price	Cost (SR)
Feasibility Study	8	205,000	1,640,000
Engineering supervision	1	1,612,875	1,612,875
Engineering drawing	1	2,932,375	2,932,375
Work visa and Labor tickets	40	10,000	400,000
Quality and products certifications & Recruitment charge	10	336,000	3,360,000
Evaluation fee	1	495,000	495,000
Legal Expenses	1	186,517	186,517
Total	62		10,626,768

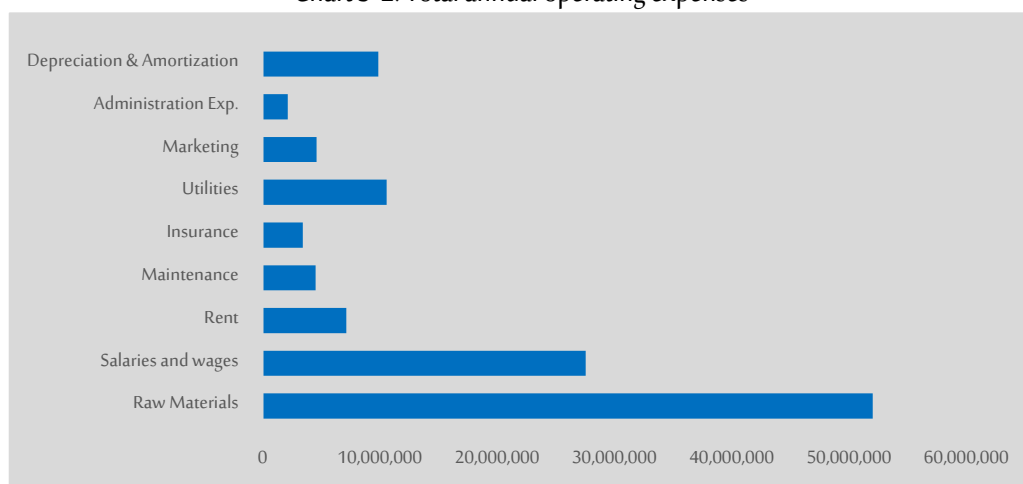
3.3 Annual operating expenses:

Operating expenses are considered one of the most important items in this study as follows:

Table 3-9: Total annual operating expenses

Item	%	Cost (SR)
Raw Materials	42.7%	52,015,000
Salaries and wages	22.6%	27,552,000
Rent	5.9%	7,141,000
Maintenance	3.7%	4,533,575
Insurance	2.8%	3,438,958
Utilities	8.7%	10,584,000
Marketing	3.8%	4,615,200
Administration Exp.	1.8%	2,166,000
Depreciation & Amortization	8.1%	9,882,510
Total	100%	121,928,243

Chart 3-2: Total annual operating expenses



3.3.1 Raw Materials:

Table 3-10: Raw Materials

Item	Unit	Unit Price	Cost (SR)
Fingerlings	10,800,000	2	24,300,000
Fish feed	9,000	2,300	20,700,000
Cork boxes (polystyrene)	600,000	5	3,000,000
Pallet wrapping roll (shering)	7,500	250	1,875,000
Other materials	2,500	250	625,000
loss	3%	50,500,000	1,515,000
Total	11,419,000		52,015,000

3.3.2 Salaries and wages

Table 3-11: Salaries and wages

Category & Position	No.	Basic Salary	Monthly+ Ben.	Total Annual
(1) Direct Manpower:				
Nutrition and Production Supervisor	10	18,000	252,000	3,024,000
Nutrition and Production Technician	10	8,000	112,000	1,344,000
Ice Factory supervisor	6	8,000	67,200	806,400
Ice Factory Technician	6	4,000	33,600	403,200
Q.C. Supervisor	3	8,000	33,600	403,200
First captain	8	25,000	280,000	3,360,000
Fishing boat captain	8	16,000	179,200	2,150,400
Divers (maintenance and net replacement)	24	16,000	537,600	6,451,200
Drivers	46	3,000	193,200	2,318,400
Laborer	112	2,000	313,600	3,763,200
Total (1)	233	90%	2,002,000	24,024,000
(2) Management Manpower:				
C.E. O	1	40,000	56,000	672,000
Sales Manager	1	20,000	28,000	336,000
Sales officer	8	5,000	56,000	672,000
C.F. O	1	20,000	28,000	336,000
Accountant	4	5,000	28,000	336,000
HR Manager	1	20,000	28,000	336,000
Government relations official	4	5,000	28,000	336,000
Procurement Officer	3	5,000	21,000	252,000
IT Officer	3	5,000	21,000	252,000
Total (2)	26	10%	294,000	3,528,000
Total (1) + (2)	259	100%	2,296,000	27,552,000

3.3.3 Rent:

Table 3-12: Rent

Item	Unit	Unit Price	Cost (SR)
Port	8,000	9	70,000
Onshore site rent (factory and support services)	500,000	14	7,071,000
Total	508,000		7,141,000

3.3.4 Maintenance:

Table 3-14: Maintenance

Item	Unit	Unit Price	Cost (SR)
The Port (Marina)	32,000,000	1%	320,000
Buildings and civil works	21,762,500	1%	217,625
Production machinery and equipment	106,575,000	3%	3,197,250
Transportation and Logistics	14,450,000	5%	722,500
Office Equipments	804,000	3%	24,120
Furniture (Desk, main chair, two guest chairs, file cabinet)	1,736,000	3%	52,080
Total	177,327,500		4,533,575

3.3.5 Insurance:

Table 3-15: Insurance

Item	Unit	Unit Price	Cost (SR)
The Port (Marina)	32,000,000	1.5%	480,000
Buildings and civil works	21,762,500	1.5%	326,438
Production machinery and equipment	106,575,000	2.0%	2,131,500
Transportation and Logistics	14,450,000	3.0%	433,500
Office Equipments	804,000	3.0%	24,120
Furniture (Desk, main chair, two guest chairs, file cabinet)	1,736,000	2.5%	43,400
Total	177,327,500		3,438,958

3.3.6 Marketing:

Table 3-16: Marketing

Item	Unit	Unit Price	Cost (SR)
Distribution of advertising publications Operating	160,000	12	1,920,000
Maintaining and developing the website	10,000	12	120,000
Advertisements	205,000	12	2,460,000
Mobile Applications	9,600	12	115,200
Total	384,600		4,615,200



3.3.7 Utilities Consumption and Cost:

Table 3-17: Utilities

Item	Unit	Unit Price	Cost (SR)
Electricity	594,000	12	7,128,000
Oil and fuels	288,000	12	3,456,000
Total	882,000		10,584,000

3.3.8 Administration Exp.:

Table 3-18: Administration Exp.

Item	Unit	Unit Price	Cost (SR)
Stationery and publications	15,500	12	186,000
Fees and subscriptions	146,500	12	1,758,000
Mail and phone	11,000	12	132,000
Professional fees	6,000	12	72,000
Hospitality and cleanliness	1,500	12	18,000
Total	180,500		2,166,000

3.3.9 Depreciation & Amortization:

Table 3-19: Depreciation & Amortization

Item	Unit	Rate	Cost (SR)
The Port (Marina)	32,000,000	3%	1,066,667
Buildings and civil works	21,762,500	3%	725,417
Production machinery and equipment	106,575,000	5%	5,328,750
Transportation and Logistics	14,450,000	10%	1,445,000
Office Equipments	804,000	10%	80,400
Furniture (Desk, main chair, two guest chairs, file cabinet)	1,736,000	10%	173,600
Pre-operating expenses	10,626,768	10%	1,062,677
Total	187,954,268		9,882,510



3.4 Working Capital

Working capital is defined as operating expenses, which include all expense items that must be spent until the project is operated during the first operation, marketing and collection cycle:

Table 3-20: Working Capital

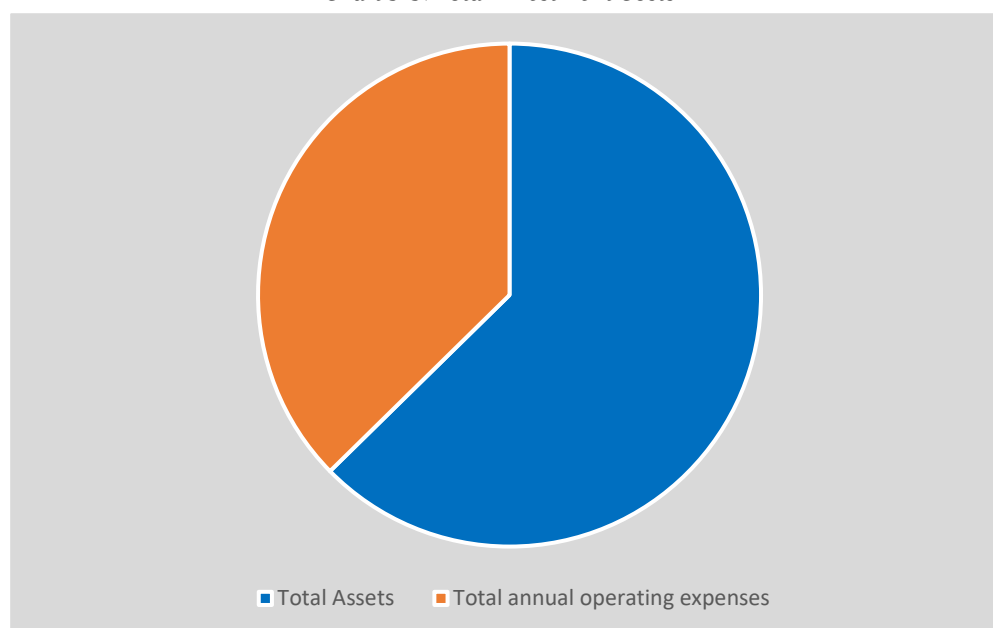
Item	Operating Cost	%	Cost (SR)
Raw Materials	52,015,000	100%	52,015,000
Salaries and wages	27,552,000	100%	27,552,000
Rent	7,141,000	100%	7,141,000
Maintenance	4,533,575	100%	4,533,575
Insurance	3,438,958	100%	3,438,958
Utilities	10,584,000	100%	10,584,000
Marketing	4,615,200	100%	4,615,200
Administration Exp.	2,166,000	100%	2,166,000
Total	112,045,733		112,045,733

3.5 Total Investment Costs

Table 3-21: Total Investment Costs

Item	%	Cost (SR)
Total Assets	63%	187,954,268
Total annual operating expenses	37%	112,045,733
Total	100%	300,000,000

Chart 3-3: Total Investment Costs



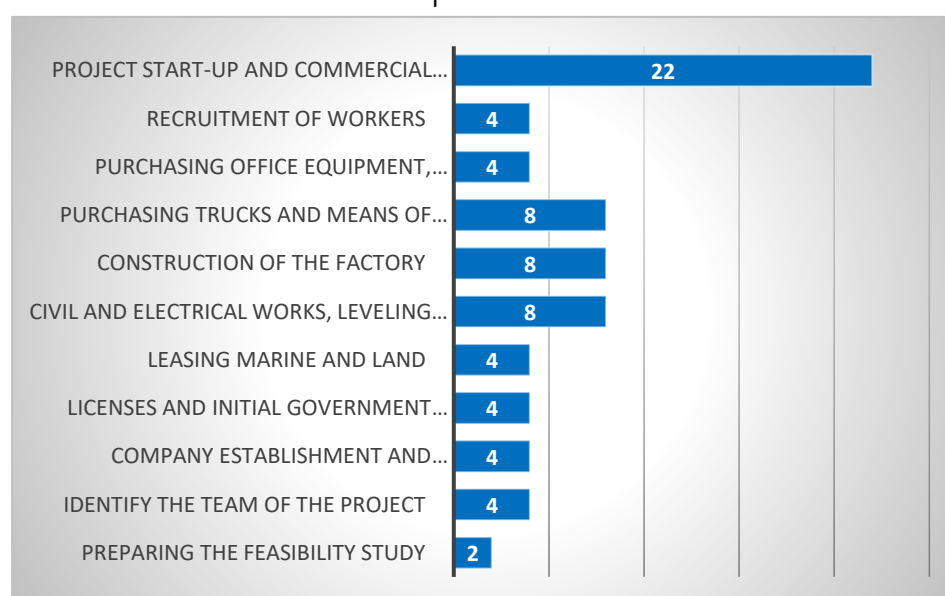
3.6 Implementation Schedule:

The project implementation phase includes the extended period of time starting from making the investment decision and ending with the commercial operation phase. It is necessary to give this stage of the project cycle special importance, because deviation from the initial plans for project implementation would negatively affect the profitability of the entire project. The primary goal here is to determine the necessary financial requirements. It is expected that the project will be implemented within 8 months, and that commercial production will begin within 14 months of the end of the implementation period. The table below shows the successive and overlapping stages of project implementation:

Table 3-22: Implementation Schedule

Item	Period/month
Preparing the feasibility study	2
Identify the team of the project	4
Company establishment and regulatory requirements	4
Licenses and initial government approval	4
Leasing marine and land	4
Civil and electrical works, leveling the land	8
Construction of the factory	8
Purchasing trucks and means of transportation	8
Purchasing office equipment, software, furniture	4
Recruitment of workers	4
Project start-up and commercial operation	22

Chart 3-4: Implementation Schedule



Part 4

Financial Study



4- Financial Study:

The following sections present the assumptions of financial projection, profit or loss statement, financial position and cash flow statement. It also presents the key financial and investment ratios and indicators for the project.

4.1 Source of Finance

It was previously said that the total invested capital amounted to approximately 300,000,000 Saudi riyals. The project will be financed from: self-capital in the amount of 201,000,000 riyals, equivalent to 67% of the project costs, and a loan from the Agricultural Development Fund (ADF) in the amount of 99,000,000 riyals, equivalent to 33% of the project costs, as follows:

Table 4-1: Source of Finance

Item	%	Cost (SR)
Capital	67%	201,000,000
Agricultural Development Fund loan	33%	99,000,000
Total	100%	300,000,000

Chart 4-1: Source of Finance

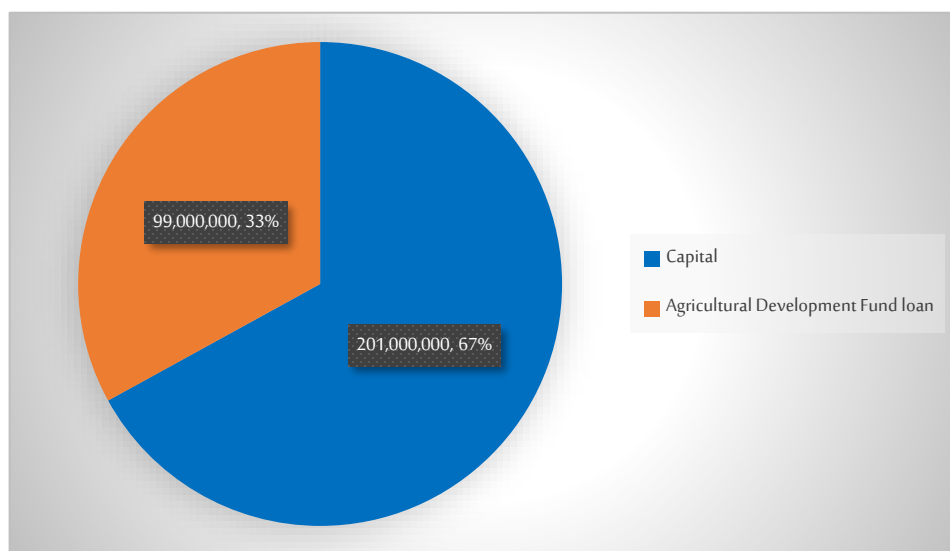


Table 4-2: ADF loan Repayment

Item	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Disbursement	99,000	99,000	99,000	89,100	79,200	69,300	59,400	49,500	39,600	29,700	19,800	9,900
FUF	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
Payments	-	-	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900
Outstanding	99,000	99,000	89,100	79,200	69,300	59,400	49,500	39,600	29,700	19,800	9,900	-

4.2 Sales Projection:

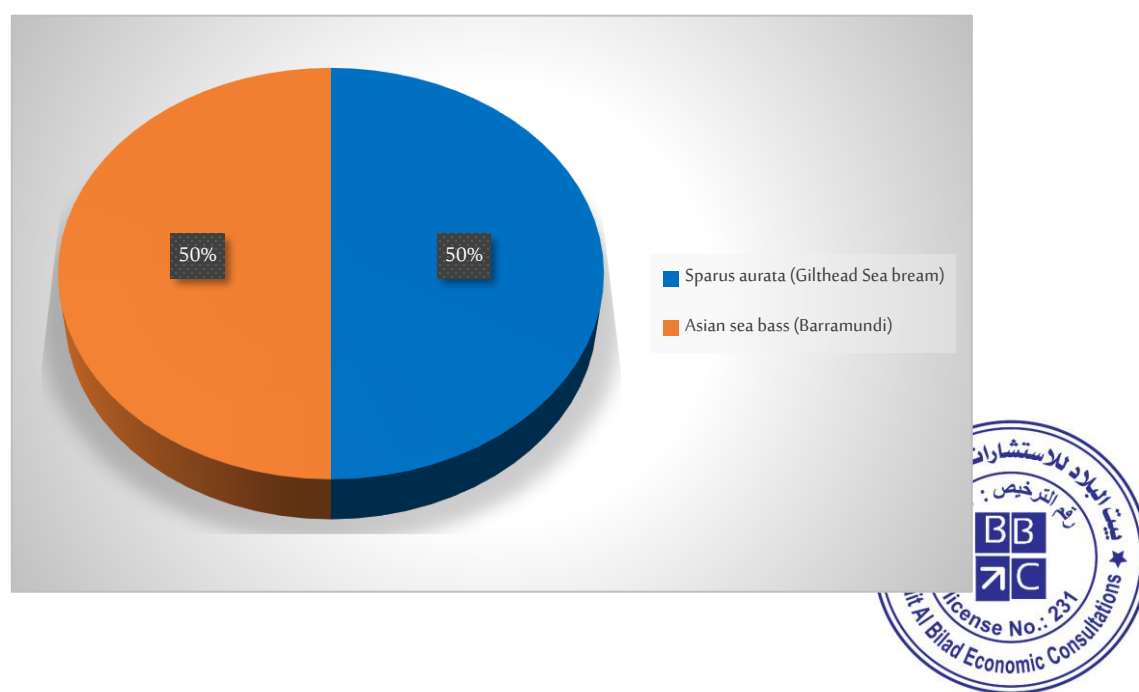
The assumptions on which sales are built: The expected sales of the project during the next phase were estimated according to the expectations that were predicted in the previous parts of the study in addition to the client and a group of experts in the field, and to increase the realism of the study and more conservatively in estimating sales at less than the price that is used in similar projects, noting that Prices including VAT are as follows:

Table 4-3: Sales Revenue

Item	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Occupancy rate	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
Number of cages	100	110	120	130	140	150	160	170	180	190
Production/ cage - tons	35	35	35	35	35	35	35	35	35	35
Annual production - tons	3,500	3,850	4,200	4,550	4,900	5,250	5,600	5,950	6,300	6,650
Price per ton/riyal	29.3	29.6	29.9	30.2	30.3	30.4	30.5	30.7	30.8	30.9
Total Sales	102,638	114,030	125,641	137,472	148,491	159,734	171,064	182,482	193,990	205,586

The total annual capacity of the project is about 7,000 thousand metric tons when operating at full capacity, and since reality always necessitates operating the project without reaching the planned production due to various factors, including the rate of demand for the project's products, in addition to potential malfunctions, so the consultant estimated an operating rate commensurate with The activity of the project, and the extent of its control over factors inhibiting production, as the project begins with a low operating rate in the first year, then production capacity increases in the second year, and so on, as it stabilizes at a fixed operating rate.

Chart 4-2: Sales mix structure



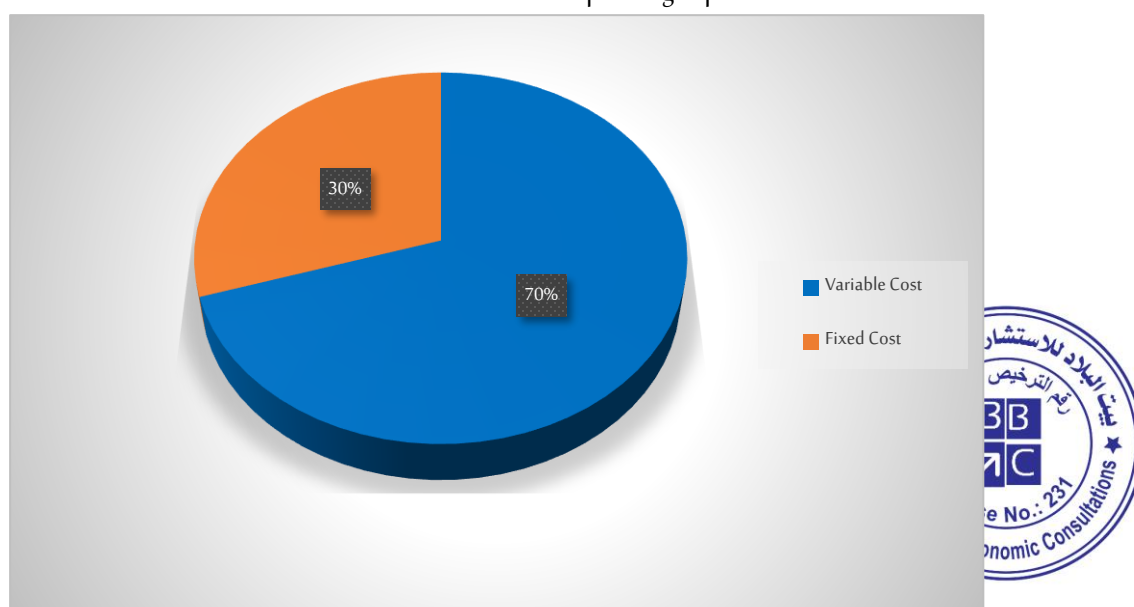
4.3 Classification of annual operating expenses:

Annual operating expenses 121,928,243 riyals which amounted to approximately 85,564,600 riyals, equivalent to 70% of the total annual, while fixed expenses amounted to approximately 36,363,643 riyals, equivalent to about 30% of the total.

Table 4-4: Classification of annual operating expenses

Item	%	Cost (SR)
Variable Cost (1)		
Raw Materials	100%	52,015,000
Salaries and wages	100%	24,024,000
Utilities 90%	90%	9,525,600
Total (1)	70%	85,564,600
Fixed Cost (2)		
Salaries and wages	100%	3,528,000
Rent	100%	7,141,000
Maintenance	100%	4,533,575
Insurance	100%	3,438,958
Utilities 10%	10%	1,058,400
Marketing	100%	4,615,200
Administration Exp.	100%	2,166,000
Depreciation & Amortization	100%	9,882,510
Total (2)	30%	36,363,643
Total (1) + (2)	100%	121,928,243

Chart 4-3: Classification of annual operating expenses



4.4 Financial Statements:

4.4.1 Profit or Loss Statement

Table 4-5: Profit or Loss Statement for the Years Ending [Dec 31] (SAR000)

Item	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Occupancy rate	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
Sales	102,638	114,030	125,641	137,472	148,491	159,734	171,064	182,482	193,990	205,586
Variable expenses										
Raw Materials	26,008	28,608	31,209	33,810	36,411	39,011	41,612	44,213	46,814	49,414
Salaries and wages	12,012	13,213	14,414	15,616	16,817	18,018	19,219	20,420	21,622	22,823
Utilities 90%	4,763	5,239	5,715	6,192	6,668	7,144	7,620	8,097	8,573	9,049
Total of CGS	42,782	47,061	51,339	55,617	59,895	64,173	68,452	72,730	77,008	81,286
Gross Margin	59,855	66,970	74,302	81,855	88,595	95,560	102,612	109,753	116,981	124,300
Fixed expenses										
Salaries and wages	3,528	3,634	3,743	3,855	3,971	4,090	4,213	4,339	4,469	4,603
Rent	7,141	7,355	7,576	7,803	8,037	8,278	8,527	8,783	9,046	9,317
Maintenance	4,534	4,670	4,810	4,954	5,103	5,256	5,413	5,576	5,743	5,915
Insurance	3,439	3,542	3,648	3,758	3,871	3,987	4,106	4,229	4,356	4,487
Utilities 10%	1,058	1,090	1,123	1,157	1,191	1,227	1,264	1,302	1,341	1,381
Marketing	4,615	4,754	4,896	5,043	5,194	5,350	5,511	5,676	5,846	6,022
Administration Exp.	2,166	2,231	2,298	2,367	2,438	2,511	2,586	2,664	2,744	2,826
Total Fixed expenses	26,481	27,276	28,094	28,937	29,805	30,699	31,620	32,568	33,546	34,552
EBITDA	33,374	39,694	46,208	52,918	58,791	64,861	70,992	77,184	83,436	89,748
Dep. & Amortization	24,436	13,809	13,809	13,809	13,809	13,809	13,809	13,809	13,809	13,809
Operating Profit	8,938	25,885	32,399	39,109	44,981	51,052	57,183	63,375	69,627	75,938
Other Income	5,953	5,702	5,026	5,499	5,940	6,389	6,843	7,299	7,760	8,223
Other expense	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832	1,832
Profit before zakat	13,059	29,755	35,593	42,776	49,089	55,610	62,194	68,843	75,555	82,330
Estimated Zakat	3,494	4,251	5,135	6,177	7,351	8,659	10,099	11,669	13,368	15,194
Net profit for the year	9,566	25,504	30,457	36,599	41,738	46,951	52,095	57,174	62,187	67,136



4.4.2 Financial Position Statement:

Table 4-6: Financial Position Statement at [Dec 31] (SAR000)

Item	Base	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Assets											
Non-Current Assets											
PPE, net	177,328	163,518	149,709	135,899	122,090	108,281	94,471	80,662	66,853	53,043	39,234
Non-Current Assets	10,627	0	0	0	0	0	0	0	0	0	0
Total non-current assets	187,954	163,518	149,709	135,899	122,090	108,281	94,471	80,662	66,853	53,043	39,234
Current assets											
Inventory, net		3,206	3,527	3,848	4,168	4,489	4,810	5,130	5,451	5,772	6,092
Trade receivables, net		8,436	9,372	10,327	11,299	12,205	13,129	14,060	14,999	15,944	16,897
Cash and equivalents	112,046	140,416	170,676	206,005	247,620	294,580	346,874	404,445	467,225	535,147	608,147
Total current assets	112,046	152,059	183,576	220,179	263,087	311,273	364,813	423,636	487,675	556,863	631,137
Total assets	300,000	315,577	333,284	356,078	385,177	419,554	459,284	504,297	554,527	609,906	670,370
Equity & Liabilities											
Partners' equity											
Capital	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000
Retained earnings		9,566	35,069	65,527	102,126	143,864	190,814	242,910	300,083	362,270	429,406
Total equity	201,000	210,566	236,069	266,527	303,126	344,864	391,814	443,910	501,083	563,270	630,406
Non-Current liabilities											
ADF loan	99,000	89,100	79,200	69,300	59,400	49,500	39,600	29,700	19,800	9,900	0
Employees benefit liability		110	226	347	475	609	750	897	1,052	1,215	1,386
Total non-Current liabilities	99,000	89,210	79,426	69,647	59,875	50,109	40,350	30,597	20,852	11,115	1,386
Current liabilities											
Zakat provision		3,494	4,251	5,135	6,177	7,351	8,659	10,099	11,669	13,368	15,194
Accrued expenses and other liabilities		5,275	5,802	6,329	6,857	7,384	7,912	8,439	8,967	9,494	10,022
trade payables		7,033	7,736	8,439	9,143	9,846	10,549	11,252	11,956	12,659	13,362
Total Current liabilities	0	15,801	17,789	19,904	22,177	24,581	27,120	29,790	32,591	35,521	38,578
Total liabilities	99,000	105,011	97,215	89,552	82,052	74,690	67,469	60,388	53,444	46,636	39,964
Total equity and Liabilities	300,000	315,577	333,284	356,078	385,177	419,554	459,284	504,297	554,527	609,906	670,370

4.4.3 Cash flows Statement:

Table 4-7: Cash flows Statement for the Years Ending [Dec 31] (SAR000)

Item	Base	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Cash inflows:											
Capital	201,000										
ADF loan	99,000										
Net profit		9,566	25,504	30,457	36,599	41,738	46,951	52,095	57,174	62,187	67,136
Provision for employee benefits		110	116	122	128	134	141	148	155	163	171
Provision for zakat		3,494	4,251	5,135	6,177	7,351	8,659	10,099	11,669	13,368	15,194
Depreciation and amortization		24,436	13,809	13,809	13,809	13,809	13,809	13,809	13,809	13,809	13,809
Net changes in working capital		665	-26	-44	-62	4	-14	-21	-28	-36	-43
Total cash inflows (1)	300,000	38,271	43,654	49,479	56,651	63,037	69,546	76,130	82,779	89,491	96,268
Cash outflows:											
fixed assets	177,328										
Pre-operating expenses	10,627										
ADF loan installments		9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900
Zakat paid		0	3,494	4,251	5,135	6,177	7,351	8,659	10,099	11,669	13,368
Total cash outflows	187,954	9,900	13,394	14,151	15,035	16,077	17,251	18,559	19,999	21,569	23,268
Change in cash	112,046	28,371	30,260	35,328	41,615	46,960	52,294	57,571	62,780	67,922	73,000
Cash at 1/1	0	112,046	140,416	170,676	206,005	247,620	294,580	346,874	404,445	467,225	535,147
Cash at 31/12	112,046	140,416	170,676	206,005	247,620	294,580	346,874	404,445	467,225	535,147	608,147



4.4.4 Owners' equity Statement:

Table 4-8: Owners' equity Statement for the Years Ending [Dec 31] (SAR000)

Item	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Capital	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000
Retained earnings 1/1	0	9,566	35,069	65,527	102,126	143,864	190,814	242,910	300,083	362,270
Net (EBIT)	9,566	25,504	30,457	36,599	41,738	46,951	52,095	57,174	62,187	67,136
Retained earnings 31/12	9,566	35,069	65,527	102,126	143,864	190,814	242,910	300,083	362,270	429,406
Total Owners' equity	210,566	236,069	266,527	303,126	344,864	391,814	443,910	501,083	563,270	630,406

4.4.5 Zakat and Tax:

Table 4-9: Zakat and Tax for the Years Ending [Dec 31] (SAR000)

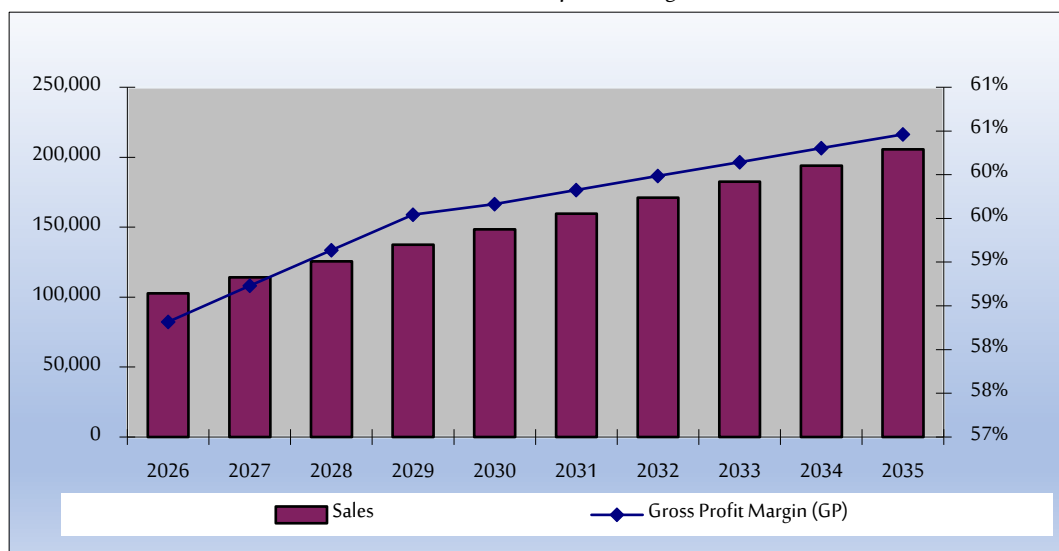
Item	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Contents of adjusted net income:										
Net profit (EBIT)	13,059	29,755	35,593	42,776	49,089	55,610	62,194	68,843	75,555	82,330
Employee benefits	110	116	122	128	134	141	148	155	163	171
Net adjusted income	13,170	29,871	35,714	42,904	49,223	55,750	62,342	68,998	75,718	82,501
Amount subject to Zakat										
Capital	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000	201,000
ADF loan	89,100	79,200	69,300	59,400	49,500	39,600	29,700	19,800	9,900	0
Employee benefits 1/1	0	116	231	353	481	614	755	903	1,058	1,221
Retained earnings 1/1	0	9,566	35,069	65,527	102,126	143,864	190,814	242,910	300,083	362,270
Net adjusted income	13,170	29,871	35,714	42,904	49,223	55,750	62,342	68,998	75,718	82,501
Total amount subject to Zakat	303,270	319,752	341,315	369,183	402,329	440,829	484,611	533,610	587,759	646,992
Assets to be deducted										
Fixed assets net book value	163,518	149,709	135,899	122,090	108,281	94,471	80,662	66,853	53,043	39,234
Pre-operating expenses	0	0	0	0	0	0	0	0	0	0
Total Assets to be deducted	163,518	149,709	135,899	122,090	108,281	94,471	80,662	66,853	53,043	39,234
Zakat income	139,751	170,043	205,416	247,093	294,049	346,357	403,950	466,758	534,716	607,758
Zakah 2.5%	3,494	4,251	5,135	6,177	7,351	8,659	10,099	11,669	13,368	15,194

4.5 Project Financial and Economic Indicators:

4.5.1 Gross Profit Margin:

This ratio shows the relationship between total sales and gross profit, and this ratio achieved an average of 60% during the financial forecast period. Meaning that direct expenses (cost of sales) represented 40% of sales, and this percentage is considered very close to similar projects:

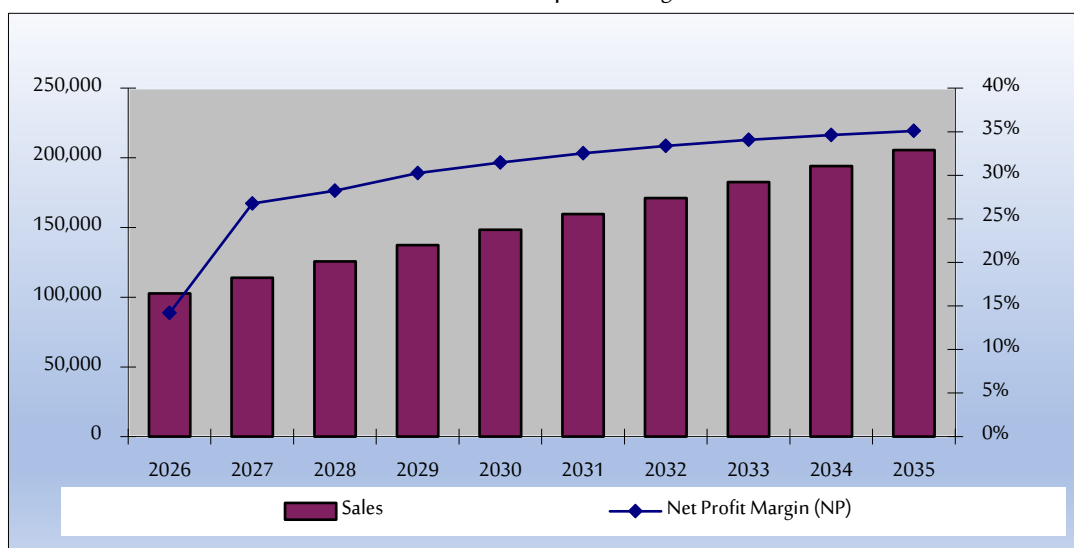
Chart 4-4: Gross profit margin



4.5.2 6.4.2 Net Profit Margin:

Net profit is an important indicator to show the efficiency of project management after taking all direct and indirect expenses and zakat into account. This indicator recorded an average of about 27% during the forecast period. This percentage is considered excellent and very close to similar projects:

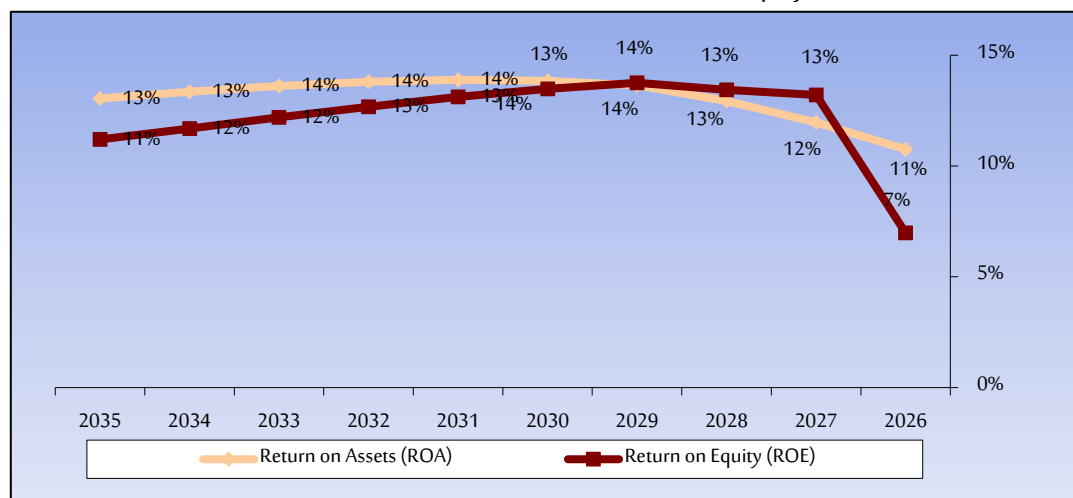
Chart 4-5: Net profit margin



4.5.3 Return on Assets (ROA) and Return on Equity (ROE):

Return on Assets (ROA) this ratio shows the relationship between net profit and the total assets. This ratio achieved an average of 14%, and the return on equity ratio achieved an average of 11% during the financial forecast period, and it is considered a very good return compared to similar projects. The figure below shows these ratios:

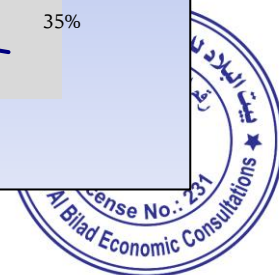
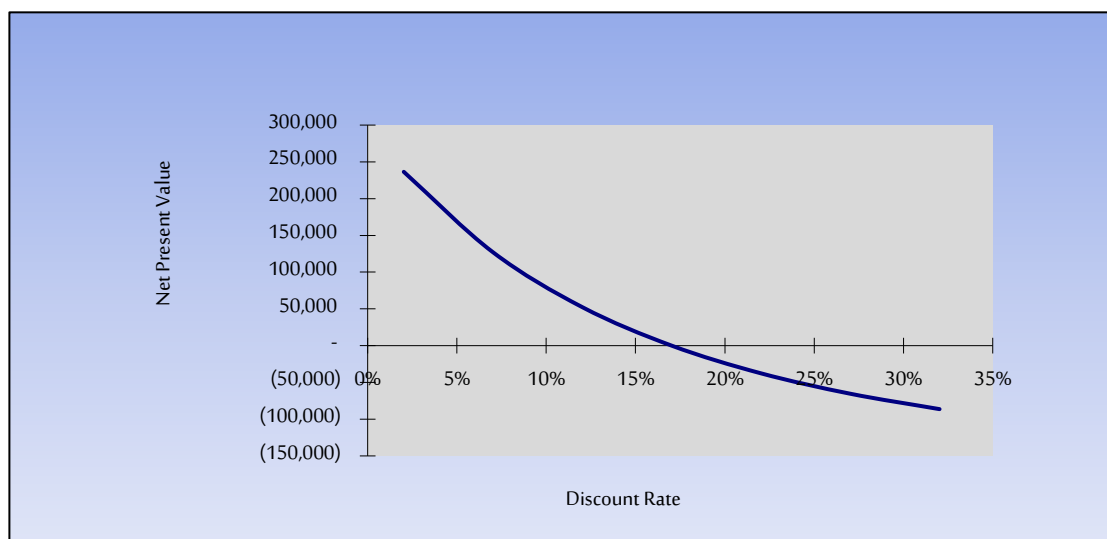
Chart 4-6: Return on Assets (ROA) and Return on Equity (ROE)



4.5.4 Internal Rate of Return (IRR):

A project's internal rate of return on investment represents the discount rate at which the present value of expected net cash flows equals zero. The project achieved an internal rate of return on investment of 17%, which is a return that exceeds the cost of capital (opportunity), which reflects the high profitability of the project:

Chart 4-7: Internal Rate of Return (IRR)



4.5.5 Net Present Value (NPV):

The net present value is arrived at by calculating the present value of the project's cash flows and subtracting the capital investment cost from it. The decision rule is that the investment project is profitable if the net present value is positive - greater than zero, and a loser if it is negative or equal to zero. The annual cash flows have been discounted by Over the period under study, using a weighted average capital cost of 10%, a net present value of 72,021,718 riyals was reached, which reflects the high profitability of the project.

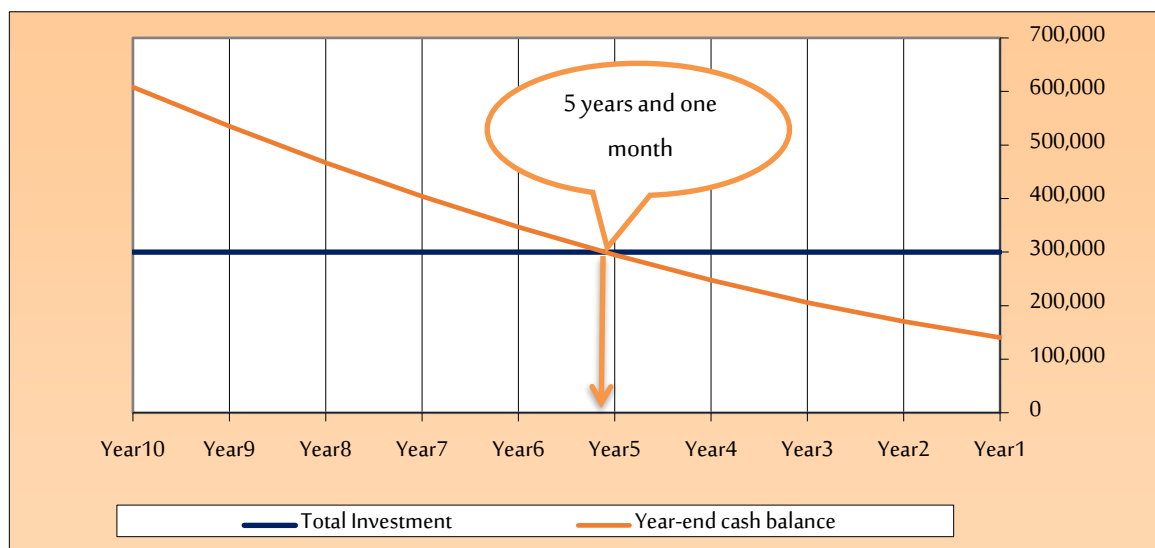
4.5.6 Profitability Index (PI):

Profitability Index is obtained by dividing the net present value of cash flows by the cost of capital investment (benefit-to-cost ratio). The decision rule here is that if the value of the index is greater than one, then the project is considered profitable, and if the value of the index is equal to one or less, then the project is considered a loss, and it has reached evidence. PI of the project is 1.4 and the criterion confirms the profitability of the project.

4.5.7 Payback Period (PBP):

Payback Period (PBP) It is defined as the time period required for a specific investment to generate sufficient cash to cover its costs, and the decision rule is that the shorter the payback period, the more feasible the project is. The capital recovery period was approximately 5 years and one month. And this period is considered very excellent due to the speed of recovery of the invested capital and the possibility of investing it in future expansions:

Chart 4-8: Payback Period (PBP)

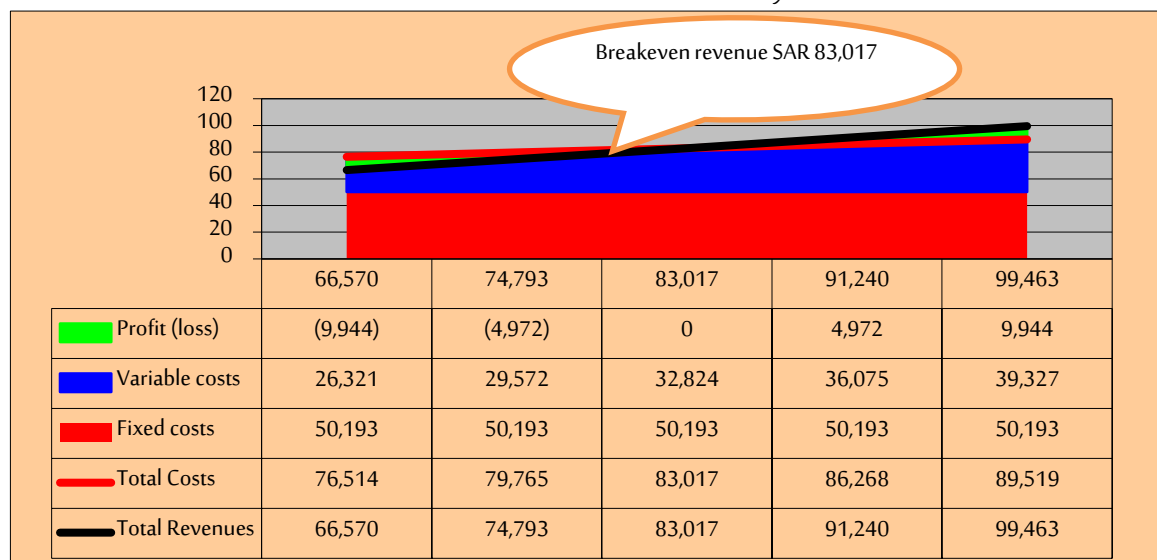


4.5.8 Break-Even-Point Analysis:

The break-even point is the point at which total revenues are equal to total costs, and the project makes no profit or loss. The lower this percentage, the more profitable the project is. The average of this percentage reached 40%, meaning that 83,016,578 riyals achieve breakeven and is considered a very good percentage:



Chart 4-9: Break-Even-Point Analysis



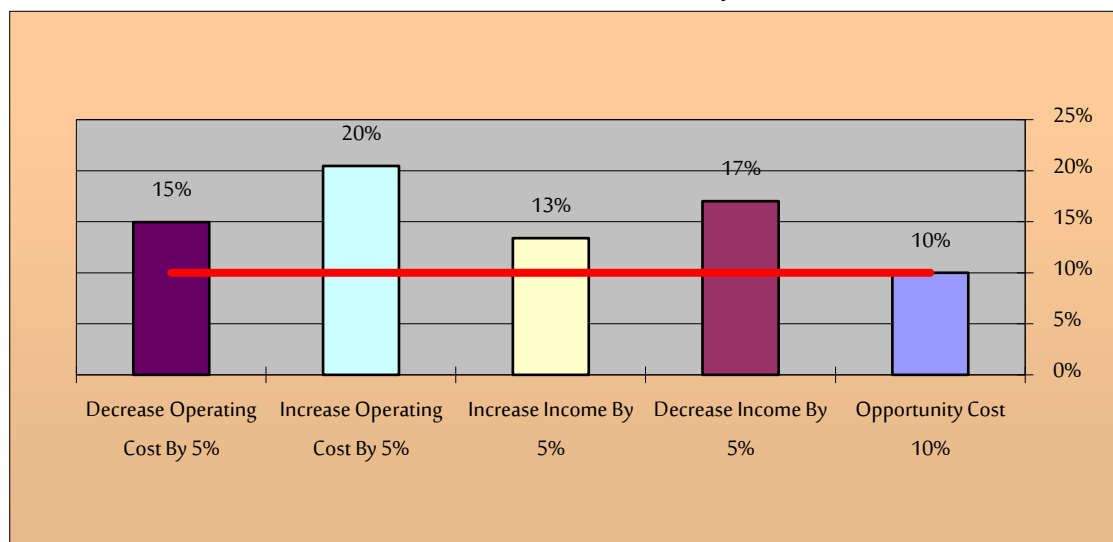
4.5.9 Economic value added (EVA)

Economic value added is a term trademarked by Stern Stewart & Co., and is defined as: (the profit or loss that remains after subtracting the cost of all types of capital employed). The total added economic value of the project amounted to 129,406,464 riyals, the added value of the worker amounted to 499,639 riyals, the worker's share of the invested capital amounted to 1,158,301 riyals, and the ratio of the value added to the invested capital was 0.43.

4.5.10 Sensitivity Analysis

The objective of this sensitivity analysis is to understand the performance of the business by varying one factor and holding other factors constant. To understand this, we have considered the effect on the business through the following five key scenarios which affects sales, price, expenses and operations individually.

Chart 4-10: Break-Even-Point Analysis



4.6 Conclusion

The following table presents summary of the project's estimated profitability and leverage.

Table 4-10: Financial Summary

Ratio	AVG	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Liquidity Ratios											
Current Ratio	13.0	9.6	10.3	11.1	11.9	12.7	13.5	14.2	15.0	15.7	16.4
Quick Ratio	12.8	9.4	10.1	10.9	11.7	12.5	13.3	14.0	14.8	15.5	16.2
Cash Ratio	12.4	8.9	9.6	10.3	11.2	12.0	12.8	13.6	14.3	15.1	15.8
Debt Ratios											
Leverage Debt Ratio	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1
Leverage Equity Ratio	0.2	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Times Interest Earned Ratio	26	5	14	18	21	25	28	31	35	38	41
Operating Ratios											
Assets Turnover	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3
Equity Turnover	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3
Debtor Turnover	12.6	12.2	12.8	12.8	12.7	12.6	12.6	12.6	12.6	12.5	12.5
Inventory Turnover	13.8	13.3	14.0	13.9	13.9	13.8	13.8	13.8	13.7	13.7	13.7
Profitability Ratio											
Gross Profit Margin (GP)	60%	58.3%	58.7%	59.1%	59.5%	59.7%	59.8%	60.0%	60.1%	60.3%	60.5%
Net Profit Margin (NP)	27%	9.3%	22.4%	24.2%	26.6%	28.1%	29.4%	30.5%	31.3%	32.1%	32.7%
Return on Assets (ROA)	14%	10.8%	12.2%	13.4%	14.3%	14.6%	14.8%	14.7%	14.6%	14.3%	14.0%
Return on Equity (ROE)	11%	4.6%	11.4%	12.1%	12.8%	12.9%	12.7%	12.5%	12.1%	11.7%	11.2%



