

NewTechAqua

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



NewTechAqua School Campaign #IWorkInAquaculture

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Introduction

The European Commission has underlined the potential of aquaculture as a source of high-quality protein for food with a low-carbon footprint which has an important role to play in helping to build a **sustainable food system**. Aquaculture creates jobs and **economic development** opportunities in the EU's coastal and rural communities. Additionally, this sector can also help decarbonise the economy; fight climate change; reduce pollution; contribute to better preserving ecosystems; and be part of a more circular management of resources. However, the benefits of aquaculture are largely unknown to the public, as well as technologies and innovations produced by the sector.

NewTechAqua **School Campaign #IWorkInAquaculture** aims to raise awareness on sustainable aquaculture practices in Europe, the benefits of fish consumption for human health and the job opportunities amongst the young generation, in order to increase the consumer demand for sustainable aquaculture products and the interest in working on aquaculture.

NewTechAqua has developed several **educational materials**, such as a power point presentation, factsheets, videos and games, targeting secondary and high school students, to explain the important role of the aquaculture sector in the European Union, the opportunities and challenges to its development, and the job opportunities related to research and innovation. **All the materials are produced in English.**

Target Group

Secondary and high schools (range of age **14 to 18 years old**) and science teachers.

This School Campaign targets teachers who seek expert knowledge on aquaculture and want to give their students the opportunity to experience science activities. The access and use to this kit is free, open and accessible to all stakeholders and people interested in the topic.

Learning objectives

- Learn the important role of the aquaculture sector in the European Union, the opportunities and challenges to its development, and the job opportunities related to research and innovation.
- Discover, new innovations and technologies and sustainable practices on aquaculture developed by NewTechAqua.

The materials

1. Presentation: Aquaculture facts for schools

This presentation provides a general overview of the aquaculture sector in the European Union and an outline of NewTechAqua project. It contains simple and direct language and is intended to be used in a one-hour class.

[Download the PPT](#)

2. Factsheets on NewTechAqua innovative solutions

- [Microalgae Breeding programme](#)
- [Recombinant gonadotropins for enhancement / induction of the reproductive cycle in teleost fishes \(RECGON\)](#)
- [Sealice Model](#)
- [Functional diets for sea bream, through the incorporation of innovative ingredients](#)
- [Zero-waste diet for Sea bass](#)
- [AQUAculture ReAltime Data Assimilation for Raceways, RAS and cages \(AQUARADAR\)](#)

3. NewTechAqua-IRTA Aquaponic Kit for Schools

Assembly kit for secondary schools to provide students with basic knowledge (hydraulics and biology) of aquaponics systems. The kit is designed to help students learn by designing and setting up their own cheap and simple aquaponics kit. The kit contains instructions (diagram, modules and parts) to design two systems of different sizes for freshwater and seawater.

[Download the Aquaponic Kit for Schools](#)

4. Animated video on job opportunities

This video aims to create awareness of job opportunities in aquaculture sector related to research and innovation. The 2-minute video can be displayed in class. The video will be available on [NewTechAqua's Youtube channel](#).

5. Teaser on aquaculture job profiles and testimonies

This video series aim to show different profiles of careers in aquaculture sector. It includes testimonies from NewTechAqua partners.

- [Teaser \(summary of all the videos\)](#)
- [Testimony Silvia Krizanac](#)
- [Testimony Roberto Cerri](#)
- [Testimony Renata Baric](#)
- [Testimony Pierrick Haffray](#)
- [Testimony Jose Vicente Roig](#)
- [Testimony Esteban Hernández](#)
- [Testimony Javier Ojeda](#)
- [Testimony Constantinos Mylonas](#)
- [Testimony Ana Zubcic](#)
- [Testimony Alessio Bonaldo](#)

[Download AquaCOOLture](#)

6. Final online Quiz

This Final quiz aims to evaluate, in a fun way, the knowledge acquired by the student.

[Go to the quiz](#)

How to implement

The suggested programme for the class is:

- Presentation: Aquaculture facts for schools (15 min aprox.). Presentation of one or two factsheets on NewTechAqua innovative solutions as examples are suggested to be included in the presentation (5 min/factsheet aprox.)
- Animated video on job opportunities (est. time 5 min plus discussion)
- Activities separately or all together as a lesson. To be selected in agreement with teacher/s and available time):
 - NewTechAqua-IRTA Aquaponic Kit for Schools (this may be arranged a separated workshop)
 - Teaser on aquaculture job profiles and testimonies plus discussion (5 min)
 - AquaCOOLture Board game (30 min)
 - Final online Quiz (5-10 min)

About NewTechAqua

NewTechAqua is a **H2020 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. It is coordinated by the University of Bologna (Italy) and gathers 26 partners from 9 EU countries.

NewTechAqua unites expert partners to:

1. Deliver solutions to improve fish and mollusc health and disease resistance: prediction models for specific diseases, kits for disease' detection, new breeding programmes and new feed diets.
2. Improve performance and quality of farmed fish and microalgae by developing innovative breeding programmes.
3. Make the aquaculture sector more sustainable and circular through different rearing systems (RAS, biofloc technology, aquaponics), new diets using fish by-products, fish processing wastewaters and microalgae, and low-fishmeal organic diets.
4. Increase the efficiency of aquaculture production systems via real-time management systems, satellite systems, and recommendations.
5. Support diversification of fish species by studying the reproductive cycle of emerging fish species (greater amberjack, meagre and Senegal sole) to re-create the best conditions for raising these new species in aquaculture production systems.
6. Develop new eco-friendly fish and molluscs products with high nutritional value.
7. Raise awareness and train professionals from the aquaculture sector by creating training programmes and conducting studies on consumers' preferences.

School Campaign

#IWorkInAquaculture



NewTechAqua

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