Central Department of Feasibility Studies
and Investment Costs Estimation

General Department of Economic Feasibility Studies

A Summary of a Preliminary Feasibility Study on Aquaculture Business Activity



(December 2025)

INVEST IN EGYPT

GAFI Translation Department

The Outcomes of a Preliminary Feasibility Study on Aquaculture Business Activity

Aquaculture Sector

Project General Description

- This feasibility study aims to forecast the project's financial indicators and its economic and social returns in the event of establishing and operating an aquaculture venture. Economic feasibility studies are of critical importance in rationalizing investment decisions, as they constitute a core scientific tool for assessing the efficiency of resource allocation and ensuring the optimal utilization of available capacities.
- Aquaculture is regarded as one of the vital productive sectors in the Arab Republic of Egypt, given its pivotal role in supporting the national food security system and contributing to narrowing the widening animal protein gap resulting from rapid population growth.
- The proposed project is aligned with the State's orientation towards developing border and desert governorates and achieving balanced regional development, in line with the objectives of Egypt's Sustainable Development Vision 2030.
- Aquaculture contributes to increasing the domestic supply of fish, thereby helping to achieve relative price stability and reduce reliance on external imports.
- The project is based on the application of aquaculture systems suited to the characteristics of the desert environment, ensuring efficient use of water and energy resources while maximizing achievable productivity.
- The importance of selecting the project's geographic location is underscored by its proximity to water sources and basic infrastructure, as this has a direct impact on reducing operating and transportation costs.
- The project focuses on producing fish species that are compatible with the physical and chemical characteristics of groundwater, while also meeting the requirements of the local market.
- Projected revenues are estimated on the basis of prevailing average selling prices, taking into account potential changes in market conditions. The study also relies on a set of financial indicators—such as net present value, internal rate of return, and the investment payback period—to assess the project's financial viability.
- The project ensures full compliance with approved environmental and health requirements, thereby limiting adverse environmental impacts and reinforcing the principles of sustainability.

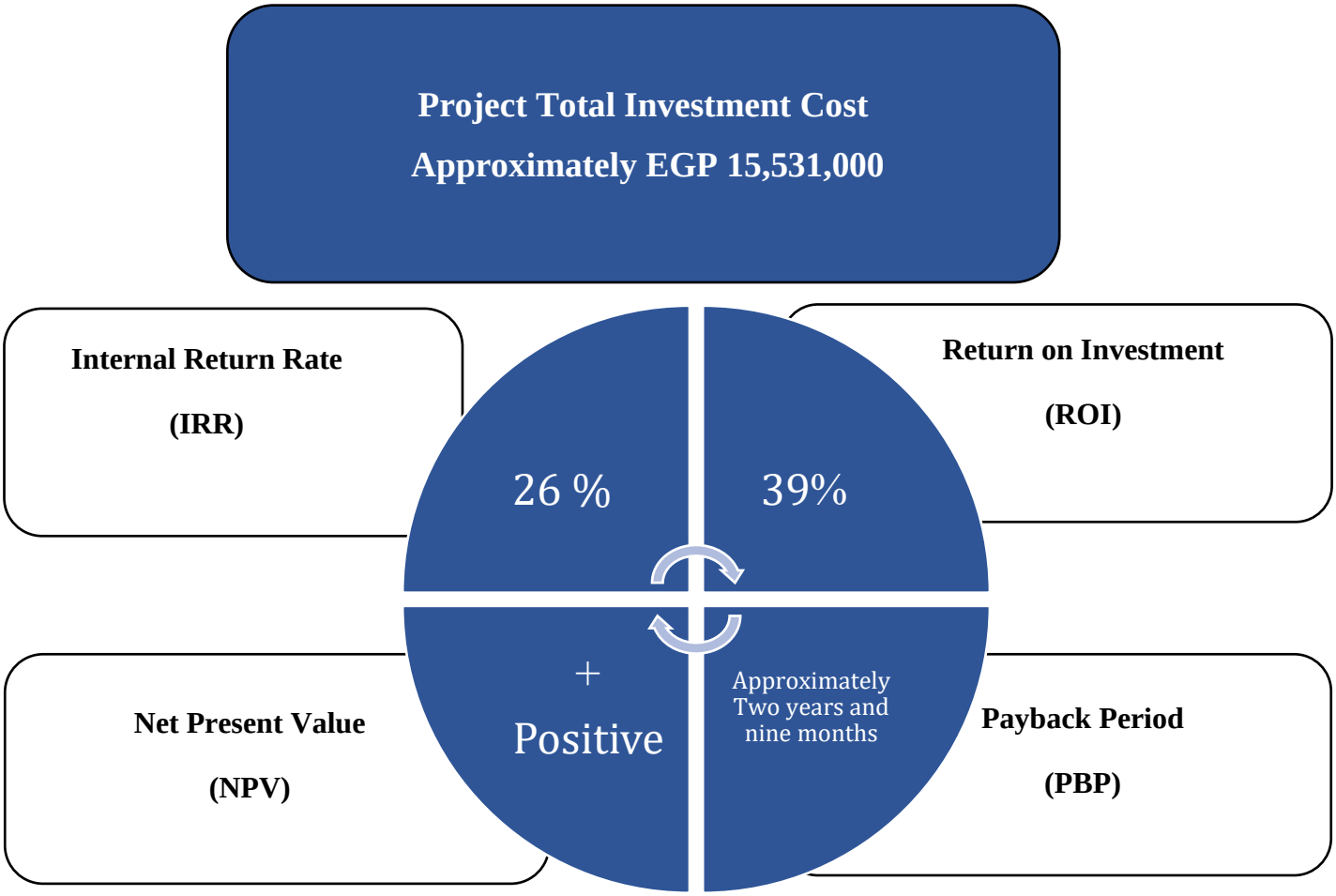
Project Products

- Mullet and tilapia fishes.

Investment Opportunity Data and Project Location

- The project is proposed to be established in Red Sea Governorate under a sale arrangement.
- The project may also be set up in any other governorate where aquaculture business activity is permissible, subject to making the necessary adjustments to the study's cost estimates.
- Based on the data available on the Investment Map, the project may be developed on a surface area of 8 feddans.

Project Key Financial Indicators



The Outcomes of the Legal Feasibility Study

- Aquaculture is governed by the Investment Law; thus, Egypt pays special attention to this activity and grants it incentives to promote its development.
- However, companies incorporated to conduct aquaculture business may choose to be governed by the Investment Law, the Companies Law, or the Commercial Law, as the company owners see fit.
- An aquaculture business may take the form of a sole proprietorship, a partnership, a limited liability company, or a joint stock company.
- There are a number of legal requirements that must be observed with regard to obtaining the necessary operating licenses, including the following:
  - An approval from the governorate having jurisdiction over the land, or that of the local administrative units or the relevant city development authority affiliated to the governorate;
  - An approval from the General Authority for Fish Resources Development;
  - An approval from the governorate having jurisdiction over the land and that of the affiliated local administrative units;
  - A permit from the Coast Guard Police Department (CGPD) and that of the Inland Waterways Police;
  - The required health licenses from the Ministry of Health;
  - Compliance with the Civil Defense Department requirements; and
  - A permit from the Ministry of Supply and Internal Trade.
- Aquaculture activities are governed by Law No. 146 of 2021 and its Executive Regulations issued under Prime Minister Decree No. 706 of 2023.
- If the project is export-oriented, it must obtain an import card and an export card specifying the nature and description of the products traded, or alternatively export may be carried out through an intermediary company acting on behalf of the project in completing export procedures and customs clearance.

The Outcomes of the Environmental Feasibility Study

- The environmental feasibility study is defined as such study that explains the degree of protection and maintenance achieved for the environment, by taking into account its absorptive capacity or its maximum capacity to withstand human activities aimed at exploiting environmental resources without the occurrence of environmental degradation or depletion on the short and long terms, whether directly or indirectly.
- Environmental feasibility studies are one the pillars of environment protection and maintenance. Since sustainable development is the one considering the environmental dimension, as well as the economic and social dimensions, then paying attention to environmental feasibility studies for different development projects is an absolute necessity to achieve sustainable development. This is as important as paying attention to the project's economic feasibility studies whose sole purpose is to ensure that the project achieves the greatest amount of material benefits, without taking into account any potential negative impacts on the environment on account of the project.
- Expected positive environmental impacts of the project:
  - The project promotes the sustainable use of natural resources, particularly water, by channeling groundwater into a productive economic activity rather than wasting it or using it inefficiently.
  - It enhances water-use efficiency through the reuse of water for subsequent agricultural purposes, such as irrigating certain crops or trees, thereby creating environmental synergy between aquaculture and agriculture and reducing water loss.
  - The project helps relieve pressure on natural fisheries and lakes, contributing to ecological balance and mitigating the threat of overfishing, which endangers wild fish stocks.
  - Aquaculture supports food security by providing a source of high-nutritional-value animal protein, reducing reliance on alternative food sources with higher environmental footprints.
  - The project advances sustainable development in desert environments by utilizing otherwise unused land and converting it into productive units without encroaching on traditional agricultural lands.
  - It helps lower indirect emissions associated with transporting fish over long distances, thanks to the relative proximity of production sites to consumption areas.
  - Conversely, the aquaculture project could have negative environmental impacts if technical and environmental standards are not properly observed during project execution and operation.

- Expected negative environmental impacts of the project:
  - One of the main potential negative impacts is the unsustainable depletion of groundwater, particularly in cases of unplanned expansion or the use of aquaculture systems with high water-loss rates.
  - Poor water management may lead to deterioration in water quality due to the accumulation of organic waste and feed residues, adversely affecting soil and surrounding water resources.
  - Unregulated use of feed or veterinary drugs can contaminate water and soil, potentially harming local biodiversity.
  - Discharging pond water without proper treatment may increase soil salinity or alter the chemical properties of adjacent lands.
  - A lack of proper environmental management could also facilitate the spread of fish diseases, negatively impacting both the environment and production.

- To avoid or mitigate the potential negative environmental impacts of the project, the following preventive measures are recommended:
  - Adopt water-efficient aquaculture systems, such as semi-intensive farming or recirculating aquaculture systems (RAS), to ensure the sustainable use of groundwater.
  - Implement balanced feeding programs using high-quality feed to minimize organic waste and improve feed conversion efficiency.
  - Establish sedimentation ponds or primary treatment units for pond effluent before reuse or discharge.
  - Ensure that veterinary drugs and disinfectants are used in accordance with approved guidelines and under specialized technical supervision to prevent environmental contamination.
  - Conduct regular monitoring of water and soil quality, including physical and chemical measurements, to ensure environmental safety limits are not exceeded.
  - Apply integrated environmental management systems and link aquaculture activities with agricultural operations to maximize resource efficiency and minimize environmental impact.
  - Provide training for workers on proper environmental management practices to ensure adherence to preventive measures and safeguard the sustainability of the project.

- Based on the above, the project is expected to have a positive environmental impact, provided that environmental standards are strictly observed.

The Outcomes of the Social Feasibility Study

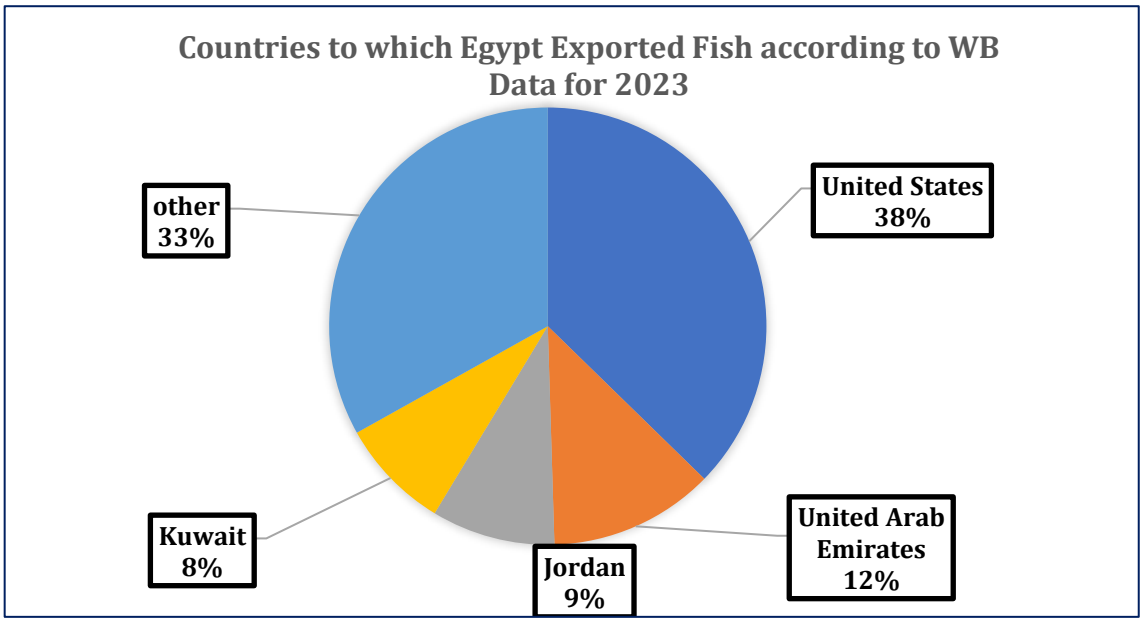
- The social feasibility study aims to analyze the social costs and benefits of various projects in order to select those that deliver the greatest social return. In this context, social feasibility places emphasis on additional dimensions not addressed by other types of feasibility studies, as it focuses on the project's social impacts and its contribution to achieving the community's economic and social objectives.
- Aquaculture business is considered a development initiative with strong social and economic dimensions, given its pivotal role in supporting food security and advancing sustainable local development, particularly in rural and desert areas that suffer from limited economic opportunities and declining income levels.
- The project creates eight (8) direct job opportunities, in addition to indirect employment for various segments of the local community. Its operation requires technical, administrative, and service labor in fields such as pond management, feeding, health monitoring, maintenance, transportation, and marketing, thereby helping to reduce unemployment rates and increase employment levels, especially among the youth.
- The project enhances the living standards of beneficiary households by generating a stable and sustainable source of income, which strengthens individuals' purchasing power and stimulates a wide range of complementary economic activities. These include the manufacture and trade of fish feed, transportation services, storage, and packaging, thereby reinforcing economic linkages and value-chain integration within the local community.
- From a nutritional perspective, the project contributes to increasing the supply of fish as a source of animal protein with high nutritional value and relatively low cost compared to other protein sources. This helps improve dietary patterns within the local community, reduce cases of malnutrition, and enhance overall public health.
- The project is conceived with a strong awareness of its social context, enabling its smooth integration into the existing local economy without creating social frictions or encroaching on residential or agricultural land uses, provided that environmental and public health requirements and occupational safety standards are fully complied with.
- In light of the foregoing, this aquaculture project can be regarded as enjoying a high level of social acceptance and strong social viability, given its positive impacts on employment, income generation, food security, and human capital development, which positions it as a priority initiative within economic and social development plans.

Marketing Feasibility Study, Growth Drivers, and Competitiveness

- The project aims to produce mullet and tilapia.
- Egypt's strategic geographic location facilitates access to export markets in Asia, Africa, Europe, and North America.
- One of the key drivers of growth and competitive advantage for the activity under study is Egypt's accession to a number of international trade agreements, including the following:
  - The Greater Arab Free Trade Area Agreement (GAFTA);
  - The Common Market for Eastern and Southern Africa (COMESA);
  - The Agadir Free Trade Agreement (AFTA);
  - The Egypt–EU Association Agreement;
  - Egypt-EFTA Free Trade Agreement;
  - The Qualified Industrial Zones (QIZ) Agreement; and
  - The Free Trade Agreement between Egypt and the Southern Common Market (MERCOSUR).

1. Supply Volume

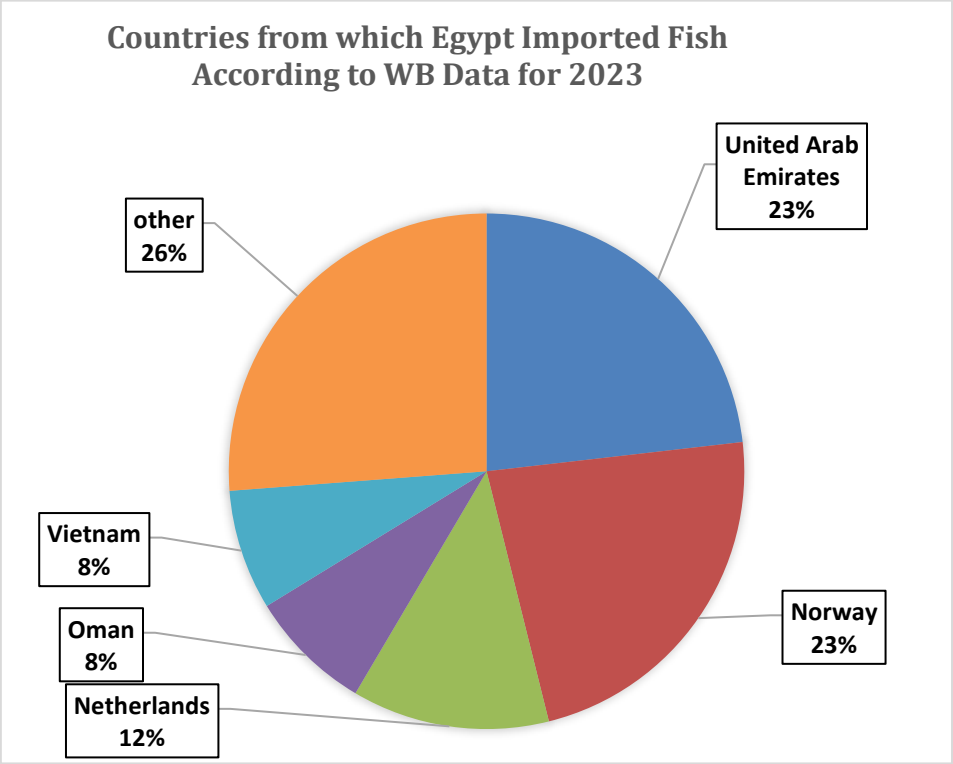
- According to World Bank (WB) data for 2023, Egypt ranked 92nd out of 214 global fish exporting countries, with total exports reaching approximately USD 72 million. This represents about 0.05% of the global fish exports, which totaled around USD 138246 million.
- In 2023, Egypt exported fish to 58 countries. Top five destinations that received Egypt's fish exports are shown in the chart below.



- Fish exports amounted to USD 27 million to the United States (USA), USD 9 million to the United Arab Emirates (UAE), USD 7 million to Jordan, USD 6 million to Kuwait, and USD 24 million to other countries.

2. Demand Volume

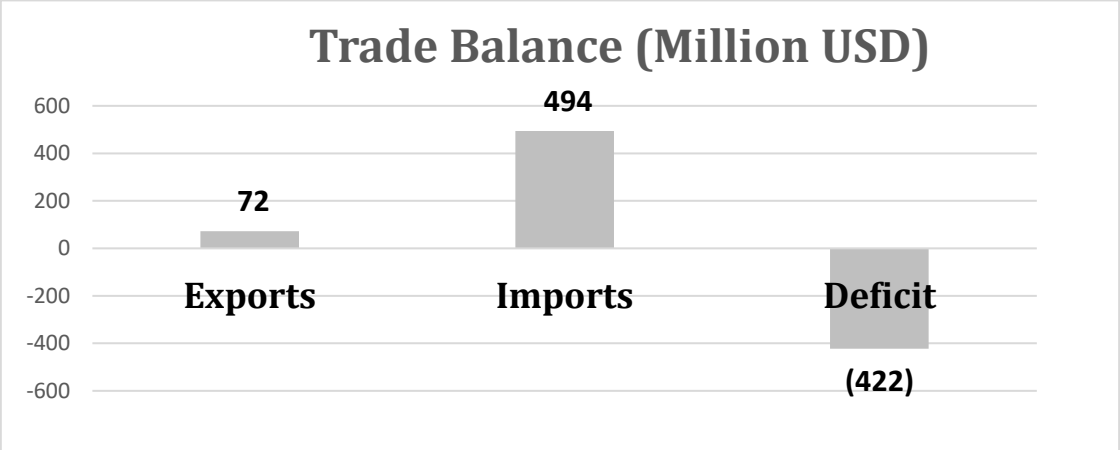
- According to WB data for 2023, Egypt ranked 41st out of 227 countries worldwide importing fish. Egypt's total imports amounted to approximately USD 138246 million, representing around 0.53% of global imports.
- In 2023, Egypt imported fish from 49 countries, with imports from the top five suppliers amounting to USD 364 million, as illustrated in the chart.



- The import volumes from these countries were as follows: UAE – USD 114 million; Norway– USD 113 million; Netherland– USD 61 million; Oman – USD 38 million; and other countries – USD 129 million.

3. Trade Balance

- The above data indicates a trade deficit in the fish sector for the year 2023.
- In 2023, Egypt exported approximately USD 72 million worth of fish, while imports amounted to roughly USD 494 million, as illustrated in the following chart:



- This reflects that there is a deficit amounting to approximately USD 422 million in Egypt's trade balance.