NewTechAqua

New technologies, Tools and Strategies for a Sustainable, Resilient and Innovative European Aquaculture

School Campaign

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

Benefits of fish consumption

- Fish provides:
  - **Energy**
  - Highly digestible **protein**
  - Other important nutrients, including long-chain **n-3 polyunsaturated fatty acids**
- Eating fish is part of the **cultural tradition** in many countries (e.g. Mediterranean diet).
- Consumption of fish, particularly fatty fish, **lowers the risk** of mortality from **coronary heart disease**.

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

What is aquaculture? FAO definition

Aquaculture is the farming of aquatic organisms including fish, molluscs, crustaceans and aquatic plants.

Farming implies:

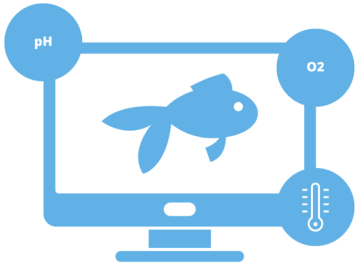
- some sort of **intervention in the rearing process** to enhance production, such as regular stocking, feeding, protection from predators, etc.
- **individual or corporate ownership** of the stock being cultivated.

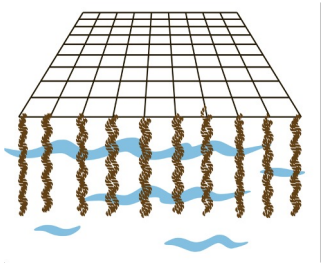
NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

What is aquaculture?

NewTechAqua

Aquaculture is very diverse in terms of both species farmed and methods of production (sea cages, ponds, raceways, on-land recirculating aquaculture systems, etc.)





NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

About EU seafood markets

- EU seafood consumption in 2020 amounted to 10,41 million tonnes, **23 kg per capita**.
- The internal demand of fishery and aquaculture products in the EU **mostly comes from imports**, as they cover around **60-70%** of the total supply.
- **EU aquaculture** only contributes to the EU seafood market with **about 20%.**

By **2025**, the global population is expected to **grow with 30%**, and the population of people aged 60 years and older will double (2.1 billion). This imply and unprecedent challenge.

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

Some advantages of aquaculture

- It is a method to produce **more fish** with **less pressure** on the environment **than commercial fisheries**.
- It offers the possibility of supplying the market with a **constant supply of fish produced in EU**, and of the highest freshness.
- It has been shown to be a **very sustainable** production of ”**animal meet”**, and the one requiring less **“freshwater”.**

Cattle	Beef	Pig	Chicken	Salmon
Feed Conversion Ratio (FCR)	6-10	2.7-5	1.7-2	1.2-1.5
Carbon footprint (kgCO2eq)	5.92	1.30	0.88	0.6

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

Challenges for a more sustainable aquaculture

NewTechAqua

- Use **sustainable fish feeds**
- Increase **organic aquaculture** production
- Improve available technologies and efficiency of production systems
- Increase **robustness (disease resistance**) and **fish welfare**
- Better products **quality and safety**
- Use **fewer chemicals** and antibiotics
- Support the **diversification** of fish species and products

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

What is NewTechAqua?

NewTechAqua

6M €

48 months

H2020

NewTechAqua' project in a snapshot:

NTA is a **European project** that aims at **expanding and diversifying** European aquaculture production of finfish, molluscs and microalgae by developing and validating **technologically-advances, resilient and sustainable applications**.

➔ **New Tech Aqua prepares for a future with less pressure on the environment and the chance to rebuild populations of threatened species!**

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

How is NTA improving sustainability of aquaculture?

NewTechAqua

A comprehensive approach

To increase production while reducing the pressure on the environment, NTA developed a comprehensive strategy :

- **Sustainability and circularity**
- **Fish and molluscs robustness**
- **Production efficiency**
- **Species diversification**
- **Awareness raising**

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

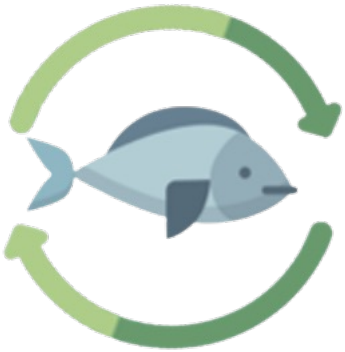
How is NTA improving sustainability of aquaculture?

NewTechAqua

NTA makes the aquaculture sector more sustainable and circular

To reduce the pressure on the environment, NTA:

- **Reuse fish by-products.** Despite containing proteins and fatty acids with high nutritional values, fish by-products are currently wasted. NTA transforms this valuable resource, creating zero-waste products for human and fish consumption.
- **Reduce waste at the consumption stage** by developing technologies to increase the shelf-life of processed products.
- **Introduce circular technologies to aquaculture practices**, such as aquaponic systems, Biofloc Technologies and Electrochemicalfilters.



NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

How is NTA improving sustainability of aquaculture?

NewTechAqua

NTA improves fish and mollusc robustness:

To enhance **health and disease resistance** of farmed fish and molluscs:

- NTA's partners experiment **new breeding programs** using innovative selection methods.
- NTA's scientists design **pro-health organic fish feed**, using plant proteins, seaweed and microalgaes fitted with a higher concentration of fatty acids thanks to innovative breeding strategies developed within the project.

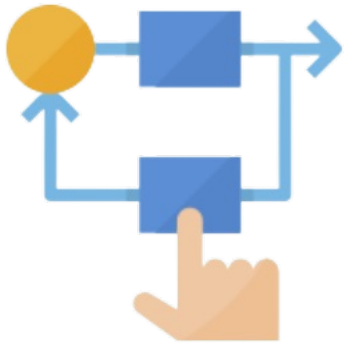
NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

How is NTA improving sustainability of aquaculture?

NTA increases the efficiency of aquaculture production:

European aquafarms have to be economically sustainable. NTA uses **technologies to improve the productivity** of aquaculture production systems with:

- **Real-time management** systems applied in land-based farms. This “precision fish-farming" allows for the eco-intensification of production, through, for instance, the optimization of feeding practices.
- **Artificial intelligence** is used to protect fish from disease outbreaks and parasites.



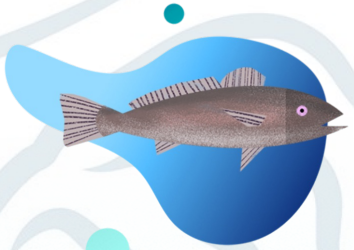
NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union’s Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

How is NTA improving sustainability of aquaculture?

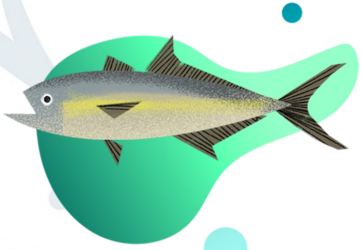
NewTechAqua

NTA supports diversification of fish species

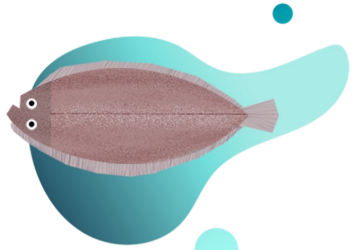
NTA's researchers study the reproductive cycle of emerging fish species to **re-create the best conditions for raising** these new species in aquaculture production systems.



Meagre



Greater Amberjack



Senegalese Sole

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

How is NTA improving sustainability of aquaculture?

NTA raises awareness and train professionals:

To **foster the replication** of those innovative solutions and ensure that scientific and technical know-how generated from the project are effectively transferred to the private and public sector, NTA:

- Produces detailed **exploitation plans**
- Organises **advanced trainings** – events available on the website
- Concludes studies on consumer acceptance.

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

Which species are considered in NTA?

NewTechAqua

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

Who is involved in NewTechAqua?

NewTechAqua

Project's consortium:

- **26** partners
- **9** EU countries

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.

NewTechAqua

Access NTA' resources here:

- Project's leaflet & logo
- Promotional video & project's presentation

Follow NTA on : Twitter LinkedIn

NewTechAqua is a project funded by the European Commission.
This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement n° 862658.