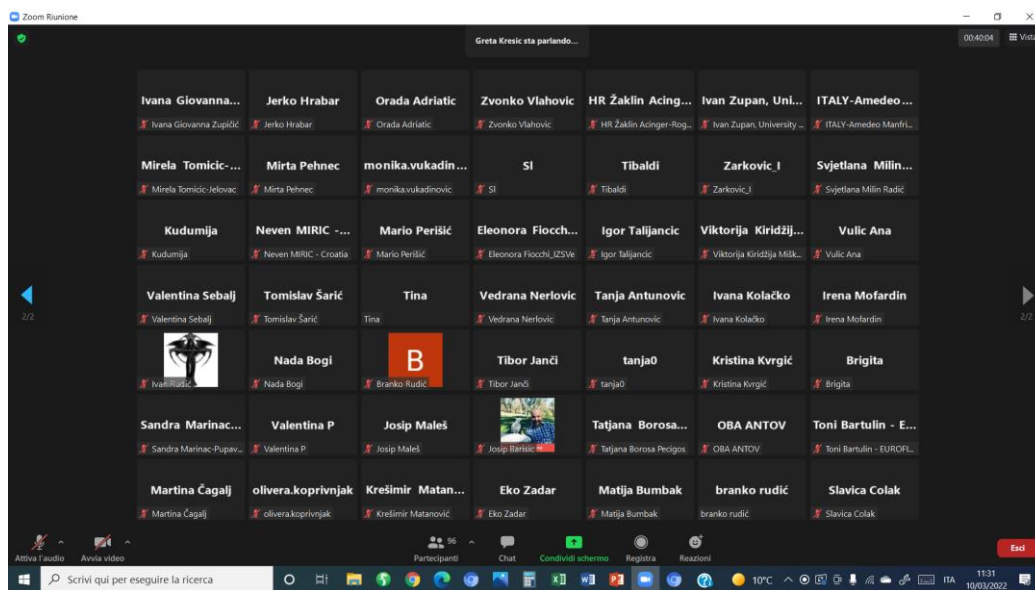


# AdriAquaNet

Enhancing Innovation and Sustainability in Adriatic Aquaculture

WP 3.3 Trainings of staff in SMEs and R&D Centers

WP3– Training nr. 5, report, March 10, 2022



## Introduction

The fifth training course entitled “SUSTAINABLE MARICULTURE: FARMING, SAFETY AND QUALITY” took place on February 24, 2022 from 11:00 till through the "Zoom platform": <https://us02web.zoom.us/j/82339592913?pwd=enVwZkl3NWVuMkNKbWlqZTBqZ2ZxLdz09.>

The workshop was organised by the Croatian partners the AdriAquaNet consortium, Mariculture cluster **PP7**, the Croatian Institute of Veterinary Medicine (CVI) in Zagreb PP1 with the collaboration of The University of Rijeka with the aim to reach nutritionist, fish producers, breeders, operators, catering services and GDO, in particularly related to Croatian market.

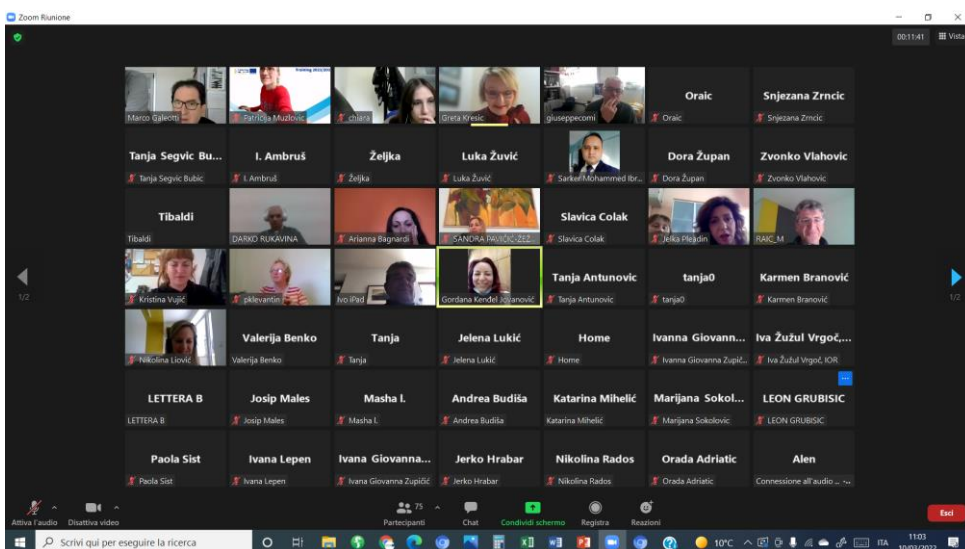
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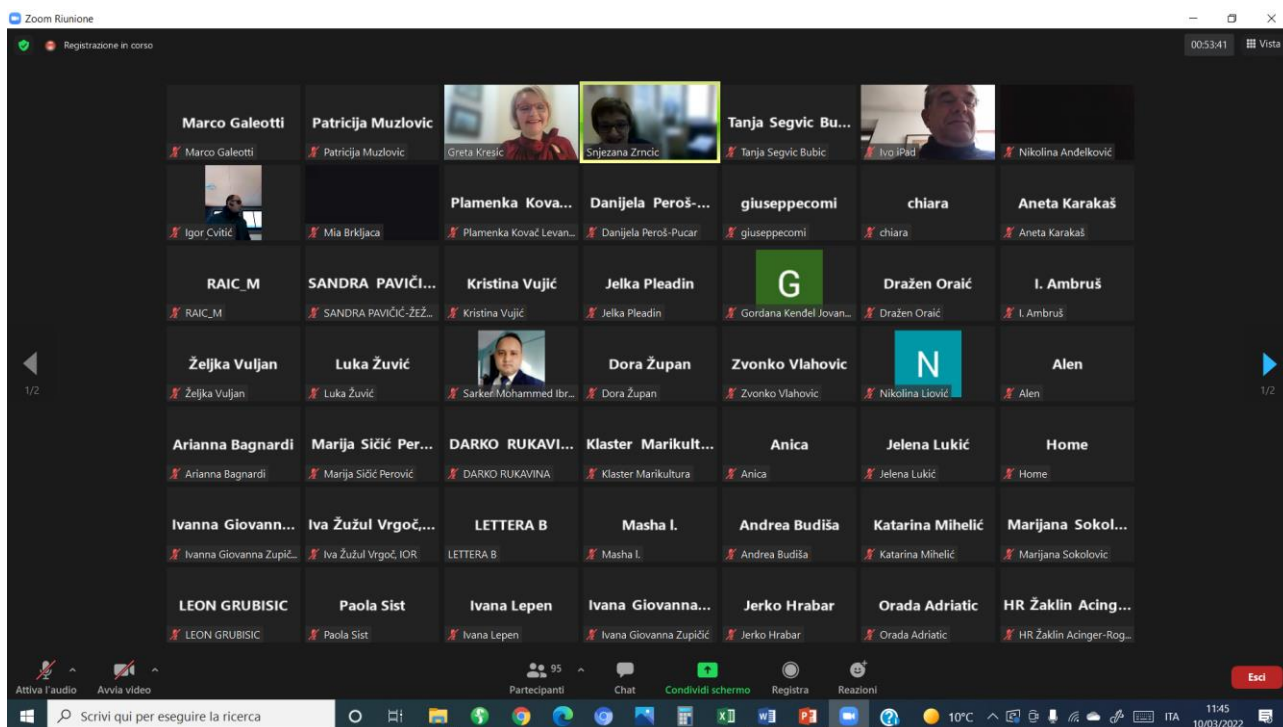
Maximum number of people attending on line were 96 persons, of which 89 participants followed the complete training Cycle of WP3,4,5 activities and got the AAN certificate of attendance.

The programme involved 7 presentations of which:

- 1 lesson related to WP3
- 1 lesson related to WP4
- 4 lessons related to WP5

The lessons were held in English and Croatian. Translation was provided. After the registration of the participants, M. Galeotti (LP) introduced the project to the attendees. LP external services LETTERA B was in charged for the zoom connection, PP1 coordinator Snježana Zrnčić and PP5 coordinator Greta Krešić were moderators of the whole course.





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**Tanja Šegvić**, PP3 coordinator, was involved as a speaker and participated in the activity 3.3. and she presented a lesson entitled **“Sustainable fish feeding”**.

### Topics


The following presentation regarding WP3 was discussed among the participants and the attendees debated about:

1. Sustainable development in aquaculture and the production of sea bream and sea bass in Mediterranean
2. The EU regulations from 2021 till 2030 and Croatian obligations.
3. Sustainable fish feeding and how different feeds influence the Quality of Farmed Fish:
  - a. Changes in the feed composition used for fish nutrition significantly that has an effect on: Fatty acids profile.
  - b. Sea bream fed with insects had statistically significantly higher values of EPA and DHA content.

- c. Minimum presence of fish proteins and balanced intake of processed vegetable and animal proteins (PAT). appears more likely in configuring the protein origin of the new generation feed formulations for carnivorous fish in the medium term.
- d. Tests and results of new feeds on fish farm at PP8 and PP9 farms.

**Uvod – održivi razvoj akvakulture**


Source: EUMQFA elaboration of Eurostat-COMEXT data (online data code: [DS-016890](#))



Country	Value (Billion Euros)
Greenland	€ 0.64
Iceland	€ 1.41
Faroe Islands	€ 0.74
Norway	€ 0.95
Russia	€ 0.74
China	€ 2.15
Turkey	€ 0.57
Viet Nam	€ 1.18
India	€ 0.85
Morocco	€ 1.53
Ecuador	€ 1.37
United States	€ 0.59
Argentina	€ 0.64

- EU najveći je svjetski uvoznik proizvoda ribarstva i akvakulture (Eumofa, 2021)
- EU komisija je u posljednjih 20 godina uložila više od 3 milijarde eura kroz različite strukturne fondove – plavi rast, zeleni rast, održivost, kružno gospodarstvo
- stagnaciju rasta proizvodnje EU akvakulture --- rast vrijednosti proizvoda akvakulture

**AQUACULTURE PRODUCTION IN THE EU**



Year	Volume (million tonnes)	Value (billion euros)
2008	1.20	3.50
2009	1.20	3.50
2010	1.20	3.50
2011	1.20	3.50
2012	1.20	3.50
2013	1.20	3.50
2014	1.20	3.50
2015	1.20	3.50
2016	1.20	3.50
2017	1.20	5.50

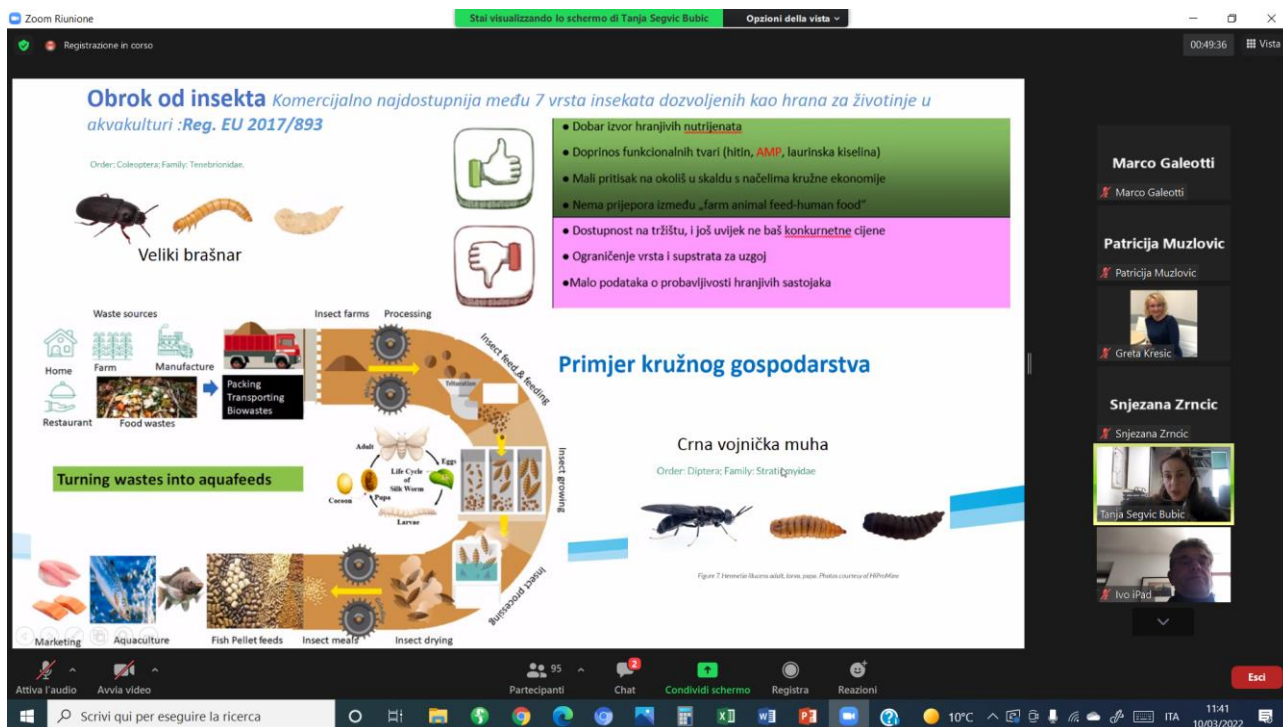
Source: EUMQFA 2019

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European Regional Development Fund

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**Obrok od insekta** Komercijalno najdostupnija među 7 vrsta insekata dozvoljenih kao hrana za životinje u akvakulturi :Reg. EU 2017/893

Order: Coleoptera; Family: Tenebrionidae.

Veliki brašnar

Waste sources: Home, Farm, Manufacture, Restaurant, Food wastes

Insect farms: Packing, Transporting, Biowastes

Processing: Insect feed & feeding

Insect growing: Life Cycle of Silkworm (Egg, Larvae, Pupa, Cocoon, Adult)

Marketing: Aquaculture, Fish Pellet feeds, Insect meal, Insect drying

Turning wastes into aquafeeds

**Primer kružnog gospodarstva**

Crna vojnička muha

Order: Diptera; Family: Stratiomyidae

- Dobar izvor hranjivih **nutrijenata**
- Doprinos funkcionalnih tvari (hitin, **AMP**, laurinska kiselina)
- Mali pritisak na okoliš u skladu s načelima kružne ekonomije
- Nema prijevora između „farm animal feed-human food“
- Dostupnost na tržištu, i još uvijek ne baš **konkurentne** cijene
- Ograničenje vrsta i supstrata za uzgoj
- Malo podataka o probavljivosti hranjivih sastojaka

Participants: Marco Galeotti, Patricija Muzlovic, Greta Kresic, Snjezana Zrncic, Tanja Segvic Bubic, Ivo Ipađ

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The following deliverables were produced and put in SIU:

1. Agenda in EN and CRO
2. Participant's attendance certificates on zoom
3. Minutes of discussion with attendees
4. Presentation of lessons and training materials

### Conclusions and Next Steps

The following training will be organized in Italy and probably in hybrid version - in person and online due to sanitary situation on May 6 and 7, 2022 by Italian partners.