AdriAquaNet

Enhancing Innovation and Sustainability in Adriatic Aquaculture

Deliverable WP 2.2.5

Technical-scientific report on WP3 (final)

Trieste, 30.06.2022

Project number:	**10045161**
Project Acronym:	**AdriAquaNet**
Project Title:	**Enhancing Innovation and Sustainability in Adriatic Aquaculture**
Start of the project:	**01/01/2019**
Duration:	**42 months**
WP/activity:	**WP2, Activity 2.2**
Deliverable name:	**Technical-scientific report on WP3**
WP leader:	**PP2 - University of Trieste**
Author (s):	**Sabina Passamonti**
Delivery date:	**30/06/2022**
Status:	**Final**

This is a **synthetic overview** of the main innovations that AdriAquaNet Partners have developed to attain **Objective 1 of the project - Increase environmental sustainability of fish farming**.

The relevant activities have been comprised in **WP 3 – IMPROVE ENVIRONMENTAL SUSTAINABILITY OF FISH FARMING.**

This Workpackage has been organized in 2 main parts:

- Act 3.1 SUSTAINABLE FEEDS AND FEEDING PROTOCOLS FOR ENVIRONMENTAL FRIENDLY ADRIATIC FISH FARMING
- Act 3.2 WASTE MANAGEMENT, EMISSION REDUCTION, RENEWABLE ENERGY AND ENERGY SAVING

The **detailed scientific and technical reports of WP3 are available in the project's website, section Docs and Tools, sub-section WP3 – IMPROVE ENVIRONMENTAL SUSTAINABILITY OF FISH FARMING.**

These documents will support fish farmers in acquiring new tools to improve the impact and environmental footprint of fish product and production process. In particular, new fish feeds and feeding strategies that cut down eutrophication emissions have been set up and subsequently implemented in commercial farms. Tailored feeding protocols have been developed to allow an innovative food management Moreover, a wastewater treatment chain that recovers and uses fish waste for biogas production by anaerobic digestion has been prototyped. The application of photovoltaic technology has been tested in the farms to improve environmental footprint and foster competitiveness.

Deliverables of Activity 3.1 are:

- D 3.1.1 New environmentally sustainable dietary formulations for cultured marine fish to be proposed to the aquafeed mill industry
- D 3.1.2 Manual for adopting new low polluting feeding protocols for marine fish farmers

European Regional Development Fund

prof. Sabina PASSAMONTI, MD, PhD
University of Trieste
Department of Life Sciences

Via L. Giorgieri 1, 34127, Italy
+39 040-558 8747
spassamonti@units.it
www.italy-croatia.eu/adriaquanet

Deliverables of Activity 3.2 are:

- D 3.2.1 Technical-scientific report on the potential of biogas technology applied to wastewater from fish farms, and assessment of energy recovery and environmental impact reduction
- D 3.2.2 Technical-scientific report on the energy use in intensive aquaculture
- D 3.2.3 Development of the model for simulation of environmental impact of fish cages

The technical innovations described in these reports have been **disseminated via training events**, as reported in D 3.3.1 TRAINING OF STAFF IN SMES AND R&D CENTERS

The target groups of this document are:

SMEs and professionals active in the aquaculture value chain

They may find it useful to know what technologies are available and who are the reference persons who can support them in implementing these innovations.

Researchers and scientists addressing manyfold issues of aquaculture sustainability by a multi-disciplinary approach

They may find it useful to understand what are the most urgent innovation needs of the aquaculture business, in order to transfer knowledge and ideas from their scientific domains to the applied sciences.

Policy makers at all levels of government

The seamless adoption of these innovations and any other necessary improvement, refinement and further development need to be supported by the public policy makers at all levels of government, in order to design and implement actions that ensure favorable conditions of cooperation between relevant actors of the innovation endeavor, such as the R&I sector (Research and higher education institutions) and the users (SMEs) at both sides of the Adriatic Sea basin.

European policy framework

This document reflects the collective effort of the AdriAquaNet project partnership to tackle concrete issues relevant for the aquaculture value chain, in line with the Common Fisheries Policy (CFP). It is clear that the AdriAquaNet objectives perfectly overlap with those of CFP, which are to increase productivity, to stabilise the markets, to provide a source of healthy food and to ensure reasonable prices for consumers.

European Regional Development Fund

prof. Sabina PASSAMONTI, MD, PhD
University of Trieste
Department of Life Sciences

Via L. Giorgieri 1, 34127, Italy
+39 040-558 8747
spassamonti@units.it
www.italy-croatia.eu/adriaquanet