



Workshop for Promoting Sustainable Aquaculture Practices in the Mediterranean and Black Sea Regions : “The Producers Perspective”

“MISR” Arab Republic of EGYPT

Lakes & Fish Resources Protection and Development Agency “LFRPDA”

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MISR "EGYPT"



The Profile of MISR “Egypt”

Egypt is among the largest economies on the African continent. In 2021, it ranked third, with a gross domestic product (GDP) of roughly 475.23 billion U.S. dollars, following Nigeria and South Africa.

GDP/capita

4.295 U.S. dollars, a 10.51% increase from 2021 .

Growth by sector: key economic sectors

Real GDP growth rate is 6.61%

Egypt's economy relies mainly on **Agriculture, Media, Petroleum imports, Natural gas, and Tourism.**

The Growth rate for Aquaculture sector in Egypt increased rapidly from 2000 -2019 is 25%/year and from 2019 – 2021 is 1% as a result of the impact of Covid -19 pandemic on the global economic.

Sector Challenges

- 1- limitation of the Fish Feed Raw Material Resources which led to import it with expensive cost.
- 2- After achieving a surplus production of freshwater fish, we need to turn to marine aquaculture that suits for the citizen's economy.
- 3- Expanding to increase the Scio Acceptability of fish produced by aquaculture.
- 4- Fish prices have increased as a result of global crises over the past 4 years, with a decreasing comparative advantage for fish prices compared to poultry and meat prices.
- 5- It is necessary to establish cooperatives in the field of aquaculture in order to find direct solutions to reduce the cost of production and reduce the role of the intermediary, and this will reflect on the increase in fish sales as a result of its relatively low price, so that it becomes affordable for the citizen.
- 6- Cultivation of fish species that are compatible with current changes in climate.

Trade and Per Capita of Fish Production in EGYPT

جدول ٢-١ إجمالي كمية الصادرات والواردات من الأسماك عام ٢٠٢٠ مقارنة بعام ٢٠١٩

Table 1-2; Total quantity of Exports and Imports of Fish, 2020 compared to 2019

Statement	Year	Quantity	%	مقدار التغير Amount of change	2020*	2019	البيان
Exports		Qua.\ MT	-19.69	-6895	28114	35009	الصادرات
Imports		Qua.\ MT	-40.76	-206214	299745	505959	الواردات

* Source: Customs Authority

* المصدر مصلحة الجمارك

جدول ٣-١ المتوسط السنوي لنصيب الفرد من الأسماك عام ٢٠٢٠ مقارنة بعام ٢٠١٩

Table 1-3; Annual average share per Capita of Fish, 2020 compared to 2019

Statement	Year	نصيب الفرد كجم في السنة عام ٢٠٢٠ * Annual share per capita / kg - 2020 *	نصيب الفرد كجم في السنة عام ٢٠١٩ Annual share per capita / kg - 2019	البيان
Available of domestic prod. (1)		19.70	20.26	المتاح من الناتج المحلي (١)
Total available for consumption (2)		22.68	25.38	إجمالي المتاح للاستهلاك (٢)

1 Domestic production available (Domestic production - Exports)

(١) الإنتاج المحلي المتاح (الإنتاج المحلي - الصادرات)

2 Total available for consumption = (Domestic production - Exports + Imports)

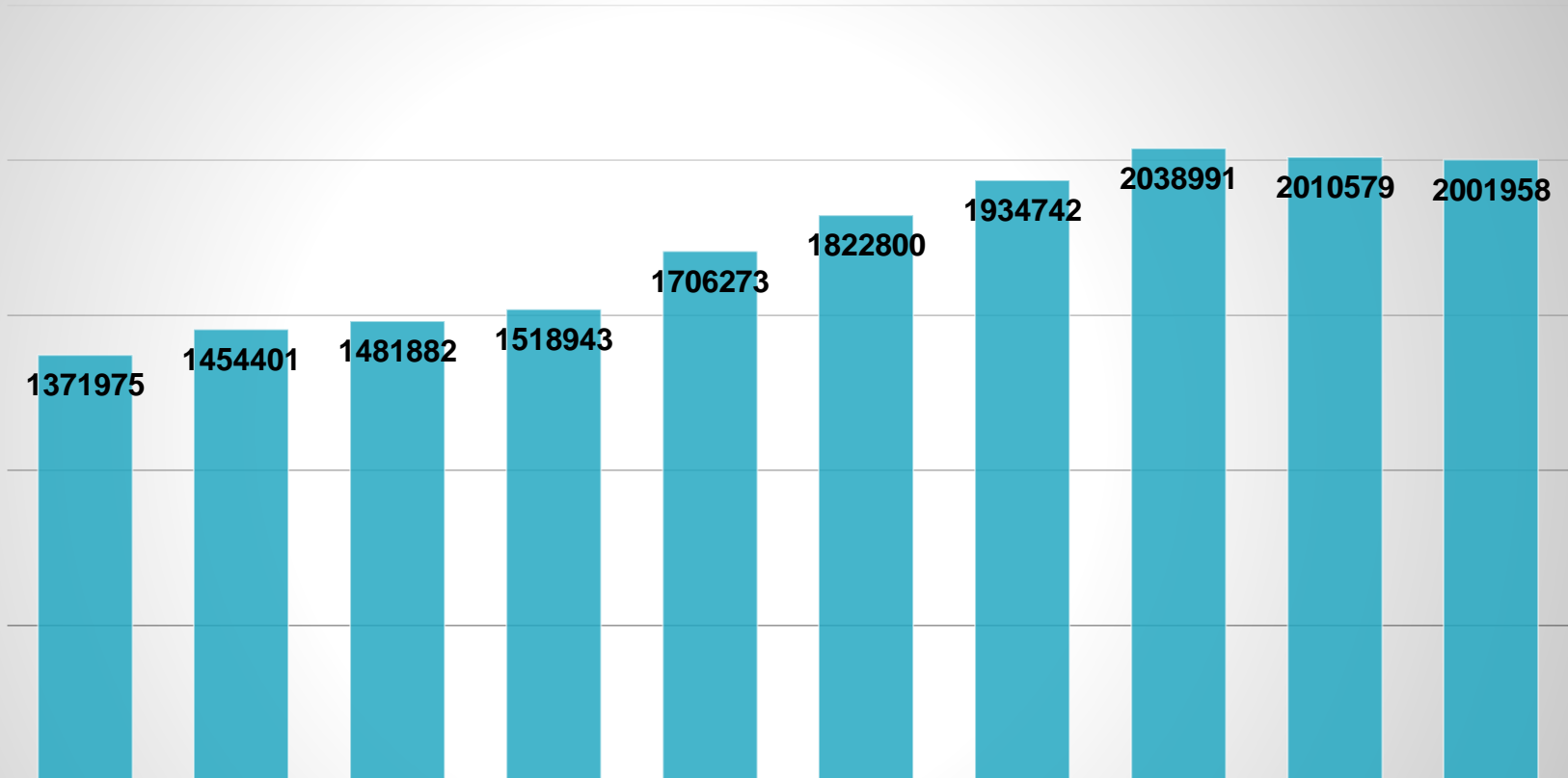
(٢) المتاح للاستهلاك = (الإنتاج المحلي - الصادرات + الواردات)

* عدد السكان بناء على تقديرات الجهاز المركزي للتعبئة العامة والإحصاء

*Population estimates according to "The Central Agency for Public Mobilization and Statistics "CAPMS"

Overview of Fish Production in EGYPT

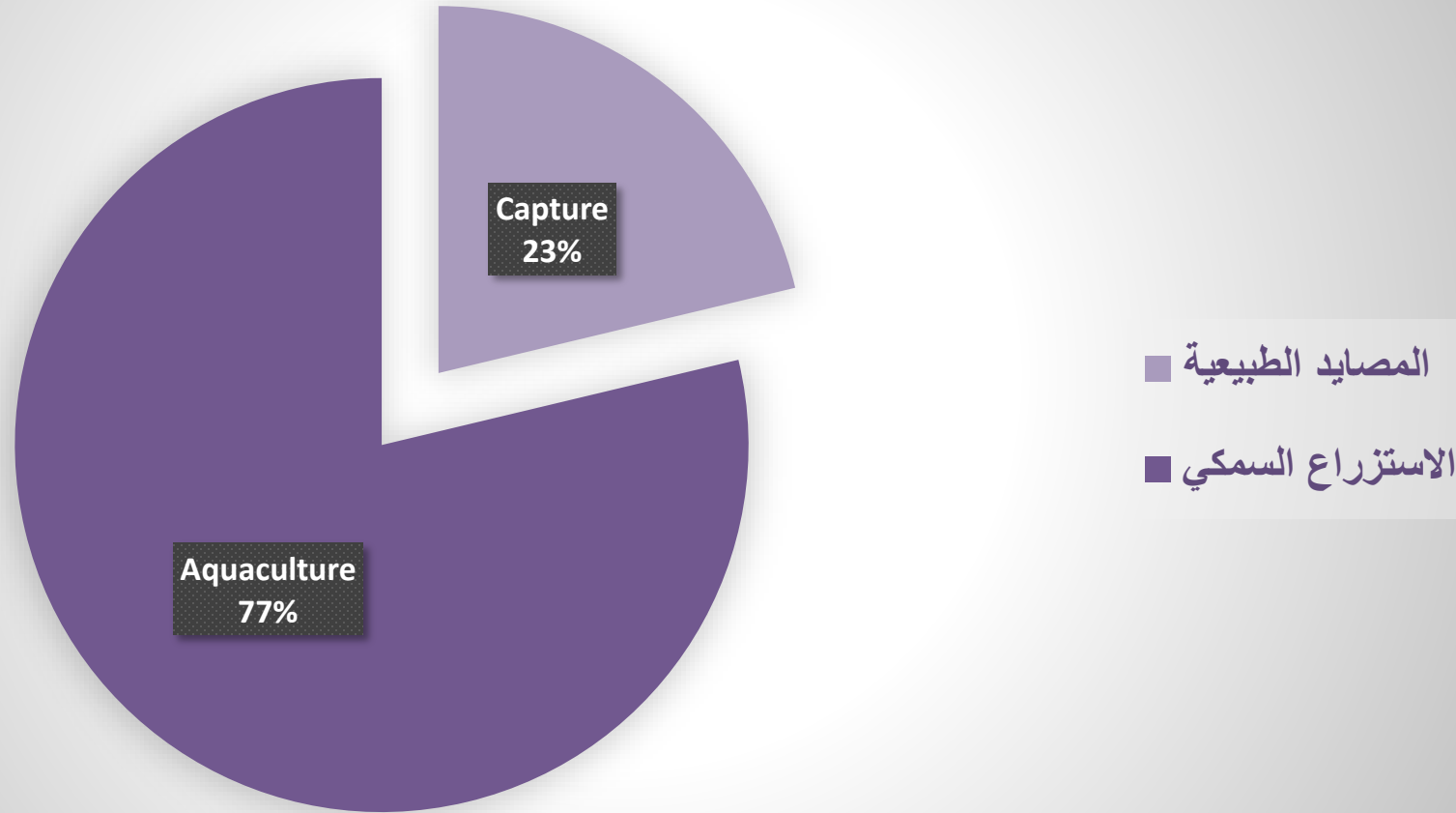
الإنتاج



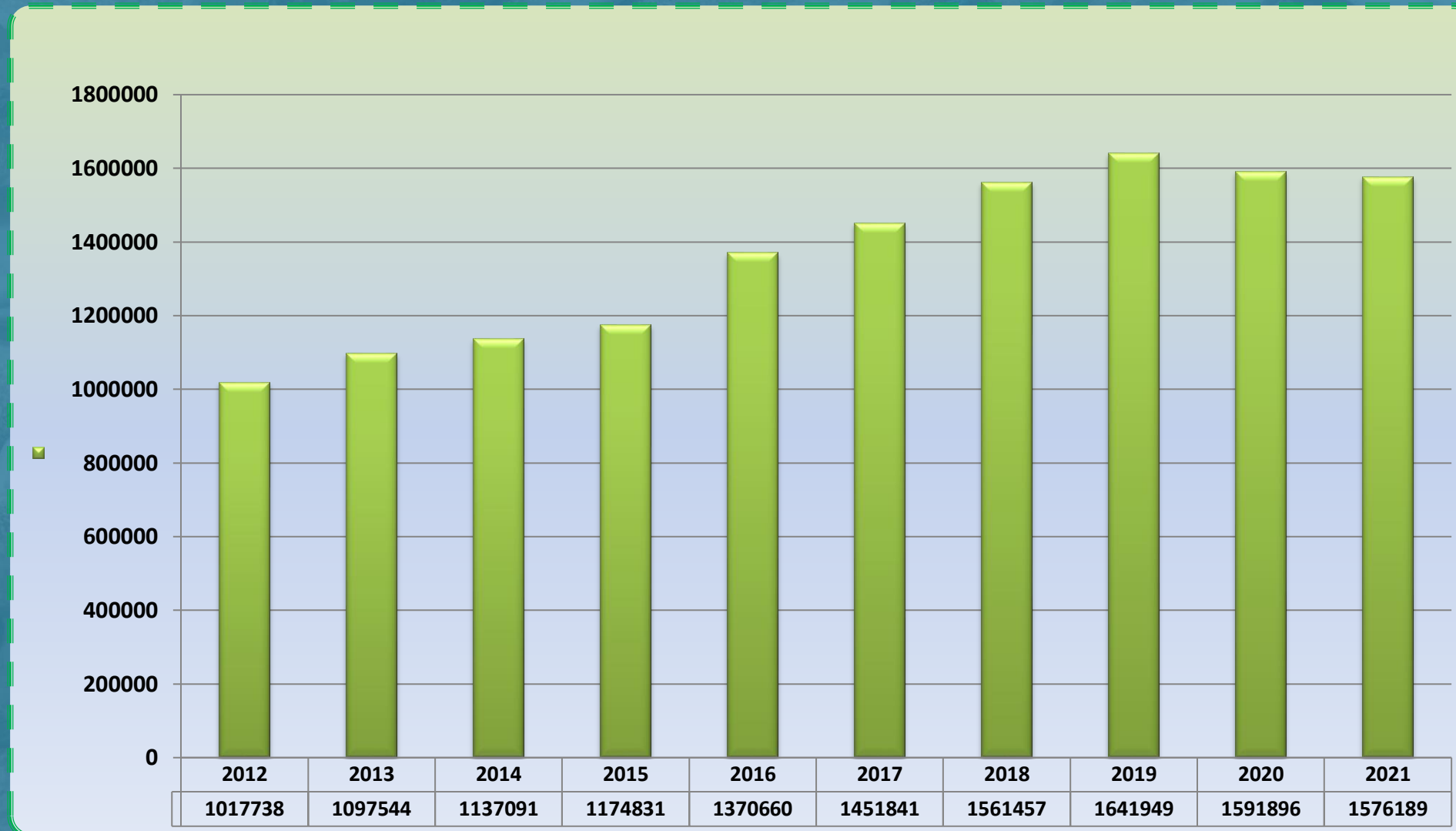
With the Value
Estimated
by 2,1 Billion
USD

year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
production	1371975	1454401	1481882	1518943	1706273	1822800	1934742	2038991	2010579	2001958

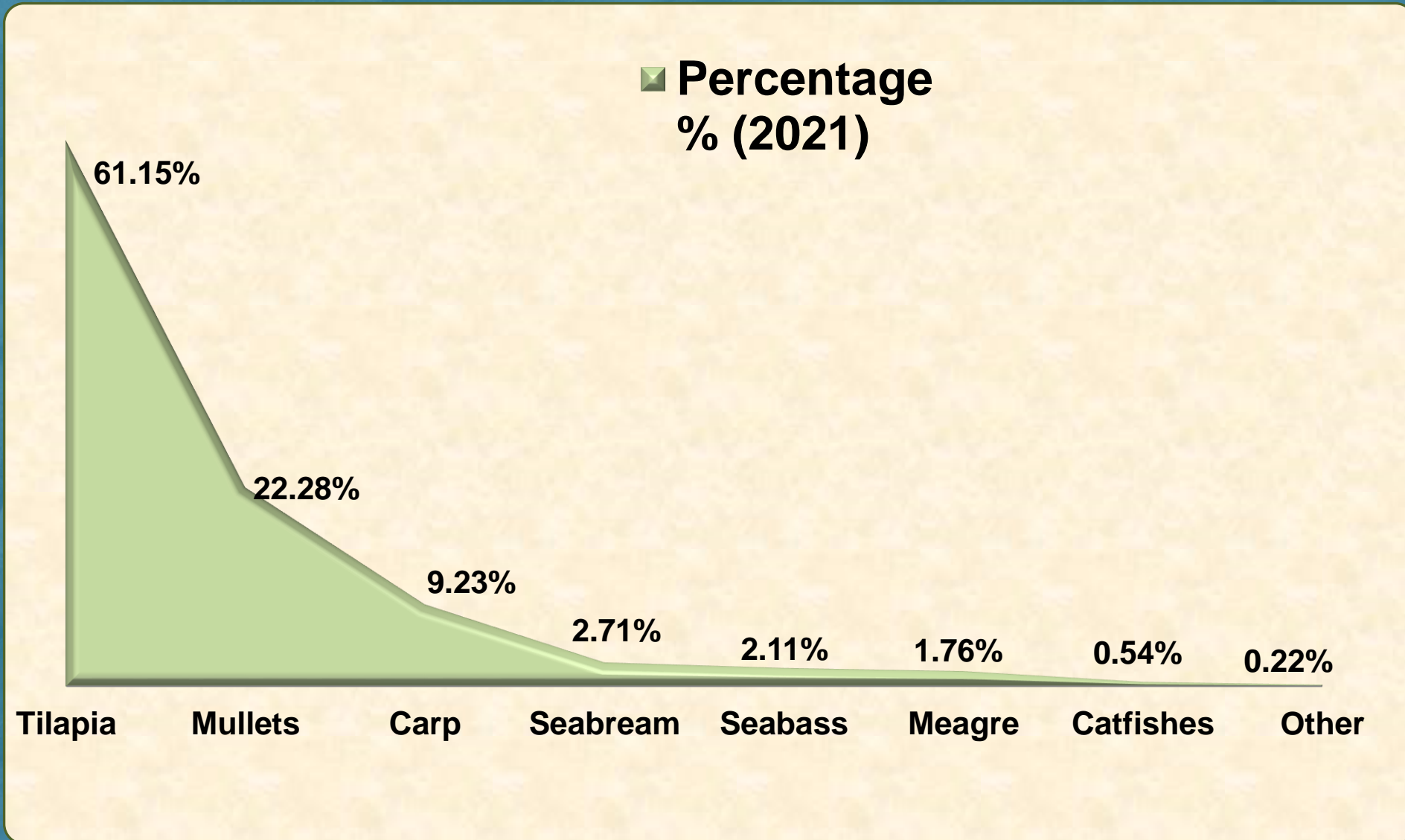
Catch percentage (%) from natural fisheries & aquaculture - 2021



Overview of Aquaculture Development (2012-2021)



Aquaculture Species Reared

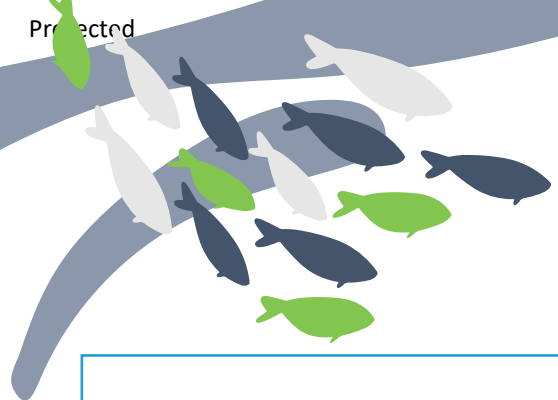




National Aquaculture Vision

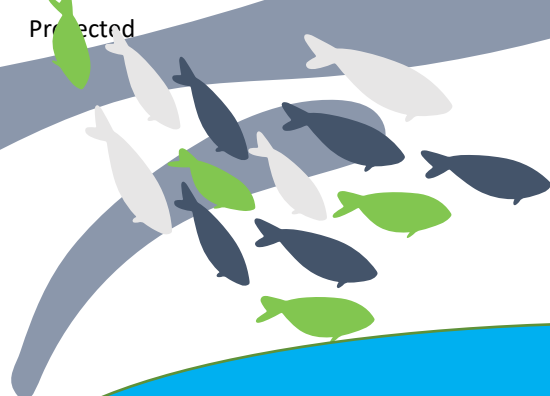
In accordance with Egypt's 2030 Strategy for Sustainable Development and the Constitution of Egypt, Article 79 states that: The government is responsible for the food security of citizens. This includes 4 axes; - **Providing food, Sustaining food, delivering food, food Safety.**

Aquaculture is the ideal way to provide healthy and cheap food and achieve food security for citizens at a lower cost compared to producing other types of protein.



National Aquaculture Mission

As well as focusing on the use of water in an efficient and economic way, especially nowadays with limited water resources and an increase in the demand for agricultural crops in line with the population increase. Therefore, the state has taken care of the integrated path between plant agriculture and aquaculture and it was applied in the **1.5 million acres project within the framework of the state's policy to rationalize water .**



The New Aquaculture System Now in Egypt according to the Egyptian strategy

The Fish and Human welfare is very important, when you design an Aquaculture System

The Environmental Concept and Saving the Natural Resources is very important, when you design an Aquaculture system

The variation and sequences of income is very important to support Aquaculture production cycle, when you design an Aquaculture System

The quantity and Variety of production is very important, when you design an Aquaculture System

You can find all those important Concepts only in Integrated Agri-Aquaculture system & Multi-Trophic Marine Fish Farm system

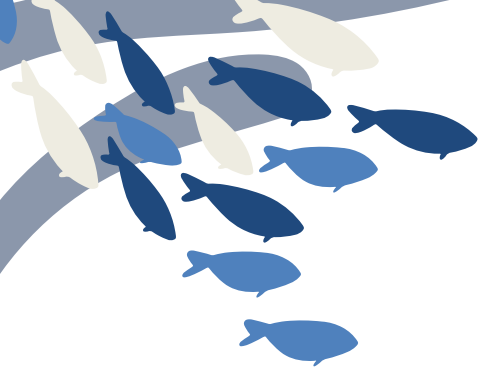
National Aquaculture Target

Fish Production In EGYPT is; **2,00** Million Tons in 2021 (**424** TT fishery) and **1.576** MT Inland Aquaculture (**1.335.004** MT Freshwater aquaculture, **241.995** TT Marine aquaculture).

Egypt has a leader position in Aquaculture production level in the world (**NO. 6**), Mediterranean and Black seas Region (**NO.1**) and Africa continent (**No.1**), with **80 %** of production from Demand according to GAFRD 2020.

Egyptian Strategy;- Achieve 3 Millions Tons in 2030.





Fresh Water Aquaculture Application



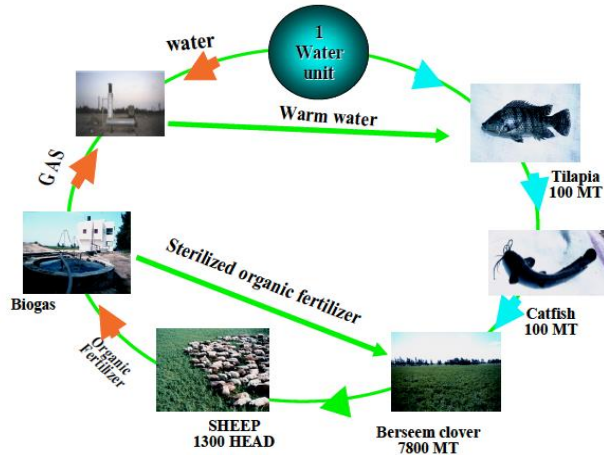
AlKeram Integration Agri-Aquaculture System for Rationalization of the use of water



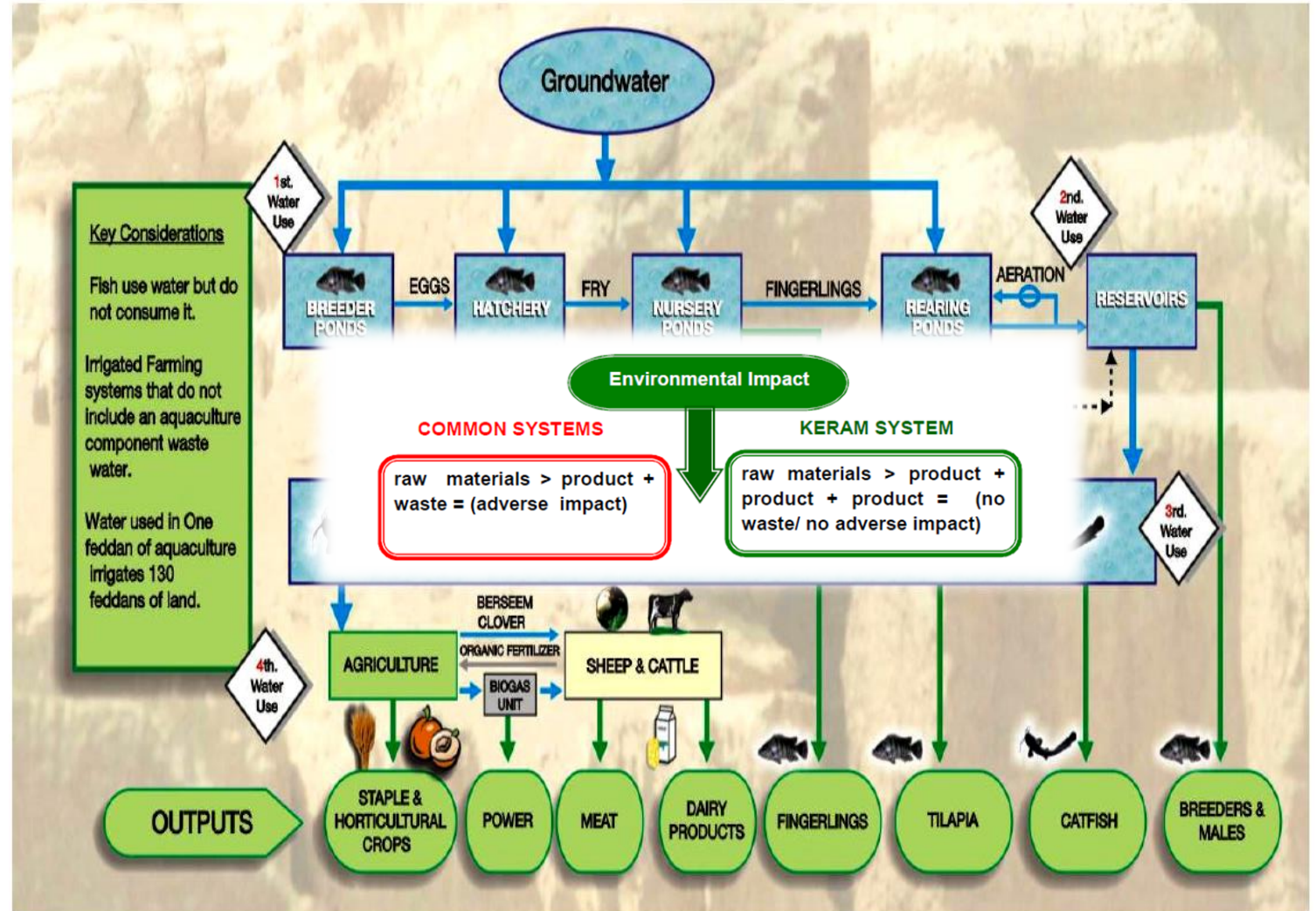
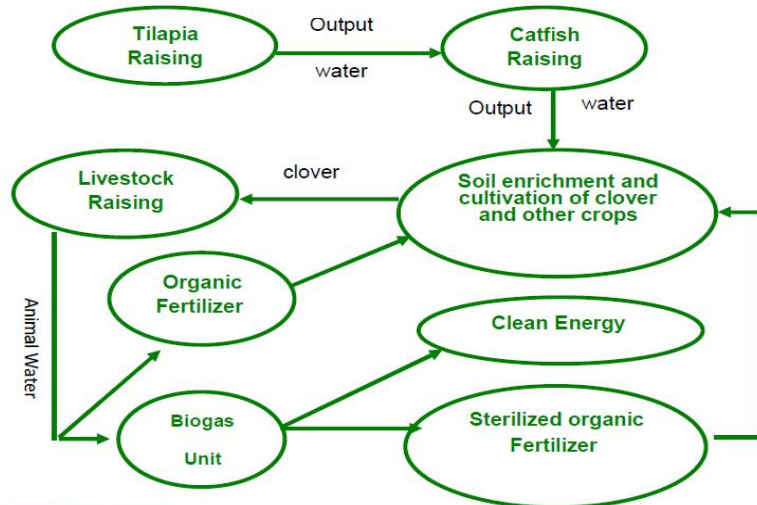
- **AlKeram Project Aims to reclaim and Cultivate desert lands using water from fish ponds containing important soil enrichment elements and thereby achieve multiple returns within a complete economic frameworks and with due regard for the environment.**

Keram Integration Agri-Aquaculture System for Rationalization of the use of water

KERAM SYSTEM (SERIES) - ONLY ONE WATER UNIT



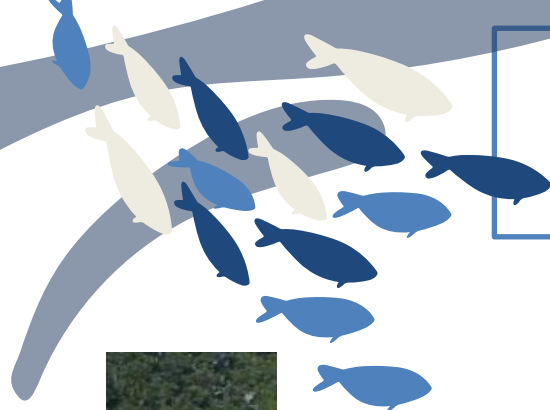
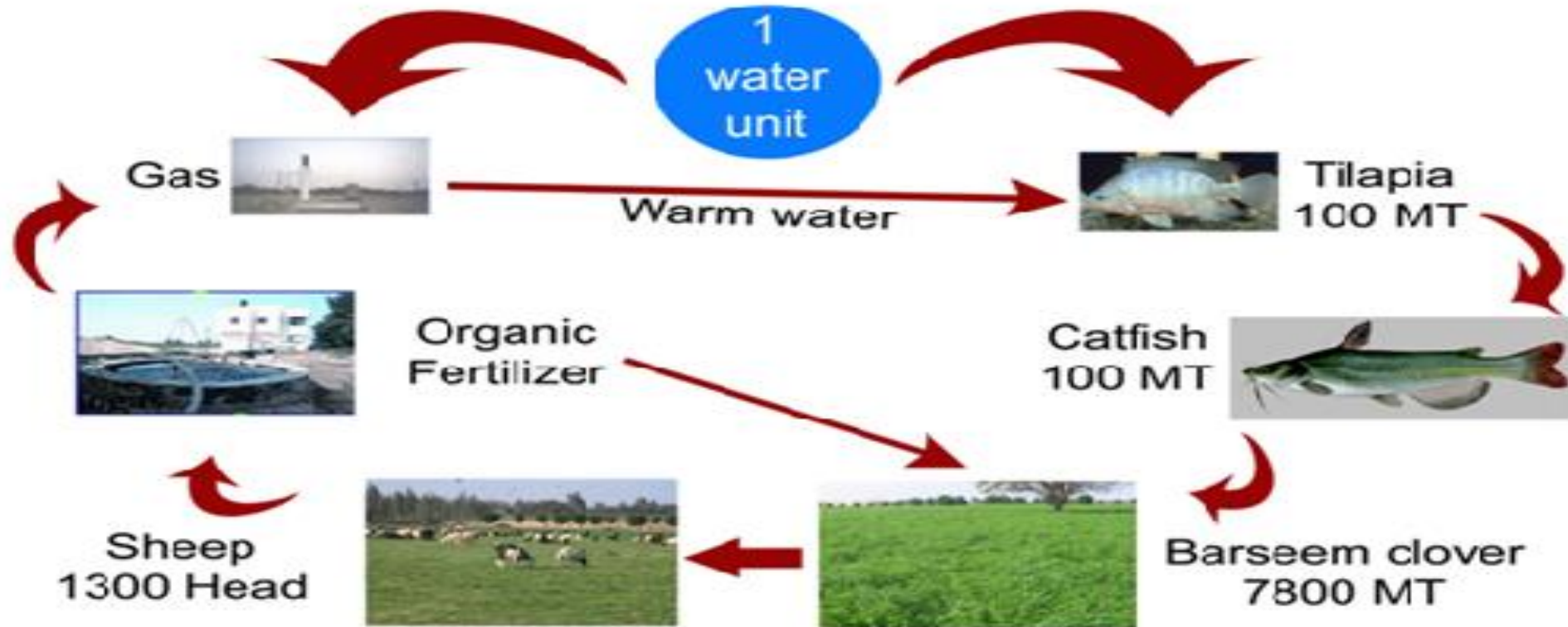
Each Stage Output is a Safety Input for the Next Stage

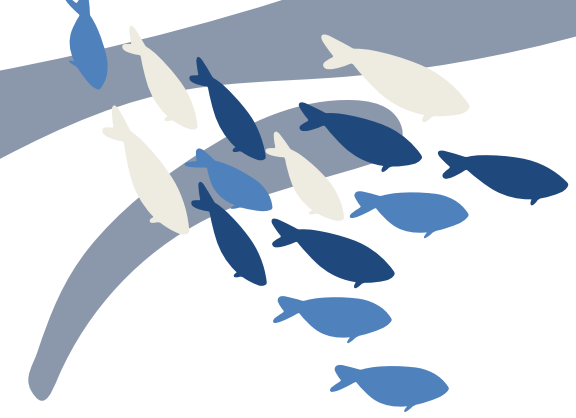


Keram Integration Agri-Aquaculture System for Rationalization of The Use of Water

KERAM SYSTEM (series)

only one source of water





Marine Aquaculture Application

Introduction to the project:-

- The second phase of MADE II project, that represents an expansion and extension of MADE I project, aims to further support the Marine aquaculture sector in Egypt technically, taking into account the economic potential and ecological dimensions (to achieve a sustainable and qualified approach to dealing with the export of what it produces to global markets.

Project goals :-

1. Establishment of a technical area for aquaculture;- **1- Marine hatchery for (Meagre - Solae) – 2- Central lab. for diagnosing and treating fish diseases and providing extension services – 3- Multi-Trophic marine fish farm] in Port Said Governorate.**
2. Improving the administrative capacity of the Lake& Fish Resources Protection and Development Agency “LAFRPDA” and the farmers' ability to perform productively through the provision of extension services.
3. Drawing a road map for Marine Aquaculture in Egypt on the coasts of the Mediterranean and the Red Sea.
4. Completion of the Marine hatchery for seabass and bream and the training center in Agamy Km. **21 in Alexandria Governorate.**

The Technical Components in Port Said

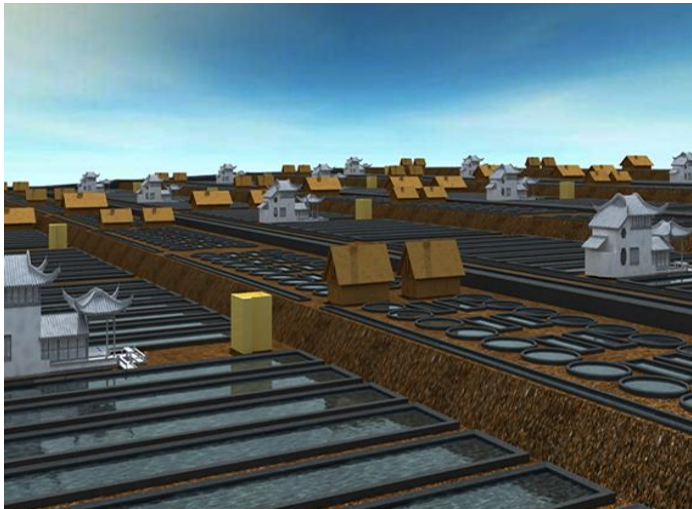
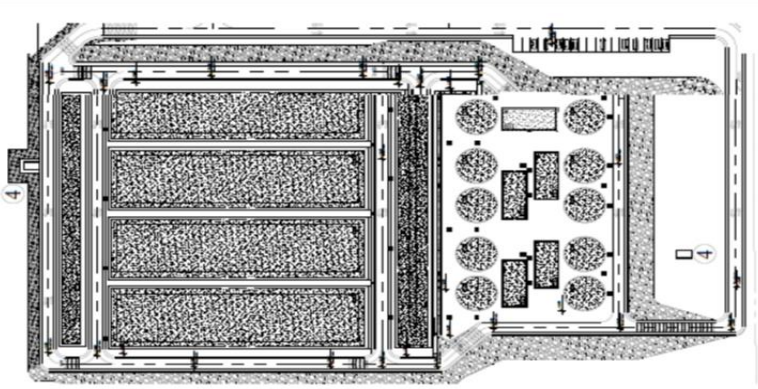


The Technical Components in Port Said

1. **Al Raswa Multi-Trophic Marine Fish farm with a production capacity of 60 tons of marine fish and shellfish on an area of 5 acres.**
2. **Central Lab. for Marine Fish Diseases Diagnosis, Treatments and Water and Fish Quality Measurements.**
3. **A Marine Hatchery for Reproductive new fish on the Egyptian market and required for export to European markets (Meagre - Solae - Shrimp) with a production capacity of 10 million fingerlings.**
4. **New Training Center funded by MoALR .**

R2 :- Al Raswa integrated Multi-Trophic Marine Fish Farm

Establishing an integrated Multi-Trophic Marine farm for producing marine fish like;- sea bream and seabass (Multi-Trophic system) that works both for production and for extension services in **Port Said Governorate** on an area of 5 acres and with a production capacity of **60 tons** of marine fish and **30 tons** shellfish.



The Production Integrated Multi-Trophic Marine Fish Farm

**Total Production is 60
tons of Marine fish
+
30 tons of Shellfish**

Pumping
Marine
Water
From Salty
Artisan
Wells

Pumping
Marine
Water
From Salty
Artisan
Wells

18 Tons

3 Tons Mullet in Clean Drainage Chanel

15 tons Shell fish

The central laboratory for fish diseases diagnosis and treatments

The extension services center that works on diagnosing and treating marine fish diseases and measuring water quality and product quality to private farms to qualify the fish products for export (extension service) **in Port Said Governorate**. And it already accredited by **ISO: 17025** and signed contract with NSFA to check fish quality for exportation and local consumption.



Training Center ;-

The extension services training center that works on building capacity for aquaculture stockholders delivering on job training for at least one week to 3 months (extension service) with site accommodation **in Port Said Governorate.**



Marine Hatchery

Experimental operation is going on for a marine fish hatchery using modern technology and the hatching of 10 million fingerlings (Solae - Meagre) in Ashtoum El-Gamil - **Port Said Governorate**.



Fish sorting and packing hall

A fish sorting and packing hall was opened in accordance with the specifications of the National Food Safety Authority and the requirements of the European Union to be approved by the National Food Safety Authority and registered in the European Union as one of the registered establishments for exporting fish to it and to farm owners that implement the project model in terms of Biosafety and good practices for operating fish farms and aims to support fish export in Egypt.



An Outlet Selling Coded Fish

Establishment of a sales outlet for coded fish has been completed to spread the culture of tracking the product among citizens to ensure its quality in accordance with international quality requirements.



The Technical Components in K21 - Alexandria

- **Marine Hatchery in K21 to produce 10 million fingerlings of Sea bass and Sea bream.**
- **Install international training center for building capacity in Marine aquaculture Sector.**
- **Renewing the old marine hatchery with a production capacity of 10 million fingerlings sea bass and sea bream.. Both of two hatcheries producing 20% of the total requirements of farms in national and private projects Of the total needs of farmers in Egypt.**
- **Managing 2 intensive fish farms for the production of fish (Sea bass, Sea Bream, Meager, Shrimp and Red tilapia) with a production capacity of 25 tons belonging to the SASME project and required to be included in the activities of MADE II project to be managed in one way and ensure its sustainability.**

Marine hatchery in K21;-

Marine hatchery in km 21 for reproduction of Seabass and bream fish to produce 10 million fingerlings, developing the old hatchery to produce 10 million fingerlings to provide 20% of Egypt's total needs of seabass fingerlings and seabream, and establishing a regional training center to prepare technical cadres locally and regionally.



Extension services

Strengthening the capabilities of the General Authority for Fish Resources Development to assist the public and private sectors as well as providing extension services aimed at highlighting the importance of aquaculture in a healthy and civilized manner to provide safe food to citizens, and developing 50 fish farms and qualifying them for export to the European Union.



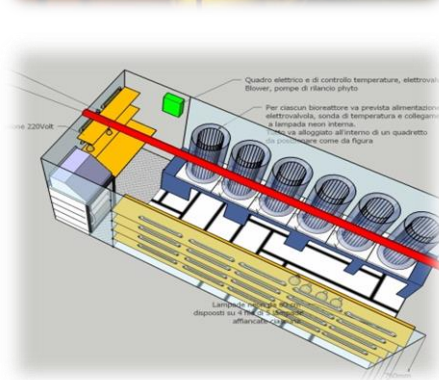
3 intensive Fish Farms

includes 3 intensive marine fish farms to produce 36 tons of marine fish from 1 Hectare at K 21 Technical district site, Alexandria.



Shellfish Hatchery

A Shellfish hatchery in Fanara, Ismailia Governorate, to produce 500 million clams and oyster larvae, and a station for washing and disinfecting clams, Oyster and preparing them for circulation and export.



Aquaculture Scio Acceptability

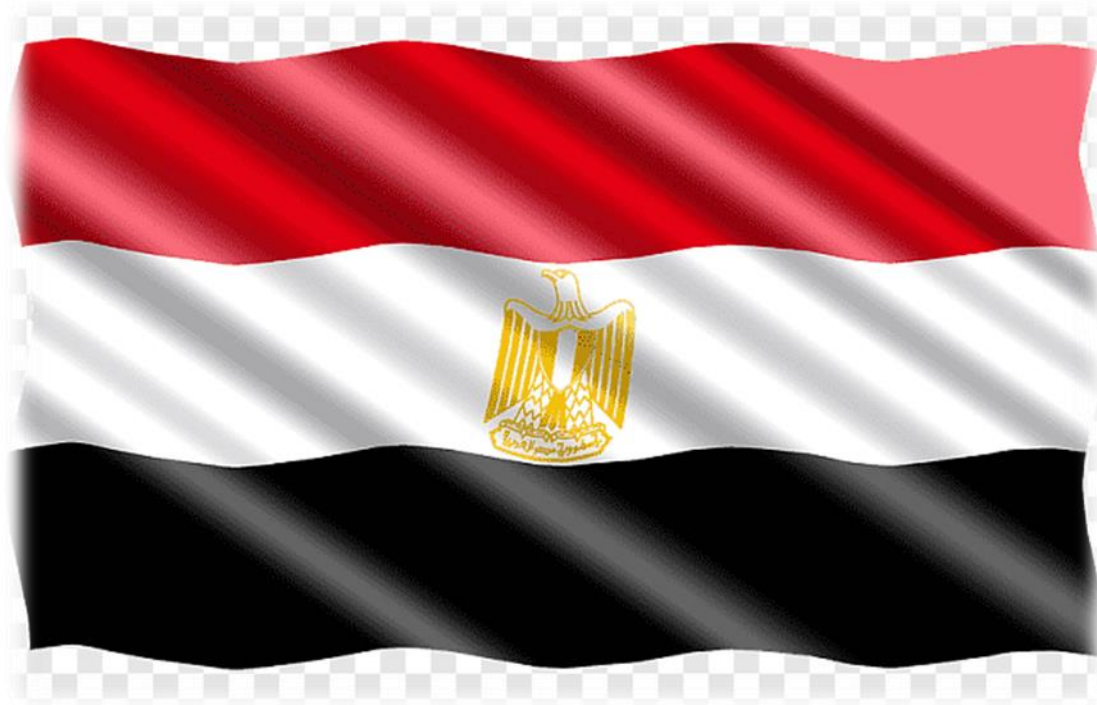


Aquaculture Scio Acceptability



Aquaculture Scio Acceptability





Thanks For your Attention